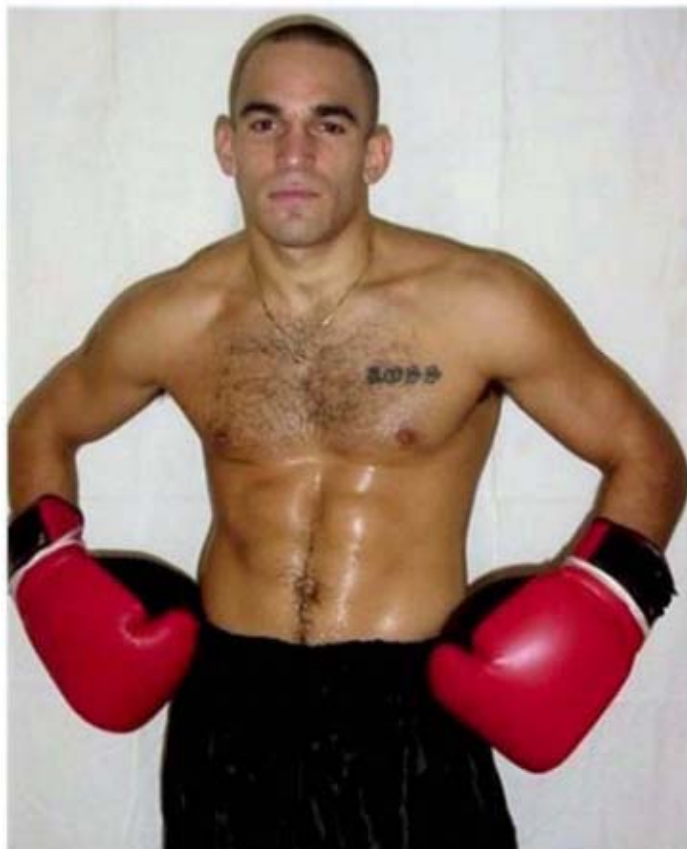


The Boxer's Guide To Performance Enhancement



***Maximize Your Potential With
Scientific Training and Nutrition***

Created By Ross Enamait, Founder of RossBoxing.com

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This is an advanced training routine, recommended for those with prior training experience.

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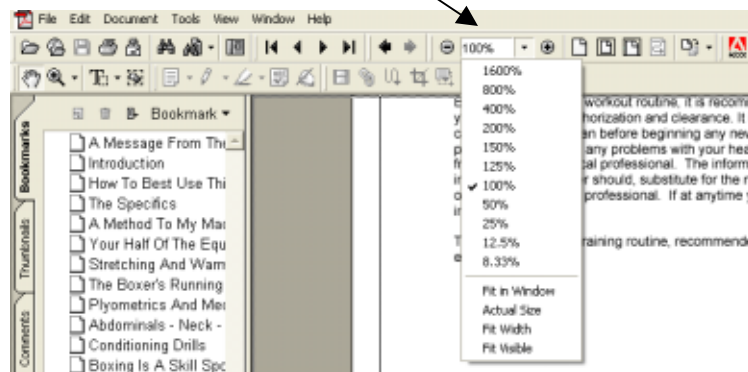
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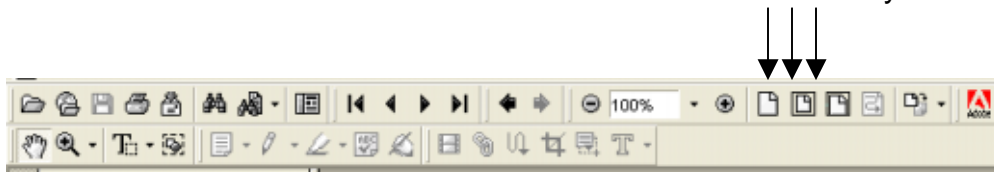
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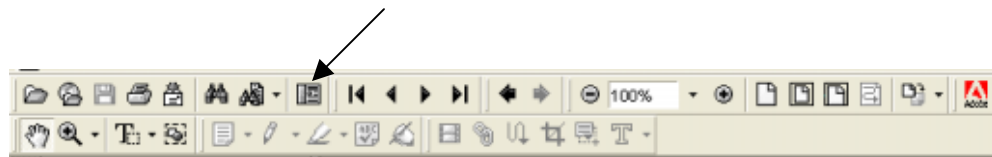
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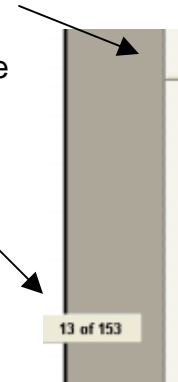


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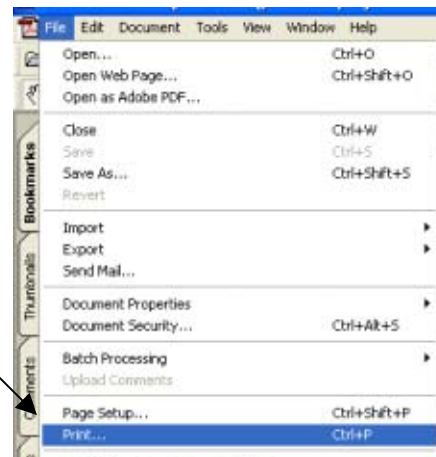


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A MESSAGE FROM THE AUTHOR

Hello and welcome to **The Boxer's Guide To Performance Enhancement**. It has been a pleasure putting this informative training program together to help fellow boxers in their pursuit of victory.

I first began boxing in 1994. Since entering the gym, my competitive fire has been fueled by the complex, demanding nature of the sport. Boxing is a difficult sport that requires long hours of practice and training. In my years since joining the sport, I have boxed under the tutelage of many experienced trainers.

Over the years, boxing has become my passion. I have studied numerous training systems seeking to improve my condition and performance. Unfortunately, one area of frustration has been the failure of boxing training techniques to advance alongside other sports such as baseball, basketball, and football. Science has come a long way over the years. Through science, we are better able to understand the body, thus learn new methods to propel our training and performance levels. The scientific approach to training has been kept quiet to the masses, as many trainers continue to teach archaic methods that negate, not enhance, the ability of their fighters.

For this reason, I took it upon myself to learn the scientific approach to boxing. I am a Certified Fitness Trainer with the *International Sports Sciences Association*. In addition, I hold a Bachelor of Science from the University of Connecticut. As of publish date; I am approaching the completion of my Master's degree from Regis University.

I wish to share the secrets to training that took me years to discover. I learned the hard way, now you can learn the right way, your first time around. Boxing is the best thing that ever happened to me. I cannot overemphasize the importance that the sport has played in my life. Through boxing, I have learned the importance of hard work, perseverance, and the dedication required to achieve my goals.

I have been fighting for 9 years now. I have trained alongside world champions and title contenders. Throughout this book, I have combined my real world knowledge with proven scientific training techniques. If you wish to advance in this sport, you must apply these training methods to your boxing program. If you do not, you will fall behind those that do. I promise that I personally go through this training program each and every day. I refuse to accept anything but victory. I recommend that you take this same approach to your training so you too can excel in the ring.

Train hard and keep your hands up!

Ross Enamait

INTRODUCTION

Boxing is arguably the most physically demanding sport of all. Those foreign to the world inside the ring often underestimate the physical condition required of a successful boxer. After all, boxing is an individual sport, without timeouts or teammates to assist. Boxing itself is a complete body workout. To succeed, you will require speed, power, strength and endurance in each of your muscle groups.

Unfortunately, boxing has not kept pace with advancements in sports science and physical conditioning. While training systems and methodologies advance for sports such as baseball, basketball, and football, boxing often stands still, refusing to accept recent developments available to athletes.

For example, many boxing coaches today discourage the use of weight training. This is one of many myths passed down over the years regarding the effectiveness of strength training for the boxer. The myth states that weight training will make the fighter slower by tightening the muscles, thus restricting movement.

What these individuals do not realize is that if done correctly, strength training will **INCREASE** range of motion, flexibility and explosive power. We must always remember that our goal is to maximize our performance in the ring. To do so, we must prepare our training routines in a way that focuses on the specifics of our sport. When we lift weights and conduct various conditioning drills, we do so with different objectives than the aspiring body builder. Our programs must be designed in a sports specific manner that will help to enhance our performance.

Another common myth is in regards to the roadwork that a boxer must go through each morning. Many trainers today instruct their fighters to a schedule of 5-mile runs each day of the week. While running 5 miles per day will surely enhance your cardiovascular system, it will **NOT** prepare you for the rigors that you will face inside the ring.

When we box inside the ring, we go through periods of fast, explosive combination punching. Our work-to-rest intervals consist of either two or three minutes of work, followed by a one-minute rest period. Amateur boxers now fight two-minute rounds while professionals box three-minute rounds. Suppose that you were to fight a four round fight consisting of two-minute rounds. Overall, you would have 8 minutes of work, with three minutes of rest (one minute of rest after rounds 1, 2, & 3).

In order to train specific to our sport, we can clearly see that a 5-mile run consisting of 30-40 minutes of low intensity running will not prepare our bodies for the specific stress that we face inside the ring. Rather we must implement a system that closely mirrors the work-to-rest intervals we encounter inside the

ring. Our program will consist of rigorous interval and sprint drills explained later in this manual.

The list of myths regarding boxing training is endless. Rather than discuss each myth, this book provides the **CORRECT** way to train and condition your body to **MAXIMIZE** your **PERFORMANCE** inside the ring.

This book is designed to cover all aspects of boxing conditioning and nutritional supplementation. We leave no rock uncovered, so rest assured that any confusion you have regarding your own training will be answered. If you are one of many who have trained according to the boxing myths, there is no need to panic. I have competed inside the ring for over nine years. In my years of boxing, I have worked with several trainers, each with their own theories and opinions. Over this time, I have learned what works and what does not.

I myself used to run 5-miles each day and kept a 50 foot radius from any dumbbells or weights. Fortunately, I have learned over the years. By reading this book, you will save yourself the trouble of figuring things out on your own. I have been the “guinea pig” so to speak. I have tried everything imaginable to improve myself as a fighter. I have been fortunate to train alongside former world champions and title contenders. In addition, I am certified as a fitness trainer by the prestigious *International Sports Sciences Association*.

My sole purpose in obtaining this certification was to enhance my own training to maximize my performance in the ring. I have learned to integrate a scientific approach to boxing training. This approach analyzes the fight game down to our individual muscle fibers. These are the fibers that will help push you to victory inside the ring. Fortunately, this is not a science class so we need not get lost in the details of biology and anatomy. Yet, it is important to gain a basic understanding of **WHY** we must train the way we do.

In the next section I will briefly review the reasons that our training program is in fact the correct way to train. I am not here to argue with other trainers; rather I am here to provide a scientifically proven method for enhancing your capability and performance inside the ring. Science does not lie. There are numerous training systems available today. Let's not focus on all of these programs, instead, let's focus on the **BEST**.

In the next section, I will explain the layout of the book and how you can get the most out of it.

HOW TO GET THE MOST OUT OF THIS BOOK

This book is designed in a way where each section focuses on one specific aspect of the overall training process. Each section will thoroughly detail all of the movements through illustrations and comprehensive descriptions. I will present loads of information, which may seem like a lot to grasp all at once. It is not important to memorize each exercise on your first reading. Rather, use this book as a reference to continually look over when implementing your own training programs.

At the conclusion of this book, I will explain the specifics of creating your own customized training and nutritional program. I have several sample programs available which will help you maximize your performance.

It is important to note however that to continually advance and succeed in boxing, you must constantly modify your training program. There is no “magic cure” to boxing conditioning. Rather, it is an ever-changing process that you must dedicate yourself to. You are not expected to go through each exercise in this book during one training session. Instead, you will continually modify your exercise selection throughout training cycles. We have provided various exercises for each specific muscle group. An old proverb states “**Variety is the spice of life**”. These are important words that must be integrated into your training schedule. You will need to adapt and tweak your workouts as you progress.

Failure to modify your workouts will restrict your improvements. Essentially, you will reach the point where you can no longer advance without changing your workout.

Words To Live By

"Luck is the residue of design." - Branch Rickey

If this sounds complicated, have no fear, I will give you all the tools necessary to maximize your boxing training program. The tools provided in this book will last you a lifetime.

Are you ready? Are you excited?

Well you had BETTER be, so let's get started with an overview of each chapter...

Words To Live By

You may be disappointed if you fail, but you are doomed if you do not try.
Beverly Sills

THE SPECIFICS

Following is an overview of each chapter. It is important to read through EACH section. Our training process is an integrated approach, meaning we integrate the information from each section to form one overall, **COMPLETE** training program.

I. A Method To My Madness

This is an **EXTREMELY IMPORTANT** section to read. Please read this section very carefully as it provides important information required for you to truly understand the important question “Why”.

Let me explain what I mean by “Why”... Throughout this book I will provide you with a complete training approach that will shock your muscle system in ways that may be completely new to you. I want you to understand the reasons “**Why**” it makes best sense to follow this training program. This section is not meant to be a science class; rather it will provide you with the background and knowledge necessary to understand the reasons for sports specific training. It is written in an easy to follow, straightforward manner.

II. Your Half Of The Equation

This is another very important section for you to read before beginning your training program. In order to be successful in implementing this training system, you must commit yourself to train hard with the purpose of improving your performance. I will explain to you the importance of your devotion to the sport.

III. Stretching and Warm-Up

Moving along, we will begin with the importance of stretching and a proper warm-up before your workout. I will discuss the benefits along with illustrations of those movements most important to the boxer.

IV. Running

We all associate the term “roadwork” with the early morning run of the boxer. In this section I describe the importance and specifics of a boxer’s running program. You must remember that **our goal is to win fights**, not compete in a marathon. This section will cut through the myths to provide a complete running program.

V. Strength Training For Boxers

The strength training section discusses how a boxer can increase strength while enhancing his overall performance. It is important to remember that when two

equally skilled boxers fight, the stronger, better-conditioned man (or woman) will **WIN**. In this section, I show you exactly how to be the stronger fighter!

VI. Plyometrics and Medicine Ball Training

Plyometrics consist of those drills such as bounding, jumping, and throwing, all designed with the purpose of increasing your speed and power. Plyometrics are perhaps the **most effective** way to enhance your performance in ANY sport. In this section I discuss specific plyometrics drills to enhance a boxing training program.

VII. Abdominals – Neck - Hands

The abdominals, neck, and hands are perhaps the most neglected areas in boxing training. These are crucial areas to strengthen for your protection inside the ring. You need strong abdominal muscles to defend against body punches. Your neck is your last line of defense against an incoming punch. Your wrists and hands are the tools used to strike your opponent. These body parts must be rigorously trained for you to last the distance.

VIII. Conditioning Drills

Up until this section, we have discussed the importance of stretching, running, strength training and plyometrics. Is that enough to be a successful boxer? **NO**. Rather, these conditioning drills will push your system to the **MAX**. Follow these drills and you will drive your stamina to levels never before seen.

Also included in this chapter are home workouts that can be completed without equipment. There are **NO** more excuses to miss training days!

IX. Boxing Is a Skill Sport

In this section, I discuss specific drills that should be included in your training routine to develop skills. It is important to remember that boxing requires not only physical conditioning but also skill.

X. Swiss Ball Training

The Swiss Ball is a revolutionary new way to increase performance by targeting balance and stabilizer muscles. As boxers, we can benefit from a Swiss Ball training routine. It provides sports specific benefits while adding variety.

XI. Nutrition and Supplementation

Up until this point, I have provided you with all the exercises necessary to push your training program to the next level. The training program provided in this

book is meant to work your body to its limit. This workout will push your muscles to their threshold. Your muscles will break down and rely on adequate nutrition and supplementation to ensure recovery to rebuild into a stronger overall system. Do not overlook the importance of a proper nutritional program. By neglecting proper nutrition, you throw away much of the hard work you have spent in the gym. This section teaches you to fuel your body in a way that promotes performance enhancement.

XII. Putting It All Together

When you reach this section, you will be packed full of information necessary to maximize your performance. You will have learned countless training exercises and drills. It will be impossible to complete each exercise in one workout. This section will show you how to develop your own programs. I have also provided you with sample training programs that you can use immediately to begin maximizing your performance.

XIII. The Mental Aspect of Boxing

Learn how to maximize your performance with your mind. In this section I discuss important topics such as goal setting, confidence, motivation, and visualization techniques. If you are serious about boxing, you will need to train your body and mind.

XIV. Final Words From the Author

I will add my final motivational comments before you get started!!

Words To Live By

Sports Do Not Build Character...They Reveal It -*John Wooden*

A METHOD TO MY MADNESS

As a boxer, you will require a combination of speed, strength, power, and endurance. In addition, you must acquire and master the skills of the sweet science. Boxing is an extremely complicated game; much more complex than it appears to those spectators who have never entered the ring to compete. You must have courage, skills, and of course an optimum level of physical condition.

As you will soon learn, there are certain elements of your own physical makeup outside of your control. For this reason, we must focus on improving those elements within our control. For example, I am 5'8" tall and fight as a Welterweight (147 pounds). No matter how hard I train, I will never be 6' tall. My height is a factor that I am unable to modify. Other factors such as my strength and cardiovascular condition can be improved. We will focus on maximizing our individual performance levels. To do so, you must first gain an understanding of the human body.

The body is a complex system; the most sophisticated system in the galaxy. Each body part works in conjunction when you perform inside the ring. Our muscles contract in sequential manner when boxing. The end product of these contractions will be victory in your bouts if you conform to our scientific training approach. Our approach will maximize your muscular strength, while allowing you to "work" for longer periods of time.

MUSCLE FIBERS

We are all born with a unique arrangement of muscle fibers. The primary muscle fibers can be classified as either fast twitch or slow twitch muscle.

Fast twitch muscle fibers are responsible for fast, powerful, explosive movements. These fibers are also known as white muscle fibers. Fast twitch fibers are responsible for the explosive punching power that Mike Tyson possessed as a boxer. Fast twitch fibers give track and field athletes the ability to sprint 100 meters in less than ten seconds. These athletes are able to sprint at unbelievable speeds for a short duration of time. Unfortunately, they are not able to maintain these tremendous speeds for more than a few seconds. Why is this so? The answer lies within the makeup of the fiber.

Fast twitch muscle fibers lack the cardiovascular capability of their fellow slow twitch muscle partners. They lack the oxygen and blood of the slow twitch fiber. Fast twitch fibers are divided into two categories, which are explained shortly.

Slow twitch muscle fibers are responsible for the sustained cardiovascular endurance evident in athletes such as marathon runners. These slow twitch or

red muscle fibers are highly aerobic in nature. They have an inherent ability to use oxygen and maintain their activity levels for extended periods of time.

These aerobic muscles contract much slower than white muscle fibers. For this reason, a world-class marathon runner will never be able to compete as a 100-meter sprinter. Each event requires a unique mix of muscle fibers.

GENETIC DETERMINATION

At birth we are all genetically predisposed to our unique mix of muscle fibers. Mike Tyson was obviously blessed with a high percentage of explosive, fast twitch muscle fiber. We all contain a percentage of the following muscle fiber types.

Slow Twitch Aerobic (Type I) – These fibers have a high aerobic capacity yet are the slowest to contract, thus the weakest.

Fast Twitch Oxidative Glycolytic (Type IIa) – These fibers have a high rate of contraction with medium levels of aerobic capacity.

Fast Twitch Glycolytic (Type IIb) – These fibers are the most explosive muscle fibers and least resistant to fatigue.

For boxing, the most desired form of muscle fiber is the Type IIa. These muscle fibers provide explosiveness combined with moderate levels of endurance. Unfortunately, we have no power over what muscle fibers we are born with. These ratios are genetically determined at birth.

So what does this mean to us? Should we just pack our bags and give up if we do not have the muscle fiber ratio we desire? **OF COURSE NOT!!!** There have been world champions with various percentages of each muscle fiber type. Each fighter brings his or her own unique physical structure and style to the fight. Through proper training, we are able to maximize our own individual performance levels. We **HAVE** the ability to improve the condition of **ALL** our muscle fibers. We will look to tear down muscle fibers through rigorous training so that they may grow back stronger than ever.

Words To Live By

“Great works are performed not by strength, but by perseverance.”

Samuel Johnson

Proper conditioning will allow us to compete at higher intensity levels for longer periods of time.

ANAEROBIC vs. AEROBIC CONDITIONING

Our conditioning program will focus on two separate, distinct forms of training. We must target both our anaerobic and aerobic systems.

Anaerobic training means to conduct an activity without oxygen. Anaerobic exercise, like boxing, requires muscles to contract at high intensities for short periods of time. Essentially, this equates to the fast combinations that a fighter throws.

Aerobic exercise is classified as low intensity activities, performed for extended periods of time. When you circle the ring between combinations, you are performing in an aerobic fashion.

Endurance training reduces the inherent capability of the neuromuscular system for maximum power output. Continuous endurance training will always prevent an athlete from maximizing his potential in strength and muscular size. These concepts are of extreme importance when implementing a sports specific training program. When you think anaerobic, think of fast twitch, explosive fiber. These are responsible for maximum power output (exactly what we need in the ring). When you think of aerobic, think of slow twitch, endurance muscle fiber.

When you think about these concepts, you quickly realize that by training in the aerobic pathway (meaning to train aerobically for extended periods of time), you detract from your anaerobic or explosive power output. These concepts do not come from my opinion; rather have been proven time and time again in scientific labs. These concepts are as real as the equation, $2 + 2 = 4$. Many trainers are unaware of these scientific findings, thus produce fighters who will never meet their true athletic potential.

Boxing is estimated to be approximately 70-80% anaerobic and 20-30% aerobic. This is of **EXTREME** importance when determining your training routine. Consider the old school tradition of jogging 5 miles each morning. When you jog, you are focusing your energy on your aerobic system. Essentially, each morning of roadwork you spend 100% of your time focusing on only 20-30% of what you will require in the fight.

Surely there must be a better way... Of course there is and I am here to show you how. Due to the nature of our sport, we must prepare ourselves through intense training. Boxers train numerous hours each week. Why spend all of this time if you are not going to spend the time productively?

Every ounce of your training and nutrition must be designed in a manner that will help to improve and enhance your ability. Your body must be able to compete at

maximum levels of efficiency, round after round. You will need to focus on recovery time, speed, strength, and agility.

Words To Live By

“To conquer oneself is a greater task than conquering others.”

Gautama Buddha

Knowing what you do now, it is easy to see that simply jogging and hitting the bag are **NOT** the most productive ways to condition yourself as a boxer. Rather, you will implement proven training techniques to assist in your desired outcome, success in the ring.

INTEGRATED APPROACH

Let's look at what I call an integrated approach to training. This approach will draw from several different training systems to form one, boxing specific routine.

First consider the following questions:

1. Can weight training alone get me in shape for boxing? My Answer = NO
2. Can running alone get me in shape for boxing? My Answer = NO
3. Can plyometrics alone get me in shape for boxing? My Answer = NO
4. Can the heavy bag alone get me in shape for boxing? My Answer = NO

Not one of these training techniques alone can prepare you for the rigors of a boxing match. We all know someone who lifts weights at the local gym who is rippled with muscles. You may look at him and think he is in great shape. Yet, this man is only in shape when you compare him to those that sit around on the couch all day. He is not capable of elite BOXING TRAINING!

You will not get in boxing shape from weight training alone. You must integrate strength training, plyometrics, interval running and sprinting, and boxing specific conditioning drills. Of course there are different ways to train. Plenty of boxers have been successful with different systems but they have **NOT** achieved peak fitness levels from alternate training approaches.

This integrated approach is the most effective training system. You will...

1. Strengthen your muscle fibers.
2. Increase the explosiveness of your muscle fibers
3. Increase both your aerobic and anaerobic thresholds

4. Train your muscles to operate in a sports specific manner (**SPECIFIC TO BOXING!!!**)

Words To Live By

"Knowledge speaks, but wisdom listens." - *Jimi Hendrix*

IMPORTANT TRAINING PRINCIPLES

Before proceeding to the next section, let's closely review some important training principles that pertain to all sport and fitness activities. All training programs **MUST** conform to these principles to ensure maximum progression. All aspects of our training (running, plyometrics, weight training, etc...) must follow these principles.

1. **The Specificity Principle** – The Specificity Principle states that you must eventually move from general training towards highly specialized training. For example, suppose you have a fight that is 12 weeks away. For the first 4 weeks, you may focus on increasing your limit strength. Limit strength is defined as the maximum level of muscular force that you can generate for one all out movement. Limit strength is similar to the foundation of a house. Before you can build the house, you must first lay the foundation. The Specificity Principle states however that once you lay this foundation your training must reflect the "specific" competition that you are preparing for. This means that heavy weight training does not take the place of boxing specific training when you prepare for boxing. Rather, you **MUST** train according to your desired outcome; success in the ring.
2. **The Overload Principle** – This principle states that in order to improve in strength or endurance, you must apply a greater deal of resistance than you are accustomed to. Essentially, you must place an overload on your system for positive changes to occur. Consider weight lifting, if you bench-press 5 pounds, there is not sufficient resistance (overload) to cause an adaptive response. Basically, you must train hard to expect results.
3. **The Principle of Progression** – This principle states that there is an optimal level of overload that should be performed and an optimal timeframe for this overload to occur. If you increase your workload too slow, you will not improve. If you increase your workload too fast, you will cause injury or muscle damage. The intensity level of exercise must increase proportionately to the improvements in the boxer's condition. As you improve, you may increase the intensity. This principle helps us realize the importance of proper rest and recovery. Continual stress and constant overload will result in exhaustion and injury. You should not train

at maximum intensity all of the time. Doing so will result in overtraining, thus causing physical and psychological damage.

4. **The Adaptation Principle** – This principle states that the body adapts to the demands imposed upon it from training. In order to continually advance, you must increase the stress that you apply to your muscles. As you improve, you must increase your workload. If not, your body will adjust to the weight, thus limiting continued improvements.
5. **The Use/Disuse Principle** – This principle states that your body will adapt to the stresses that you impose on it by increasing in strength and power. It responds when you “use” the muscles in training. At the same time, your muscles also respond to disuse. When you stop working a certain muscle group, the muscles react to the lower levels of intensity and demand by decreasing in size and strength. The laymen’s definition of this principle is “**use it or lose it**”.

There are several other training principles that have been developed and researched by sports scientists. This book is not designed as a science class; rather it focuses on the specific methods that can enhance our performance. These five principles summarize what our entire training program **MUST** adhere to. Always keep these scientific principles in mind when developing your own training program.

FINAL THOUGHTS

At this point, you have an understanding of your muscle fibers and the important principles that **ALL** training programs must follow. We must maximize the strength and condition of each of our muscle fibers. We will do this by focusing on a combination of training techniques, all designed to maximize your performance as a **BOXER**.

Now that you know the scientific aspects of training... let’s move on...

YOUR HALF OF THE EQUATION

At this point, you have an understanding of the muscle fibers that form your body. Throughout the book, I will provide specific exercises necessary to maximize your training and boxing performance. Each chapter will focus on a particular form of training.

Unfortunately, you must do more than read each chapter. Simply reading the chapters and memorizing the various exercises will **NOT** allow you to maximize your performance. The only way to achieve your goals is through dedication and hard work. Boxing is a sport that has very little to do with luck, rather it deals with hard work and perseverance.

To excel in boxing, you must push yourself to intense levels in the gym. When you train intensely, you will break down muscles that will rebuild to form a stronger, more efficient system. I can only show you **HOW** to do the exercises. I can provide you with the workouts necessary to reach your goals. Yet, I am not there to motivate you to work your hardest.

Words To Live By

"Well done is better than well said." - *Benjamin Franklin*

There will be days that you are tired and do not want to train. Perhaps you stay up late one night and have no desire to run in the morning. Your mind will talk to you, convincing you that it is OK to put things off until the next day. What your mind does not realize is that another boxer who you may face one day has put his tiredness aside, instead choosing to run. Being tired, rushed for time, etc... **ARE ALL EXCUSES.** I view excuses as a sign of weakness. The only legitimate excuse to miss a workout is injury.

Whatever your reason for skipping a workout, always remember that another warrior has learned to overcome his mind to force himself to train, even on days when his motivation is lacking. You must make the decision for yourself as to how far you wish to take your boxing career. I cannot make that decision for you.

Excuses will lead to mediocrity. **An average fighter gets lost in the crowd.** They blend in because they have nothing to differentiate themselves from the rest of the pack. I personally have made a commitment to push myself to the max each and every day. Surely certain days in our training program are more intense than others, if not, you would quickly become over trained. You must still approach **each** workout with the utmost level of commitment and desire.

Words To Live By

"The average person thinks he isn't." - *Father Larry Lorenzoni*

Each day provides an opportunity to improve your ability. When I train, I do not allow myself to just “*go through the motions*”. You must make this same commitment. You only have one chance at life, so my advice to you is to live it with no regrets. Do not be the guy who says, I “*could of*” “*should of*” “*would of*” trained harder. We all know the guy who speaks of his past with lines such as, “I could have been the best *BUT...*”

There are no “*BUTs*” in this sport. You alone must decide how successful you will be. I am giving you the tools to maximize your conditioning. If you adhere to this training program, you will get into the best shape of your life. Whether you are a competitive fighter or someone who uses boxing as a fitness routine, why settle for anything but the best? You must believe in yourself and your ability to excel. Commit yourself to perfection in boxing as well as life.

Words To Live By

"A pint of sweat, saves a gallon of blood." - *General George S. Patton*

Throughout my boxing career, I have seen many fighters enter the gym loaded with natural talent. Unfortunately, many of these individuals did not possess the work ethic and discipline to become champions. When I make comments such as “*boxing is the most physically demanding sport of all*”, I speak these words from experience.

To be successful, you must push yourself to extreme levels inside the gym. By doing so, your body learns to respond and adapt while under severe physical stress. We will all fatigue at some point during a fight, you must be prepared to respond when it happens. If you are not willing to pay your dues inside the gym, you are sure to pay for it when fight night rolls around.

I look at my own training with the following logic... Either I can punish myself in the gym, or I can choose to have someone else punish me in the ring. Once again, this decision must be made on the individual level. I can provide my advice, but only you can truly decide.

Ask yourself these questions:

1. Am I satisfied with mediocrity?
2. Do I want to get injured inside the ring?
3. Will I regret that I did not train harder after the fight (or after I retire)?
4. Will I quit when my training gets difficult?
5. Will I make excuses to miss workouts?

I hope that you answered **NO** to all of these questions. If you answered **YES** to any of these questions, you should **reevaluate** your reasons for involving yourself in the sport of boxing.

Words To Live By

"Never mistake motion for action." - *Ernest Hemingway*

Fortunately, I am confident that you answered **NO** to these questions. After all, you have purchased this book, which means you are **SERIOUS** about your training. You should forget about those questions and instead focus on the following statements.

1. I will train my hardest to ensure that I maximize my performance.
2. I will not make excuses for my own failure to train. Rather, I will train with a purpose, each and every day.
3. I will not accept anything but the best in my own personal performance.
4. I am ultimately responsible for my own success. If I wish to be successful, I must put my excuses aside and determine my own destiny.
5. No one can decide my future but myself. I have dedicated myself to maximizing my performance in boxing. I will do whatever it takes to ensure my success.

I could obviously expand this list, but I think my point has been made with these brief statements. The point that I wish to convey is as follows... **YOU** make up the other half of the equation. I will provide you with the tools, now you must take these tools with you to the gym and **USE** them. I have dedicated my life to learning and practicing the scientific training techniques required to perform as a fighter. These techniques are now yours. There is no more mystery regarding your next workout. The only mystery that remains is whether or not you will subscribe yourself to this routine.

Fortunately, this mystery can be easily solved when you dedicate yourself to achieving your goals. Whether you wish to be a World Champion, or to lose 50 pounds, the choice is yours. The phrases "**I CAN'T**" and "**I QUIT**" are no longer to be used in your vocabulary.

Words To Live By

"A pessimist sees the difficulty in every opportunity; an optimist sees the opportunity in every difficulty." - *Sir Winston Churchill*

ALWAYS REMEMBER, you can do **ANYTHING** that you put your mind to.

You must know what you wish to accomplish. Sit and think for a while what your reasons were for purchasing this book. What is it that you wish to accomplish? It is important to develop goals that you can work towards achieving. Each day before driving to the gym I review my goals to remind myself “why” I am training. When I realize I have not yet accomplished my goal, I arrive at the gym ready to train hard. When I finally achieve my goal, I create another to begin working towards.

Each goal must not be as monumental as winning a World Championship. While this may be your final goal, you will have numerous steps that you must first accomplish along your journey.

Suppose you can run 1 mile in 7 minutes. Set your goal to run a mile in 6 minutes. If you can do 50 pushups, set your goal to 75 pushups, then 100. Each day you train, push yourself harder towards achieving these goals and results will follow.

Now that you are motivated and ready to go, let's get started!

STRETCHING AND WARM-UP

If you are anything like me, when you arrive at the gym, you are ready to get down to business. I love training hard and pushing myself to the extreme. I enjoy hard sparring and intense conditioning drills. After all, we are in the fight game, right? We are in this game to fight. Boxing is the sport of warriors...

While this is all true, there is no reason to overlook the importance of a proper warm-up and stretching routine. I have intentionally separated the two terms "warm-up" and "stretching" as they are two distinct parts of our workout. All too often stretching and warming up are considered one and the same.

For as long as I have been involved with boxing, I would venture to guess that 90% of boxers completely neglect this portion of their workout. Most get to the gym and immediately jump into action.

Words To Live By

"Never interrupt your enemy when he is making a mistake."

Napoleon Bonaparte

I used to be the same way and even today must continually remind myself of the importance of a proper warm-up. Yet, from experience, I can testify to the benefits of properly warming the body in preparation for a vigorous workout.

The main purpose of the warm-up is to increase blood circulation to raise general body and deep muscle temperatures. In doing so, you warm your muscles, ligaments and tendons in preparation for more vigorous activity. A proper warm-up provides many benefits to the boxer. You will reduce your chance of injury, improve athletic performance, and increase your range of motion and elasticity. In addition, the warm-up increases muscular efficiency, improves reaction time, and improves the speed of movement of muscles and ligaments.

Furthermore, a proper warm-up can help reduce the severity of post-exercise muscle soreness. The increased blood flow resulting from warm-up are important to deliver oxygen to the muscles to prevent the build-up of unwanted waste products that cause muscle soreness.

A proper warm-up will limit your risk of pain and injury. There is no excuse to sacrifice the benefits of a proper warm-up due to your eagerness to get started in the ring. A pulled hamstring or strained quadriceps may take four to six weeks to properly heal. Properly warm-up and you will save yourself the time of pain and injury.

THE DIFFERENCE

So far we have spoke of the warm-up and stretching together. This does **NOT** mean that they are the same. Many people view stretching as a means to warm-up, thus stretch as soon as they arrive at the gym. This is **NOT** the proper way to warm-up. If one stretches prior to performing his or her warm-up, the muscles are cold thus more prone to injury, such as muscle tear or strain. It is important to raise your body temperature before beginning your stretching routine. When you stretch a cold muscle, you are asking for injury.

Instead, warm your body, raise your core temperature, get your blood pumping and **THEN** go through your stretching routine. Think of the warm-up as a way to prepare your entire system for the rigorous workout that you will soon inflict upon your body. You must prepare your cardiovascular system, respiratory system, nervous system, and muscular system to accommodate our intense conditioning program...

Right now you should be asking the question, "OK so what should I do to warm-up?" This is a great question with more than one correct answer. After all, consider all the different exercises that you will perform as a boxer. You will run, lift weights, conduct plyometrics drills, and perform boxing specific exercises such as bag work and sparring. Obviously when you lift weights for your upper body, you will not focus as much attention to your legs as you would before a running program.

For this reason, I like to divide the warm-up into two sections. We will complete both elements of the warm-up, before proceeding to our stretching routine.

WARM-UP

Part 1

I break my warm-up into two sections. First, I begin with a general warm-up. I want to loosen up the entire body by raising my core temperature. This should consist of 5-10 minutes of light activity. I like to jump rope as a way to break a sweat and warm both my upper and lower body. When you start to feel lose, you know you are warm. If you do not have a jump rope, substitute a light jog, running in place, or jumping jacks. Most importantly, ensure that you break a sweat and raise your body temperature.

Part 2

Once you break a sweat and feel loose, it is time to focus your energy towards the specific muscle groups that you will exercise. These "*exercise specific*" warm-ups focus on the body parts to be used in the subsequent training routine. An example would be to shadow box before entering the ring to spar. The advantage of this technique is that the temperature is more effectively increased in the specific body parts to be used.

After conducting your primary warm-up, you must then focus more attention to those areas that will be most involved. For example, prior to conducting an intense session of interval running and sprints, you must thoroughly warm-up and stretch your legs. Once I have broke a sweat, I like to do some jogging, both frontward and backward, to loosen my legs completely. I usually jog two laps around the track to meet this need. Once my legs are completely warm, I will conduct some light stretching drills.

Words To Live By

"The secret of success is to know something nobody else knows."

Aristotle Onassis

Before we proceed to the illustrations of proper stretching technique, let's first discuss the various methods of stretching. These techniques hold true regardless of the muscle group you are stretching.

Ballistic stretching involves bobbing or bouncing. Ballistic stretching utilizes moving pressure to stretch the target muscles. It is **NOT** advised as it activates the myotatic reflex causing muscles to tense, rather than relax. You are more susceptible to injury when you conduct ballistic stretching.

Dynamic stretching involves moving the muscle through its full range of motion. Dynamic stretching leads to greater flexibility in movement. To maintain a correct dynamic stretch, focus on smooth, even movements that do not shock the muscle. Dynamic stretching consists of controlled leg and arm swings that take you to the limits of your range of motion. Ballistic stretches attempt to force a part of the body beyond its range of motion. Dynamic stretches do not involve bouncing or "jerky" movements. An example of dynamic stretching would be slow, controlled leg kicks, arm swings, or torso twists.

Static stretching is a controlled stretch. It involves holding a position for 15-30 seconds. You stretch to the farthest point and hold. A specific muscle or muscle group is extended to the point right before pain. During static stretching, concentrate on relaxing the target muscles and breathing deeply.

After reading these descriptions, it is easy to see that stretching the muscles without prior warm-up is dangerous. By doing so, you run the risk of muscle tear or strain.

We will focus our attention on dynamic and static stretching (primarily static). These stretches will be conducted following a sufficient warm-up. I will visually demonstrate the proper stretching exercises in the next section. This warm-up routine should be followed before each workout session. I consider both roadwork (running) and gym work as separate workout sessions. Perform these warm-ups before both.

Remember, the 10-15 minutes that this overall warm-up takes is worthwhile when you consider the injuries you prevent. Warm-up to improve your workout and decrease muscle soreness.

Following your warm-up, conduct the following stretches. Descriptions are provided where necessary. We will begin with upper body stretches first. These stretches are not required prior to your running sessions. Each stretch must be performed for both left and right arms (or legs).

UPPER BODY



Arm Twirls – Twirl your arms in circles both frontward and backward, big and small circles.

Neck Circles – (*Not Pictured*) Twirl your neck in a circular fashion both clockwise and counterclockwise. Make full circles so that your eyes can see in all directions. Circle in each direction at least 20 times.



Side Bends



Arm Stretch



Shoulder Stretch



Forearm Stretch



Bent Over Arm Stretch

LOWER BODY



Windmill Toe Touch



Quadriceps Stretch



Dynamic Leg Kick



Side Groin Stretch



Front Groin Stretch



Leg Pull



Seated Toe Touch



Seated Groin Stretch



Trunk Twist



Calf Stretch – Push against a wall as you push your rear heel into the ground. By pushing your heel into the ground, you will stretch the calf muscle. This is an important stretch for boxers considering the amount of time we spend circling the ring on our feet. Perform this stretch (as with all stretches) for both legs.

This brief stretching routine will help you to perform your best while minimizing injury and soreness. Do not neglect this important element of your workout.

THE BOXER'S RUNNING PROGRAM

The tradition of a boxer's morning roadwork is as old as the sport itself. Running is an important aspect to the overall condition of the boxer. Through running you are able to increase both your aerobic and anaerobic strength and endurance.

At this point, you know that anaerobic training means to conduct an activity without oxygen, forcing muscles to contract at a high intensity for short periods of time. Aerobic training on the other hand translates to low intensity activities such as jogging, performed for extended periods of time. Earlier we said that boxing is estimated to be between 70-80% anaerobic. These numbers should come as no surprise when you consider the explosive, ballistic nature of an actual fight.

Inside the ring, you must punch while ducking, slipping, feinting and moving. You must throw punches at a rapid pace while moving in all directions. In order to be an effective, powerful puncher, you must engage yourself in ballistic training techniques that teach your body to fire a maximum percentage of motor units per movement. Consider that a muscle consists of a group of motor units. The more units that you are able to activate, the more force and power you can accomplish with the muscle. By doing so, you become an explosive fighter, capable of firing continuous combination punches over the course of the fight.

So how do you transform your body into this explosive machine? It is not going to be easy, but a properly designed running program is a key ingredient.

Words To Live By

"If everything seems under control, you're just not going fast enough."
Mario Andretti

I am sure that many of you have read about several former champions who would rise early to run 5 miles a day. After reading about these champions, many of you have begun similar running programs yourself. After all, if the champions ran 5 miles, so should you.... Right?

WRONG

These fighters did not become World Champions by jogging 5 miles a day. Several other factors contributed to their success. Slow paced, long distance running will prevent you from maximizing your performance.

When you fight, you push your anaerobic threshold. To improve your anaerobic threshold, you must train in a way that closely resembles how you fight. Jogging does not closely resemble the actions of a fight (**Remember the Specificity Principle!!!**). Jogging is conducted at a slow pace, for extended periods of time. As boxers, we must compete for 2 or 3 minutes rounds with 1-minute rest

intervals. To improve your ring performance, you must train in a way that closely mimics your actual competition.

A QUICK REVIEW

I am really going to beat these principles into your head!! (Well not literally but you get the point) ...

1. We must train specific to our event (2-3 minutes of work followed by 1 minute of rest.
2. We must mimic our competition through our training (**SPECIFICITY**)
3. Our event is 70-80% anaerobic
4. We want to gain explosiveness and power

Now that you know what your system will do from a scientific standpoint, let's get to the good stuff. Let's talk about how we are going to make this science lesson a reality!

INTERVAL TRAINING

One of the best ways to improve your boxing stamina is through Interval Training. Intervals are perhaps the single most important aspect of your overall conditioning program. All aspects are important, but these intervals take intensity to a whole new level.

Words To Live By

"I find that the harder I work, the more luck I seem to have."

Thomas Jefferson

Take a minute to reread those famous words from Thomas Jefferson. Boxing has very little to do with luck. It is all about hard work. You will hear me say that over and over again.

There is no better way to describe hard work than through an interval training routine. The purpose of the interval is to replicate the work-to-rest ratios that you exhibit in the ring. There are several varieties to the interval routine. Interval times and intensity should mimic the actual competition. For example, suppose you are going to fight 4 rounds, each consisting of 3 minutes. You would pattern your interval running around these time constraints. Let's look at the specifics...

4 Round Fight (3 Minute Rounds)

Total Work = 12 minutes (4 x 3)

Total Rest = 3 Minutes (1 minute of rest after rounds 1, 2, & 3)

When designing your interval running program, it is best to run one more interval than the number of rounds you will be fighting. For example, if we box 4 rounds, we will run 5 intervals.

Sticking with the above example, we will implement an interval program consisting of 5 x 3 minute intervals. The three minutes of work involve a fast paced, sustained run. If you have access to a track, run two laps around the track (800 meters). This is an approximate distance that you can run in 3 minutes. Always remember that this routine is called “interval **running**” NOT “interval jogging”. Your intensity level must reflect a hard run, **NOT** a casual jog. You must prepare your body to exert maximum power for 3 continuous minutes. Your pace should fall in between your sprint and jog speed. Run as hard as you can without restricting your ability to finish the required distance. Always remember, your rate of improvement will be determined by how hard you are willing to work. Run these intervals hard and you will see the results. Your rest period will be 1 minute between each interval.

These intervals are extremely difficult. Your legs will fill with lactic acid. When you work anaerobically, your body begins to pump lactic acid into your muscles. This causes that familiar feeling of muscular fatigue and pain. By continuously training with intense interval programs, you will overcome these feelings. You will be able to work longer, more intense intervals. You will run faster with improved recovery rates. These improvements will quickly convert to success and stamina inside the ring.

AM I WORKING HARD ENOUGH?

How do you know that you are running your intervals hard enough? This question is easily answered by your heart rate. You can either take your pulse from your neck or on your wrist, right below your hand. Let's go over how to determine your ideal heart rate for running intervals.

$220 - \text{Age} = \text{Maximum Heart Rate}$

$\text{Maximum Heart Rate} \times .80 = \text{Aerobic Heart Rate}$

$\text{Maximum Heart Rate} \times .90 = \text{Anaerobic Heart Rate}$

Now let's use real numbers. Our example uses a 20-year-old boxer.

$220 - 20 \text{ Years Old} = 200$

$200 \times .80 = 160$ - - *Your heart rate when exercising aerobically*

$200 \times .90 = 180$ - - *Your heart rate when exercising anaerobically*

When running intervals, a 20-year-old boxer should have a pulse of 180 beats per minute, according to the calculation above. You can quickly take your pulse

for 10 seconds then multiply by 6 to determine your beats per minute. Take your pulse in between intervals to ensure that you are working your hardest.

MORE EXAMPLES

We just discussed a program consisting of 5 x 3 minute intervals. You should not run this same routine each day. You must always look for variety in your routine to ensure continuous development.

I often integrate 2-minute intervals by running 600-meter sprints. Instead of doing 5 x 3 minute intervals (800 meters), try doing 6 x 2 minute intervals (600 meters). You would run 600 meters with a one-minute rest period between each interval. Repeat this 6 times.

Another example is to run 400-meter intervals. I enjoy running 400-meter sprints as they improve not only on your anaerobic endurance but also your explosive speed. Due to the shorter distance, it is best to run between 8 and 10 repetitions of 400 meters. After running 10 hard 400-meter sprints, you will definitely feel the **PAIN** and see the **GAIN**.

WORKOUT SUMMARY

- Ø 5 Intervals each consisting of 800 meters – 1 minute rest between each
- Ø 6 Intervals each consisting of 600 meters – 1 minute rest between each
- Ø 10 Intervals each consisting of 400 meters – 1 minute rest between each
- Ø 12 Intervals each consisting of 200 meters – 30 second rest between each

Words To Live By

Strength does not come from physical capacity. It comes from an indomitable will. - *Mahatma Gandhi*

FREQUENCY

Interval running will shock your system. If you have never run intervals before, these will leave you sore at first. Do not jump right into interval training if you have not been running at all. Always remember that you must have a foundation first before building the house. Build your foundation first before diving in headfirst. If you push yourself too soon, you will find yourself too sore to train. When you are sore, you do not train your best. Train smart so you do not waste valuable gym time.

Once you are in shape to run intervals, this does not mean you should run them each day. When I begin interval training, I perform these drills every other day. It is **NOT** recommended to run intervals on consecutive days. By doing so, you do not allow your body a sufficient period to recover and restore muscles fibers.

SPRINTS

Another great way to build explosive speed and anaerobic endurance is through sprint work. Interval work prepares you to sustain your anaerobic threshold throughout the course of the round. Sprints train you to be explosive in your combination punching. When you can combine explosiveness with sustained anaerobic endurance, you will be a dangerous person inside the ring!

A good sprint workout can be completed relatively quickly. It does not take long, yet is extremely stressful to the body. I do not recommend successive days of sprint training.

Most sprint workouts will consist of 10 – 12 separate sprints. I keep my sprints between 70 – 100 meters. I enjoy a wind sprint routine that consists of sprinting your set distance (70 – 100 m) then jogging back and continuing on with your sprints. When performing wind sprints, your body does not rest until you are done with the entire cycle. Your body has a slight chance to recover while jogging back before starting your next sprint. The routine would be as follows:

- Ø Sprint 100 meters
- Ø Jog back to starting point
- Ø Sprint 100 meters
- Ø Jog back to starting point ... (repeat cycle 10 times)

If you want to increase the intensity of this workout, substitute your jog back to the starting point with a backwards run. This way you sprint 100 meters, then run backwards to the starting point and continue on in this pattern.

Do not underestimate the benefits of this short, yet explosive sprint routine. You will gain more boxing specific benefits from this 10-minute workout than you will from jogging 5 miles.

Always remember when sprinting, you **MUST PUSH YOURSELF** to run as fast as you possibly can. These sprints are going to be difficult at first but you **MUST** push yourself through the workout.

Words To Live By

“The great end of life is not knowledge but action.” – *Thomas Huxley*

HILLS

Another great way to incorporate intense anaerobic conditioning is through hill training. Running hills can be an extremely effective way to increase your explosiveness, stamina, and leg strength. Hill running is a great way to strengthen your hamstrings and groin muscles. Hill running can be used as a substitute for sprint training. You will still be sprinting, only this time your sprints will be conducted uphill. It is important to constantly mix in a variety of training drills. I cannot overemphasize the importance of variety in your workout.

By changing your program, you will target different muscle groups, which will help to enhance performance.

When conducting hill sprints, I mimic the program listed for our sprint drills. I like to run between 10 – 12 sprints uphill. When you jog back to your starting position, remember to jog down the hill in a slow, controlled manner. Running downhill is a concentric movement that will cause more muscle soreness than the explosive upward sprint. For this reason, target your intensity while you are running upwards; relax your body when running down.

If you wish to increase the intensity, try running your hill sprints while wearing a weight vest. Many sports and fitness stores carry weighted vests that can be adjusted from 8 to 20 pounds. If you choose to purchase a weighted vest, only run with the vest when doing short distance hill sprints. These weighted devices are **NOT** meant for running extended distances. They are also **NOT** designed for use during interval work. If you choose to wear the vest, use it strictly for hill sprints (Weighted vests are also great during plyometrics drills which will be discussed in a separate section).

Running extended distances with a weighted vest will cause excessive stress on your joints and ligaments. We are looking to stress our muscles in a productive manner; running long distance with a weighted vest is unproductive.

What about ankle weights? Does it make sense to run with ankle weights? **NO.** Several years ago one of the fitness trends involved running with 3 – 5 pound ankle weights. The thought was that the extra weight would increase the strength and explosiveness of the leg muscles. Unfortunately, whoever was responsible for this training theory, did not closely analyze the important training principles listed previously. By running with ankle weights, you not only risk injury to joints and ligaments, but you train your body to operate at a slower pace.

As boxers, we train for explosiveness. We want to train our legs to move forcefully throughout our sprints and intervals. Ankle weights prevent us from this objective. The weighted vest does not violate this important principle of specificity because the weight is evenly distributed throughout our upper body. When we perform hill sprints, we are still able to drive our legs at an optimal rate.

If you do not have a hill close by, you can achieve similar benefits from running stairs.

COOL-DOWN

After each anaerobic running session, your cool-down should consist of the following:

Ø 400-800 meters of easy jogging

Ø 2-3 minutes of walking

Ø 5-10 minutes of stretching

AEROBIC RUNNING

Up until this point we have discussed several running techniques, all of which target your anaerobic endurance. Sprint work and interval running are designed to improve your anaerobic threshold, after all boxing is 70-80% anaerobic.

What about the other 20-30%? The answer to this question comes by way of aerobic conditioning and running. Clearly, our priority **MUST** be towards optimizing our anaerobic endurance and explosiveness. We are training in a boxing specific manner so we must focus our attention on what is most important. At the same time however, we must not completely neglect our aerobic system. Remember that the Use/Disuse Principle tells us to “use it or lose it”. This principle tells us that we had better focus some attention to our aerobic system so that we do not “**lose it**”.

Furthermore, if you have never been involved in a running plan, I suggest you first begin with an aerobic running program. Interval and sprint work is too intense to begin on Day 1. Rather, build up the necessary foundation to support the interval training “house” that you will soon become.

Once you have developed your foundation, always remember, we only fight 2-3 minute rounds. Do not get carried away with extensive cardiovascular/aerobic running. I recommend between 2 and 3 days per week of aerobic running. I personally recommend 2 days with the other days more focused towards interval/sprint/conditioning drills. I will cover the specifics of developing your own personal program in a later chapter.

Let's first determine whether or not we are running in an aerobic manner. The answer once again is determined by heart rate. Earlier we discussed optimal heart rates required to develop anaerobic stamina. We apply the same formula only instead multiply our maximum heart rate by .80 rather than .90.

220 – Age = Maximum Heart Rate
Maximum Heart Rate x **.80** = **Aerobic Heart Rate**

Now let's use real numbers:

220 – 20 Years Old = 200
200 x **.80** = 160 - - *Your heart rate when exercising aerobically*

When running aerobically, a 20-year-old boxer should have a pulse of 160 beats per minute. Remember that you can quickly take your pulse for 10 seconds then multiply by 6 to determine number of beats per minute.

When training to increase your aerobic endurance, you should run for a period of 20-30 minutes. This would equate to a 3-5 mile run (not jog). Notice how I have called this a run rather than a jog. Just because your distance is increasing, does not give you a free pass to take a leisurely paced jog. Rather, you **MUST** sustain an aerobic heart rate throughout the course of the entire run.

To maintain this heart rate, you must push yourself from start to finish. Always remember that boxing is a fast paced sport. Do not allow your body to adapt to slow, monotonous movements. I make a habit of moving quickly at all times. Every aspect of our training should be designed in a way that caters to a specific portion of our event.

If you are thinking that a 30-minute run sounds difficult, it should not be. I say this from a scientific standpoint. When running aerobically, you do not train with the same intensity and explosiveness as when training anaerobically. Aerobic training is much easier on your muscles. You will not experience the same break down of muscle fiber that is evident after an explosive sprint session.

ADDING SOME VARIETY

Words To Live By

"Make the work interesting, and the discipline will take care of itself." - E.B. White

If running for 30 minutes leaves you bored, I have a few solutions that will mix things up. First and foremost, do not always run in the same place. Mix it up a little and the run will go faster. Always look for ways to incorporate variety into your workout.

Furthermore, if you want to add both variety and intensity to your aerobic run, try incorporating some of the following.

Backwards Running – Backwards running not only eliminates boredom but also provides many sports specific benefits. Such benefits consist of improved muscular balance, improved neuromuscular function, and the development of a

stronger foundation for continued improvement. In addition, backwards running helps in the prevention of injury associated with normal “frontward” running.

Sideways Running (Skipping) – Try running/skipping sideways as another way to add variety to your run. I often skip sideways while throwing out straight punches as I go. Be sure to skip in both directions to ensure proportional development in the legs.

Karaoke Running – Karaoke drills improve both agility and strength in your hips. Boxing, like many sports, requires great hip action. You generate a great deal of power by rotating your hips with your punches. This drill helps condition those particular muscles. You can integrate this movement to add variety and intensity. As with sideways running, be sure to perform this drill in both directions to ensure symmetrical development.

Karaoke Running involves the following: Move sideways crossing the left leg in front of the body, rotating your hips to turn to the right. Step forward with the right foot and move the left leg crossing body in back while you turn the hips to the left. Step forward with right foot forward again. Repeat. Continue this drill in both directions. You will be in a sideways position the entire time.

When incorporating these movements in your aerobic run, perform each for a designated time period. For example, run frontward for 3 minutes, before performing each of alternate form for 1 minute (backwards 1 minute, sideways 1 minute etc...)

SHOULD I RUN MORE THAN 4 or 5 MILES?

I have a lot of boxers ask whether they should increase their distance runs to 6, 7, or even 8+ miles. The answer is an emphatic **NO**. From both a scientific and sports specific standpoint, these increased distances simply do not make sense. Running these extra miles will detract from your performance rather than improve it.

Earlier I spoke of our genetically predisposed ratios of white (fast twitch) to red (slow twitch) muscle fibers. While this number is determined primarily due to genetics, you can still alter these ratios **NEGATIVELY** through extensive aerobic training. Excessive aerobic training teaches your body to become an “aerobic machine”. You actually convert explosive white fiber to less explosive, endurance oriented red fiber. Through extensive aerobic training, you promote this crossover of muscle fiber.

By converting your system to an aerobic machine, you stray away from the specific criteria required to excel inside the ring. For this reason, do not get carried away with your distance running. Keep a fast pace and limit aerobic runs to 2 or 3 days per week.

IMPORTANT NOTE...

Many athletes like to finish intense sprint and interval drills with a light jog to cool muscles down. As mentioned earlier, I suggest warming down with a light jog between 400-800 meters. Do not exceed this distance for your cool-down period.

If you have played other sports such as football or soccer, you probably remember conducting the “team jog” at the conclusion of practice. This mentality of jogging after your workout has been ingrained in your head... Well I am here to “knock” some sense into you. Jogging at the end of your intensive training days is **WRONG**.

Words To Live By

It is possible to fail in many ways...while to succeed is possible only in one way.
Aristotle

Whenever you train two opposing systems (*aerobic & anaerobic*), always finish your routine with the system that is most specific to your event. Our event is boxing so let's look at an example. Suppose you wish to train both aerobically and anaerobically in the same training session. While I do not recommend this approach, suppose that you must miss a training session later in the week. You instead elect to perform two days in one. This is all hypothetical of course because after reading this book, you will **NOT** miss another workout!!

Anyways, let's suppose you plan to run three miles as well as complete 10 x 100 meter sprints. Your initial thought may be to sprint first. After all, these drills are much more difficult so you wish to complete them first. You then plan to finish with a long run.

Unfortunately, this method of sprinting first, followed by aerobic conditioning is **WRONG**. Your body adapts and responds best according to the latter portion of your workout. Whatever you end with, your body adjusts most positively to. Since we are boxers, our primary concern is maximizing our anaerobic conditioning levels. Aerobic conditioning is a distant secondary objective. For this reason, if you do both, **DO NOT END WITH AEROBIC TRAINING**. I do not recommend that you mix aerobic and anaerobic training days. If you must, finish with anaerobic movements.

WHERE SHOULD I RUN?

Now that we have discussed the essential ingredients of a boxing specific running program, let's quickly review the best places to run...

Grass – I prefer to run on the grass whenever possible. Grass is much softer than pavement, providing a cushion for your feet, knees, hips, and lower back. I do the majority of my running on a soccer/football field. The yard markers clearly denote distance, which is convenient for sprint and interval work.

Track – Another great place to run is a track if you have one close by. Once again, the track is great for your feet and easy to monitor interval distances. I recommend a track for sprints and interval work.

Concrete/Pavement – Running on the road is often the only option that we have. I grew up running the sidewalks for much of my early boxing career. Unfortunately, running on pavement can be detrimental to your muscles and tendons. I used to suffer from a sore Achilles tendon due to excessive running on the road. Another downfall is the difficulty in properly monitoring distance for your sprints and intervals. All in all, if you run on the pavement it will not kill you, but if the track is available, go for it.

Treadmill – I personally dislike running on treadmills. I find the treadmill to be extremely boring. In addition, the treadmill will not provide the same degree of intensity required for intervals and sprints. In addition, you cannot run backwards or sideways on a treadmill. If it is cold outside, you need to toughen up and get out to run. Remember this is boxing, the sport of warriors!

Sand/Beach – A lot of guys like to run on the beach if one is accessible. Running on the beach can really provide a great burn for your lower leg muscles. Unfortunately, the beach violates the law of specificity (just like ankle weights) by teaching your legs to move at a slower pace. I suggest that you avoid the beach. We do not run to impress skimpily clad onlookers; we run to win fights.

WHAT TIME SHOULD I RUN?

A lot of guys have asked me what time is best to run. Should I run in the morning or at night? Before the gym, or after the gym? While I cannot say there is only one time to run, I believe in running in the morning if possible. By running early in the morning you have the entire day to recuperate before hitting the gym in the evening.

I know that it can be difficult to wake up and run at 5:30 in the morning, but I will testify to its benefits. Once you start running early, you gain a sense of motivation by knowing that 99% of the world is sleeping and dreaming while you put yourself through brutal interval training drills. When you start to run seriously in the morning, you become part of an elite group of fighters. By waking early, you prove your commitment and dedication to the sport. Waking up early is not difficult once you get accustomed to it. It is all about habit. Once you have run for a week, it will become part of your usual routine. Force yourself into the habit and it will become the norm.

There will always be those individuals that are unable to run in the morning either because of a late shift job or family responsibilities. For those individuals that absolutely cannot run in the morning, you must incorporate your running before or after your gym workout.

Before The Gym – Running before the gym will leave you tired for your workout. The advantage of running before however is that you are less likely to skip your roadwork after leaving the gym exhausted. I do not recommend running intervals or sprints before the gym on days that you must spar. You do not want to enter the ring tired before the first round begins.

After The Gym – If I had to choose, I would elect to run after the gym. You can take a break after training to eat, before running later in the evening. In addition, you will enter the gym fresh to concentrate on your sports specific conditioning, skill training, and strength routines. The only potential disadvantage is that your mind might convince you that your workout was sufficient enough to skip your run. After skipping once, it can become a habit. This kind of habit will hurt you in the fight.

IF I RUN IN THE MORNING SHOULD I EAT FIRST?

A lot of fighters have asked whether or not they should eat breakfast before their morning roadwork session. Let's explore our options... Often, we do not have the luxury of eating before our run due to time constraints. While eating first may provide benefits, you must wait at least an hour after you eat before you begin your run. By eating first, you will have additional carbohydrates available for energy. Unfortunately, this is not an option when you are crunched for time.

Rather than eat first, I suggest you start your morning with an athletic sports drink such as Gatorade. Stick to a sports drink that is low in sugar. Gatorade will provide energy and valuable electrolytes. Such a drink will keep you hydrated allowing you to work at an optimal rate prior to your morning meal. After your hard work is done, you may enjoy a healthy meal while the rest of the world continues to sleep.

WINDING DOWN TOWARDS THE FIGHT

Interval and sprint training are extremely stressful to the body. For this reason, I avoid these drills the week of a fight. It is important to reduce your running leading up to the fight. If I fight on a Saturday, I finish my interval work on Monday or Tuesday. This all depends on your conditioning level. If intervals leave you extremely sore, stay away from them before the fight. You do not want to leave your strength on the track. You need your strength for fight night. I continue running up until two days before my fight. The day before my fight I will relax my legs completely. Two days before, I will take a light jog just to loosen up

and stay relaxed. On the Wednesday before, I will focus on an aerobic run with an occasional 50-foot sprint just to keep my anaerobic system involved.

We will discuss pre-fight preparation in greater detail in a later chapter but it is important enough to mention twice. You do not want all of your hard work to be wasted by over training your final week. It is important to train hard but equally as important to train smart.

Finally, before moving on to our next section let's quickly review what you need to get started on your new boxing specific running program.

EQUIPMENT CHECKLIST

- Ø *Running Shoes* - Do not skimp on your shoes. Quality shoes will prevent injuries and soreness, two factors that counteract our training.
- Ø *Stopwatch* – Get yourself a good stopwatch to keep track of your running times. This is especially important when timing intervals and rest periods. Monitor your times each day so you can track your improvement. This will help to determine if you are achieving your goals.
- Ø *Weighted Vest* – Consider purchasing a weighted vest if you really want to increase the intensity of your hill sprints and plyometrics drills (discussed later)

Now you are ready to go. Do not worry about the weighted vest at first. The interval and sprint drills will keep you busy for quite some time before it is necessary to implement a hill routine that includes a weighted vest.

Roadwork has always been an integral component of boxing training. For years, fighters have gone about running “*ass backwards*”. Now that science and technology have advanced, so have the conditioning levels of today's fighters. If you want to keep pace, you must implement these advanced running routines.

If you have been doing it wrong all along, have no fear. It will not take you long to get back on track.

QUICK SUMMARY

- Ø Intervals and sprint/hill training improve anaerobic conditioning
- Ø Intense interval training should not be completed on consecutive days
- Ø Aerobic running should be for 20-30 minutes, 2 – 3 days per week
- Ø If you have never run before, begin with aerobic running to build a foundation to prepare for more intense anaerobic training drills.
- Ø Mix variety into your aerobic run

STRENGTH TRAINING FOR BOXERS

When two equally skilled boxers square off with each other in the ring, the stronger man will usually win. In boxing, strength translates into both punching power as well as the ability to “manhandle” your opponent while fighting on the inside. The old phrase “speed beats power” may be true but speed rarely beats a combination of speed **AND** power.

So how do we improve our strength without sacrificing speed? The answer comes by way of a properly designed weight program. A properly designed strength training program does not mean walking into the gym and playing with some dumbbells. Rather, we must design a program that will aid in the specific requirements of our sport.

Let's briefly review what these specific are... As boxers, we compete in a ballistic sport. We require anaerobic endurance, along with speed and power. We must continue to perform at peak levels, round after round. To do so, we must recover quickly during our 1-minute rest periods. When boxing, we must constantly punch, move, duck, and weave. Strength training can prepare our bodies for the rigors it will endure while inside the ring.

WHY DO MOST BOXERS AVOID WEIGHTS

For years, weight training has been associated with slow, bulky fighters. Many trainers today condemn the thought of weight training for fear it will cause their fighters to become slow and less agile. Unfortunately, these trainers have not kept pace with the scientific advances in training and conditioning evident in other sports such as basketball and football. Consider that the National Football League has 300-pound football players that run the 40-yard dash in less than 5 seconds. These very same football players are often capable of bench-pressing more than twice their body weight.

Let's quickly review five weight-training **MYTHS** that continue to live within most gyms today.

MYTH #1 - *Weight training will make the boxer slow*

Science has proven that weight training can actually help to increase your speed and explosiveness. A properly developed weight program will **NOT** sacrifice the speed of the boxer. (*Consider the fast sprinting football player mentioned above*)

MYTH #2 - *Weight training makes muscles tight, more prone to fatigue*

A proper weight training routine will increase your stamina and strength. Muscle soreness is caused from over training and poor nutritional habits.

MYTH #3 - *Weight training is only beneficial with light weight and high reps*
Weight training for boxers should actually be the opposite. High repetitions will only work to slightly increase your aerobic capacity. This form of training will do little to increase your explosiveness and power. The boxer must perform medium to heavy weight lifts, with fast, ballistic movements. We will discuss the specifics later in this chapter.

MYTH #4 - *Weight training decreases flexibility and range of motion*
Proper weight training will actually increase your range of motion and provide greater flexibility! You must perform all exercises with a full range of motion and stretch the muscles when you are finished.

MYTH #5 - *Boxers do not have time or a need for weight training*
EXCUSES!! If you feel that you have no time for strength training, make time for LOSING! A boxer must do many things to be successful such as running, sparring, fighting, and strength training. One element alone will not make a champion; rather an integrated, combined approach is necessary. Remember that strength training alone will NOT get you in shape to box, however it can help your overall training plan.

Words To Live By

"He who hesitates is a damned fool." - Mae West (1892-1980)

Be sure to read these myths closely. It is important to understand the scientific facts of strength training so we can apply these concepts to our boxing specific program.

WHAT WEIGHTS WILL NOT DO

Before we begin, let's first clear the air about what strength training will NOT do for the boxer. It is important to remember that a proper weight program is only a supplement to the overall conditioning of a fighter. Remember the Principle of Specificity that states in order to improve at boxing we will need to box. Weight training alone will not make you a better boxer. Rather, it is one piece of the much greater puzzle that forms the overall fighter. Strength is just one of many attributes that you will need to become a successful fighter. It is an important attribute that serious athletes will not neglect. If you are serious about boxing, you must be serious about strength training.

THE SPECIFICS

As boxers, we must lift weights in a manner that specifically improves our performance. We partake in several forms of training such as running, plyometrics, boxing specific drills, and of course strength training. We are different from bodybuilders whose sole purpose is to add muscle mass. For this

reason, our training regimen will differ greatly from that of a bodybuilder. Always remember, we train with the intention of improving our boxing performance. We need to maximize our strength while remaining in the confines of our weight class.

For example, I box as a Welterweight (147 pounds). I want to become as strong as I possibly can without increasing my body weight. I will look to maximize lean muscle mass without exceeding this weight limit. To do so, I must keep my body fat to minimal levels to allow for as much muscular growth as possible. It is possible to improve our speed strength, explosiveness and lactate threshold without gaining weight.

THE DEFINITION OF STRENGTH

Strength is a universal requirement of all athletes. It is an essential ingredient to the success of a boxer. Yet, strength is a misunderstood principle, particularly in boxing. Our strength program must be carefully planned and executed.

Strength is the ability to contract your muscles with maximum force. It is your ability to exert force against an external object such as a barbell or when boxing an opponent. There are several categories of strength, each important to the overall performance of the fighter. Some forms of strength are less pertinent than others in relation to boxing. One common denominator among all peak performance boxers however is a higher than average level of sports specific strength. We will focus on developing the specific forms of strength required for boxing. Let's briefly discuss the primary categories of strength:

Limit strength: Limit strength is the amount of musculoskeletal force you can generate for one all-out effort. This is the strength that is often referred to as your "maximum" lift. Limit strength is the foundation upon which all sports specific strength will build. It is important to have a solid base of limit strength in all muscles before engaging in serious explosive strength training. An adequate level of limit strength will help us to reach higher levels of speed strength and anaerobic strength.

Speed Strength: Speed strength is our ability to apply force with speed. It is critical to anaerobic athletes such as boxers. Speed strength refers to our ability to stimulate fast-twitch muscle fibers for motion. As our speed strength improves, so does our ability to activate fast-twitch muscle fibers for explosive punching power. Speed strength is broken into two categories: *Starting Strength* and *Explosive Strength*.

Starting Strength: Starting strength refers to our ability to activate as many muscle fibers as possible. This is your ability to instantaneously deliver a fast knockout punch or to sprint across the track. Starting strength is more specific to our sport than limit strength. Many power lifters who can lift immense weights

are unable to use their strength in a productive manner (running, jumping, punching, etc...). To make use of our power, we must maximize our starting strength.

Explosive Strength: Explosive strength refers to our ability to leave our muscles fibers "activated" or "turned on" once we have initiated an action. For example, a sprinter that begins his race with awesome speed and power exhibits "*Starting Strength*"; if he can maintain this explosiveness and speed, he is exhibiting "*Explosive Strength*". In boxing, this refers to our ability to sustain our speed and explosiveness throughout the fight. It is not enough to just throw fast combinations in the beginning of the fight. Rather you must display explosiveness throughout the course of the bout.

Anaerobic Strength: Earlier we defined anaerobic activities as those conducted without oxygen. We also stated that boxing is 70-80% anaerobic in nature. This means that our muscles perform the majority of their work without oxygen. Your muscles operate and build what is known as an "oxygen debt" that your body "repays" in between rounds through breathing. With proper strength training, we can increase our anaerobic strength, thus increase our ability to continue punching round after round.

As you can see, there are several categories of strength. Each form requires a unique method of training. As boxers, we must integrate a program that touches upon each form of strength, while paying particular attention to our specific needs (anaerobic strength and speed strength). This combination is known as ballistic training. Ballistic movements are those that are conducted at high velocities. Our ballistic training program will involve plyometrics, weight lifting, jumping, throwing, and punching drills. Ballistic training is sport specific for the boxer.

With this said, it is important to realize that you must first build a proper foundation before beginning ballistic strength training. The advanced techniques and conditioning drills discussed later are extremely stressful to tendons, ligaments, and muscles. A detrained athlete (one that is not accustomed to strength training) is at great risk for injury during ballistic training. For this reason, we must break our strength training program into different phases. Personal trainers refer to these phases as "*Mesocycles*". Each *mesocycle* will consist of 3-4 weeks. Different *mesocycles* are grouped together to form a larger "*Macrocycle*".

This form of training is often described as Periodization. Periodization involves periods of time where different objectives are targeted in training. For example, in year-round sports such as boxing, we must structure our training programs so that we "peak" at the most appropriate time. Periodization training helps athletes to attain their best physical performance level at an optimum time. A true athletic peak only lasts about **three weeks** and there is a limit to the number that can be

attained in a single sporting season. A typical boxing training cycle is divided into four phases: *Base Period*, *Preparation*, *Pre-Competition*, and *Competition*.

The ***Base Period*** is used to develop a foundation of muscular strength and cardiovascular strength. We must prepare our body for the rigors of a serious training camp.

The ***Preparation*** phase will focus more on heavier weight lifting and anaerobic endurance. We will focus on explosive strength and power while simultaneously practicing skill enhancing drills such as mitt work and sparring. During this phase, we want to maximize our explosiveness while improving our skills for competition.

During the ***Pre-Competition*** phase, we will maximize our explosive strength while continuing to focus on anaerobic endurance and plyometrics. We will simultaneously integrate sports specific conditioning and skill enhancing drills.

Finally, the ***Competition*** phase will focus more on intense plyometrics and maximum anaerobic threshold training. We will integrate complex training routines, circuit training, and intense boxing specific conditioning drills. This period will lead into our peak performance period... **FIGHT TIME!!**

An additional training phase known as the ***Transition Period*** is a time of rest and recovery. During this time, we must stay in the gym to maintain fitness levels. In boxing, we often lack rest between bouts as we are expected to fight frequently (particularly in the amateurs). Often we must switch back and forth between the *Pre-Competition* and *Competition* cycles for extended periods of time. The important concept of the *Transition* phase is to allow your body adequate time to rest and recover following an intense competition. Certain national amateur tournaments require the athlete to box on six consecutive days. Following such a competition, it is important to allow the body adequate time to recover.

Periodization is an important concept to understand when seeking to maximize performance. If you want to improve your performance, you must not train the same way all the time. If you do, your body will adapt while your fitness level settles or declines. If you fail to change your program, you could train into the next century without improvement. Hoping to maximize performance without changing your program is like expecting to become an automobile mechanic while only pumping gas into your vehicle. Rather, the aspiring mechanic must learn each distinct part of the automobile. The aspiring boxer must work to maximize certain areas of performance in an ever-changing training program.

For example, suppose you have a fight that is 12 weeks away. You could divide your strength routine into four separate 3-week periods. At first glance you may

read of *macro* and *mesocycles* and be thinking, “*What the heck is he talking about? I just want to box*”... Do not make this mistake!

In order to maximize your performance, you must learn these important concepts that form the backbone of all training programs. A lot of guys ask questions such as “What should I do for weight lifting”... They ask these questions expecting a short answer. Unfortunately, a short answer will only lead to short-term results. You must learn the importance of altering your workouts every 3-6 weeks. You cannot simply continue to train the same way and expect to see continued improvements. If you lift weights the same way every day, you will eventually reach a plateau where improvements level off. To avoid this problem, you must focus on different training cycles.

First, you may focus on developing your limit strength to build a foundation. Once this objective is met, you may wish to focus more time towards developing your explosive speed. To do so, you will need to lift weights **DIFFERENTLY** than you would while focusing on limit strength. “Variety is the spice of life” as well as the key to continued improvements in training. You must continually alter and tweak your workouts to achieve uninterrupted progression.

If you plan to maximize strength, power, speed, and endurance, you will need to cycle your training programs. Cycling your training is the **BEST** system. For this reason, we will focus on a cycled training routine to be the best. You simply cannot focus on every aspect of strength training at once. As boxers we must box. We do not wish to spend inordinate amounts of time in the weight room and detract from our skill training and sparring.

Words To Live By

"Obstacles are those frightful things you see when you take your eyes off your goal."
Henry Ford

BOXING IS A COMPLEX SPORT

Do you remember when I said boxing is a complex sport? Now you are starting to realize that boxing training is complex as well. No need to panic... My sole purpose is to shed light on the confusion regarding boxing training. We are here to answer all of your questions so relax and read on...

To be the best does not simply mean you train longer than anyone else. If you were to conduct plyometrics, strength training, boxing, running, speed drills, etc. all into one workout, you would quickly become over trained. When you over train, you tear down muscles by robbing them of their ability to recover and improve in both size and strength. When you begin a weight training program, you must consider its impact on the rest of your training routine. For example, you will not be able to lift weights every day and still expect to spar at your optimum level. Whenever you add a new component of training such as weights,

you must consider how it will affect other aspects of your program. For example, I would not want to lift heavy weights before I conduct my sprint and interval running. You need to balance your training objectives to create the overall perfect package.

In a later section (*PUTTING IT ALL TOGETHER*) I will thoroughly discuss the specifics of creating your own training program. I do not wish to overflow you with information or add to your confusion. Rather, I need to inform you of the dangers associated with over training. It is important to push yourself hard in the gym without overexertion and injury. Injuries and extreme soreness take away from our ability to perform at our best.

Let's now look at how we develop each category of strength.

Limit Strength = Optimized through heavy resistance training with moderate repetitions. It is best to work with 80-85% of your maximum lift for 3-8 repetitions. As boxers, we must develop limit strength for a foundation but it is not our primary objective.

Starting Strength = Optimized through moderate resistance training, plyometrics, and running drills. When lifting, use weights between 50-70% of your maximum for 8-12 repetitions. Push the weights in an explosive manner. Concentrate on moving the barbell or dumbbells with speed throughout the movement.

Explosive Strength = Optimized through moderate – high resistance training, plyometrics, and running drills. Increase the weight to 70-80% of your maximum for 6-10 repetitions. These exercises should be performed “explosively”.

Anaerobic Strength = To increase anaerobic strength, we must delay the process involved in fatigue while simultaneously improving recovery times. Anaerobic strength is best improved through boxing specific training drills that mimic the work-to-rest ratios of our sport. When weight training, you must focus on ballistic movements with weights between 50-70% of your maximum. This form of lifting will increase your strength while interval and conditioning drills will add to overall anaerobic endurance. In addition, supplements such as Creatine and Inosine will help you to work at a high intensity rate for longer periods of time. (*I will thoroughly discuss Nutrition and Supplementation in a later chapter*)

These are the primary forms of strength training. As boxers we will focus on each form with an emphasis on starting strength, explosive strength, and anaerobic strength.

HOW OFTEN SHOULD I LIFT?

As boxers, we must satisfy several requirements through our training. Unlike pure “bodybuilders”, we must focus on more than gaining muscle mass. Boxing

is a skill sport that requires practice inside the ring. This means you need to spar, hit the heavy bag, shadow box, run in the morning, etc... The list goes on and on. For this reason, we must fit a strength program into our schedule without sacrificing valuable skill based training objectives. I recommend lifting weights two days per week. I typically lift weights between one and three days per week depending on how close I am to a fight. My strength program integrates weight training and explosive plyometrics all in one workout. I will explain the specifics of this complex routine later in this book.

If you lift more than two or three days per week, you will begin to eat into your boxing specific training and conditioning. You also run the risk of over training.

Words To Live By
"I'll sleep when I'm dead." - Warren Zevon

GETTING STARTED

Earlier we discussed the development of a training cycle (*mesocycle*). Our training programs will gradually increase our overall strength and performance.

Do not allow new terminology such as “*mesocycle*” or “*macrocycle*” to confuse you. Instead focus on the concept of constantly adapting your training to more closely meet your competition needs. First we build the foundation, next we introduce some explosive movements, and finally we become purely ballistic. Boxing is ballistic in nature so this is where our training must take us. If we begin with ballistic training, without first developing a solid foundation, we are asking for injury.

THE ENTIRE BODY

Boxing is a sport that utilizes muscles across the entire body. You must develop strong legs, back, stomach, arms, chest, and shoulders to be successful in the ring. For this reason, I recommend a complete body workout when performing your weight training. Many bodybuilders break their training into separate body parts as shown in the following schedule:

Monday/Thursday	Tuesday/Friday	Wednesday/Saturday
Chest	Back	Shoulders
Triceps	Biceps	Legs

In this training program, the bodybuilder lifts six days per week with rest on Sunday. Weight training is his primary form of training. As boxers, we have much different needs, thus train in a unique fashion. Our program will focus on adding strength without the bulk desired by the bodybuilder.

On days that we are not lifting weights, we will conduct anaerobic conditioning drills as well as sprints and interval running. We do not need to lift weights each day.

A common weight training program for boxing is conducted on Wednesday and Saturday. On each day we would focus on strengthening the entire body. Once we have developed a relative degree of foundation strength, we will begin to incorporate plyometrics and conditioning drills into our weight program. We will integrate power, speed, and anaerobic strength training into one session. This entire workout is easily completed in less than one hour. I will discuss these intense complex workouts soon.

First, let's review the concept of a training cycle (*mesocycle*) with a brief example. After this example, I will present illustrations of a variety of strength training exercises.

In this example, let's break up our training period into four 3-week periods. This could of course be changed to three 3-week periods etc... We do not always have 12 weeks to prepare so flexibility is important when designing your own programs.

Words To Live By

"It's not the size of the dog in the fight, it's the size of the fight in the dog."
Mark Twain

Mesocycle 1 (Weeks 1-3)

Wednesday & Saturday Weight Training

When starting your first weight training program, it is important to build your foundation. You must develop strength throughout your entire body to prepare for the vigorous complex training that will take place during advanced *mesocycles*. We want to build our foundation on rock, not on sand!

This introductory mesocycle will focus on the following:

- Ø Improve general strength throughout major muscle groups
- Ø Increase muscle mass relative to body weight
- Ø Work to overcome weaknesses (ex. Weak legs will require more squats)
- Ø Reduce body fat
- Ø Introduce light plyometrics in weeks 3 and 4

In this introductory cycle, focus on lifting 50-65% of your maximum lift.

This cycle is purely to prepare you for the **"PAIN"** that my conditioning drills and anaerobic training will bring! This book is all about performance enhancement. In order to enhance your performance, you are going to have to WORK!

Mesocycle 2 (Weeks 4-6)

Wednesday & Saturday Weight Training

Moving into the 2nd mesocycle, you will have established a solid foundation to build from.

This mesocycle will focus on the following:

- Ø Improve limit strength in major muscle groups
- Ø Introduce speed strength weight training
- Ø Begin anaerobic threshold training
- Ø Increase the intensity of plyometrics drills

In this mesocycle, we split our training intensity between our two workouts per week. For example, on Wednesday, the focus will be on lifting heavy weights to improve overall limit strength. To achieve this objective, we will lift close to 80% of our maximum for approximately 6 repetitions.

On Saturday, our focus will shift towards speed and anaerobic strength training. We will lift weights between 55-70% of our maximum. We will also integrate more intense plyometrics within our strength routine.

Mesocycle 3 (Weeks 7-9)

Wednesday & Saturday Weight Training

The third mesocycle will add to the explosive training that we began in weeks 4-6. This mesocycle will focus on the following:

- Ø Maximize explosive strength
- Ø Integrate intense, weighted plyometrics and medicine ball drills
- Ø Continue anaerobic threshold training

In this mesocycle, we will focus on maximizing explosiveness by lifting weights that are 70-80% of our maximum, for 6-10 repetitions. In addition, we will continue to perform intense plyometrics. These three weeks will be extremely intense to maximize the explosive power that will translate in knockout punching power!

Mesocycle 4 (Weeks 10-12)

Wednesday & Saturday Weight Training

Our final mesocycle will focus on complex training as we begin to phase out our heavy weight training. It is best to begin phasing out heavy weight training between 14 to 21 days prior to a bout. This phase out period is important. We do not want to leave all our power in the weight room. It is more important to bring our power to the ring!

This mesocycle will focus on the following:

- Ø Maximize anaerobic conditioning
- Ø Maximize ballistic training with weighted plyometrics and medicine ball drills
- Ø Heavy weight training is replaced with intense sports specific conditioning

This cycle will not include heavy weight training. Instead, we will opt to maximize our anaerobic and ballistic conditioning. These drills will be discussed in detail in the next two chapters, *PLYOMETRICS* and *CONDITIONING DRILLS*. In addition, perhaps the most important chapter, *PUTTING IT ALL TOGETHER*, will explain how to integrate each aspect of training into one universal program. Designing a program that includes plyometrics, weights, conditioning drills, skill enhancement drills, heavy bag work, and sparring is a complicated task. After all, there are only so many days a week! Have no fear; I will take care of the complexity for you...

First let's discuss the primary exercises with illustrations to demonstrate form. I will then discuss what exercises you need to include in your workout.



Power Clean Press (1) Power Clean Press (2) Power Clean Press (3)



Power Clean Press (4)

Power Clean Press – This movement incorporates each muscle group. Steps 1-3 should be one continuous movement. Start to straighten your legs as the barbell lifts off the floor. Extend the hips forward as the arms begin to bend. As the body straightens between steps 2 & 3, continue the bars ascent by pulling upward with the arms. When the bar reaches its highest point, bend the knees and “catch” the bar with your upper chest and shoulders (Part 3). Press the bar upward as shown in Part 4.



Squats – Squats are the most important lower body exercise. Stabilize your torso by contracting your abdominals and back. Do not bend your trunk forward more than 45 degrees. Keep your heels on the floor as you drive the weight upward. Lower the weight as low as you feel comfortable. Stop when your quadriceps (thighs) are approximately parallel to the floor. Point your feet slightly outward. You can vary the width of your stance to target different muscles.



Lunges – Alternate legs when performing the lung. Do not allow your knee to extend over your toe on your front foot. Perform this exercise for each leg. You can add variety to this movement by walking while you lung. Walk across the gym with dumbbells in hand while “Lung Walking”.



Step-Ups – Step up with one leg at a time onto a raised surface such as a bench or a chair. You will lift your entire body upward so both feet stand atop the bench. Hold dumbbells in hand to increase the intensity.



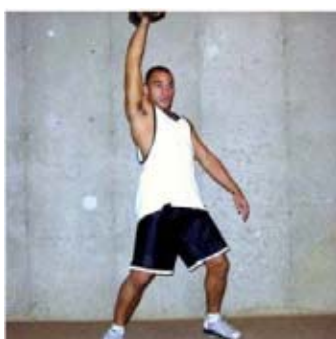
Calf Raises – Rise up on your toes to work the calf muscles. I perform this exercise with dumbbells in hand as I rise on my toes. In the picture, I am standing on two separate weight plates to increase my range of motion.



Weighted Toe Touch – Reach down to the toes while bending your lead knee. Step to the side as you initiate the movement. Perform this exercise in each direction.



Raise Ups – Lie flat with one knee up. Lift your straight leg off the ground. This exercise targets the hamstrings and butt. Perform this exercise for both legs



One Arm Clean Press – This exercise is similar to the Power Clean Press but is performed with one hand at a time. Snatch the dumbbell up from the ground in a fluid motion until you press from your shoulder



Good Mornings – This exercise targets the lower back. Be very careful when performing this movement. Start first without weight until you increase in strength



Bent Over Rows – Keep your knees bent and back straight as you perform this upper back exercise. You can perform this exercise with either a barbell or dumbbells.



Pull-Ups and Chin-Ups – Perform both pull-ups and chin-ups. This picture illustrates the pull-up as my palms face outward. Chin-ups work more of the biceps muscle as your palms are turned toward the face. Perform pull-ups with a wider grip to focus on the upper back. Utilize a narrow grip to work more shoulders and arms.



Upright Rows – This is a great exercise to strengthen your shoulders and neck. I highly recommend this exercise for all boxers.



Straight Arm Raise & Hold - Begin this exercise with the barbell down by your waist. Lift the bar so that it is extended out in front of your face. Hold for 5-10 seconds before raising the bar above your head.



Squat Press – Perform this exercise with dumbbells. This is a combination exercise that integrates both a squat and shoulder press. Squat on the way down, while thrusting up and pressing at the top.



Shoulder Press – Notice how my palms are turned toward my face when beginning this exercise. Turn your arms in a corkscrew motion as you press the weight upward. This exercise is excellent to target the shoulders.



Bench Press (Flat and Incline Bench) – This exercise targets the chest. You can perform this exercise on a flat or inclined bench. The incline will shift emphasis to the shoulders.



Close Grip Bench Press – This is a great exercise to target the triceps muscle. It will work some chest as well but is more focused on the triceps. The triceps are an important muscle for punching as you extend and snap your arm toward your opponent.



Triceps Extension – This is another exercise to target the triceps. Keep your elbows in a stationary position throughout the movement.



Seated Triceps Raise – Elevate your feet and secure a weight across your legs. Lift up with your arms to target the triceps. This exercise can be performed anywhere with two chairs.



Biceps Curl



Hammer Curl

Biceps Curl/Hammer Curl – Keep your elbows stationary and curl the weight from waist to chest. The Hammer Curl is performed with dumbbells with the thumb on top as illustrated. Hammer Curls work the forearms and biceps.

Dive Bombers – Dive Bombers are one of the most effective “weight free” exercises available. Begin in a pushup position but lift your backside into the air. Next flare your elbows out and lower your nose towards an imaginary spot in front of you. Then flatten yourself out as if you were sliding underneath a bar. Finally, “dive” your head upwards towards the sky. Return to starting position.



PUSHUPS

Pushups have always been a great, convenient way to strengthen the chest, shoulders, and arms. Below we have illustrated several variations to this traditional exercise. First, we begin with a conventional pushup. Your hands should be approximately shoulder width apart.

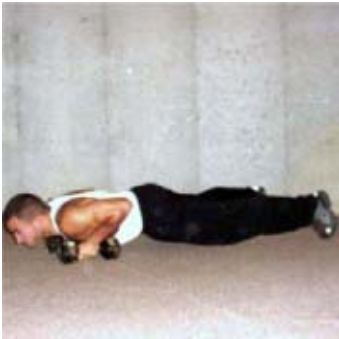
To emphasize the triceps use a closer grip as illustrated in the middle picture below. As your strength increases, shift your hands further up your body until they are positioned under your face. The intensity increases as you move your starting hand position towards your face. A third variation involves elevating your feet onto a chair or bench. By raising your feet, you raise the intensity.



Depth Pushup – This is one of the most difficult pushups. You will elevate your feet while performing the pushup between two chairs. The chairs allow you to achieve a more complete range of motion. This advanced exercise will shock your chest and arms.



Ball Pushups – Use either a basketball or medicine ball. Complete with one hand on the ball or both. This exercise will increase strength and balance. If you use one hand, be sure to exercise both sides evenly.



T Pushup – With dumbbells in hand perform a pushup. As you come up, twist and raise the dumbbell over your shoulder. Be sure to work both sides evenly. This exercise builds strength and coordination.

REVIEW

The preceding exercises have covered all major muscles groups. We rely on each muscle group when boxing. For this reason, we must develop sufficient strength across our entire body. The primary muscle groups are as follows:

- | | |
|--------------|----------------------------|
| Ø Biceps | Ø Neck |
| Ø Triceps | Ø Chest |
| Ø Forearms | Ø Abdominals |
| Ø Shoulders | Ø Quadriceps (Thighs) |
| Ø Upper Back | Ø Hamstrings (Back of leg) |
| Ø Lower Back | Ø Calves |

The exercises above target each of these muscles. Perhaps the best exercises available are the Squat and Power Clean Press. Between these two movements you are able to work your entire body. These exercises develop awesome power throughout the legs and upper body. They are advanced however and should not be performed until a sufficient level of general strength has been achieved.

I will discuss the specifics of developing your own weight lifting routine in the section *PUTTING IT ALL TOGETHER*.

SUMMARY

Strength training provides numerous advantages to the boxer. When two equally skilled fighters box, the stronger man is often victorious. Strength training allows us to simultaneously increase strength, speed, and power. The most important

forms of strength for boxing include speed strength, explosive strength, and anaerobic strength. To increase these forms of strength, we must exercise at an intense pace. Before we begin such training, we must develop a solid foundation of general and limit strength. Failure to do so will result in injury.

Our strength training routines must coincide with our boxing objectives. It is best to pattern our strength programs with distinct training cycles, each emphasizing a particular form of strength. The primary phases involved in a training cycle (*macrocycle*) include a Base Period, Preparation, Pre-Competition and Competition Phase. Our training objectives must lead us to peak performance levels at fight time. Training peaks typically last 3 weeks. We must look to achieve these peak levels at competition time. The only way to consistently peak our performance is through targeted training cycles.

As boxers, our weight training differs from bodybuilders and power lifters. We must maximize strength while remaining within the confines of our weight class. We must also not allow strength training to detract from our skill and conditioning routines. Strength training is only one element of a much more complete boxing training routine. We must integrate several elements into one complete routine to maximize our performance.

PLYOMETRICS AND MEDICINE BALL TRAINING

Weight training alone will not maximize our speed and power. In our last chapter, we discussed several forms of strength. As boxers, we must focus on developing and maximizing our speed and explosiveness. By doing so, we will transform our body into a power punching machine.

To make these goals a reality, we need to introduce plyometrics and medicine ball training. Plyometrics consist of a variety of exercises that enhance starting speed, acceleration, and of course power. These exercises consist of bounding, jumping, and hopping drills. By strengthening the nervous system, plyometrics teach the body to react quickly and explosively. These drills will greatly improve our overall performance. Plyometrics are very stressful to our systems however, which is why we must first prepare ourselves with general weight training. We must build a foundation of strength before we can build a body capable of enduring intense plyometrics training.

PREPARATION FOR PLYOMETRICS

Plyometrics exert great force against the musculoskeletal system. It is extremely important that you first develop a solid base of strength and stamina before incorporating these exercises into your routine. The introductory *mesocycle* (Weeks 1-4) provided in the **Strength Training** chapter will help to prepare you for the strains of a plyometrics routine. As you can see, there is not one standard boxing training program. Rather, there is a process involved where we must develop our bodies slowly to best enhance our performance. This form of training may seem complicated. Many trainers do not bother to learn the intricate details because of the inherent complexity. We must learn and follow these scientific guidelines if we truly wish to reach peak performance levels.

TRAINING THE RIGHT WAY

Plyometrics training emphasizes quality not quantity. Each exercise should consist of no more than 10-20 repetitions for 1-3 sets. Exercises must be stopped if speed and form can no longer be maintained. You should **NEVER** train to failure with plyometrics drills. Plyometrics training puts an emphasis on speed and power. To maximize these objectives, we must ensure adequate rest between sets.

Plyometrics routines are not strength training or aerobic activities. Rather, they combine strength and speed to create power essential for our sport.

WHEN TO CONDUCT PLYOMETRICS TRAINING

At this point, you may be thinking to yourself, *“How will I find time to include plyometrics when I need to run, lift weights, and box?”*

Many athletes conduct separate training sessions specifically for plyometrics drills. For example, these athletes may run in the morning, conduct plyometrics during the day, and strength train in the evening. This can be an effective training routine but it is NOT the best way to train. Rather, I prefer (as does science) to implement a complex training routine.

What is complex training? Complex training integrates strength training, plyometrics, and sports specific conditioning drills into one routine. Consider that weight training alone will increase your power and strength but when you integrate plyometrics, you add the benefit of improving your rate of force. Rate of force is the speed with which force is achieved in a movement.

Plyometrics alone will increase your speed and power output. To maximize results however, you must integrate plyometrics into a complex training program. Complex training typically consists of one strength exercise followed by a plyometrics movement. For example, you will perform squats with weight for 10 repetitions. Immediately after completing this exercise, you will perform 15 squat jumps without weight. Another example would be to perform 10 repetitions of shoulder press with dumbbells, then immediately perform 15 overhead medicine ball throws. I will discuss several complex training routines in the section *PUTTING IT ALL TOGETHER*.

When we perform complex training routines, we first activate the nervous system and fast twitch muscle fibers with a strength training exercise (squats). We then conclude with a plyometrics movement, which activates a maximum percentage of fast twitch fibers to enhance our training benefit. We can more effectively target these fibers after the strength training portion of the complex set. By lifting weights first, we *“turn the fibers on”*. The concluding plyometrics exercise then stresses these fibers that have already been activated by the weights.

Words To Live By

“How to succeed? Try hard enough” Malcolm Forbes 1919-1990

Please note that complex training is perhaps the most advanced form of training available. For this reason, you **MUST** first prepare your body to accommodate the stress of this routine. In addition, these split routines are so intense that proper rest periods between sets are essential to ensure maximum results. You may be accustomed to working out at a fast pace with little rest in between exercises. This is **NOT** how to proceed with complex weight and plyometrics drills. We will first perform a strength training movement and then immediately follow with a plyometrics movement. We do not want to rest in between the

complex set because the purpose is to stress the already activated muscles while performing the plyometrics portion of the routine.

After the complex set is complete however, you must allow your muscles to recover before proceeding with your next set. Failure to do so will put strain on your aerobic system. We are not conducting complex training for its aerobic benefits. Rather, we are looking to improve speed and power so be sure to allow adequate rest periods. Typical rest periods between complex training routines range from **2 to 5 minutes**. Let's look at an example:

1	Strength Movement	Barbell Squats
2	Plyometrics Movement	Squat Jump Without Weight
3	Rest Period of 2-5 Minutes	
4	Strength Movement	Barbell Squats
5	Plyometrics Movement	Squat Jump Without Weight
6	Rest Period of 2-5 Minutes	
7	Strength Movement	Barbell Squats
8	Plyometrics Movement	Squat Jump Without Weight
9	Rest Period of 2-5 Minutes	

As you can see we first conduct a strength training exercise, followed by a plyometrics movement, and finally a 2-5 minute rest period. Please note that in between the strength and plyometrics movement you may take up to 1 minute of rest depending on your conditioning level. I prefer to rest only as long as it takes for me to put the weight down and get positioned to perform the plyometrics movement. This typically takes approximately 20-30 seconds.

SAMPLE EXERCISES

Below are illustrations of plyometrics and medicine ball exercises.

I have included various exercises that require dumbbells and barbells. These exercises are appropriate in the plyometrics section as they are fast movements, intended to increase speed and power.



Neider Press – This exercise helps to develop explosive punching power. You must thrust the weight out in an explosive manner. I have enjoyed many benefits from this powerful movement.



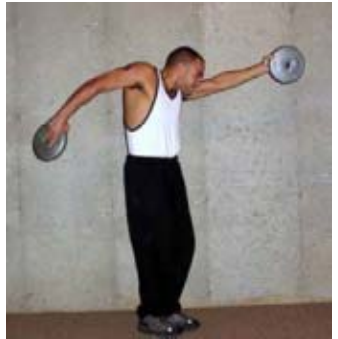
Dumbbell Twists – This movement adds power to your hips and pivot muscles. This exercise will increase your power when turning into your punches. Much of our power is generated from our hip action. Perform this exercise in both directions.



Dumbbell Ax Swing – This movement replicates the motion of swinging an ax. Thrust the dumbbell downward as you would an ax. Perform this exercise in an explosive manner in both directions. Swing the dumbbell outside your knees



Plate Ax Swing – This exercise is a variation of the dumbbell ax swing. It uses a free weight plate instead of the dumbbell. It is performed straight in front of the body, unlike the dumbbell ax swing which is directed towards each side.



Runner's Swing – Simulate the arm action while running with dumbbells or weights in hand. This exercise will develop explosiveness throughout the shoulders.



Swimmer's Stroke – Simulate the arm action of a swimmer with dumbbells. Use between 5 & 10 pounds. This exercise is great for punching power.



Dumbbell Squat Jump – Squat down with weights in hand (*or wearing a weighted vest*) and forcefully thrust up from the squat position into the air. This exercise develops powerful and explosive legs.



Half Squat Jump – This movement can be performed with or without weights. Perform a half or semi squat and quickly jump into the air. Concentrate on having your feet touch the ground as briefly as possible



Plyometric Pushup 1 – Your partner will drop you from your shoulders. You must spring up quickly so that he can catch you. Do not allow your partner to bend to catch you, rather thrust yourself all the way up to him.



Plyometric Pushup 2 – This variation does not require a partner. Push yourself off the ground. Thrust up quickly to minimize the time that your hands are in contact with the floor.

Plyometric Step-Ups – Earlier we illustrated the weighted *Step Up* as a strength training movement. This movement is different as it entails explosive steps. You will “jump” one foot up at a time. You will always have one foot on the ground and one foot on the step. This exercise involves continuous movement with a striding action between the legs.





Jump Ups – Jump up onto a barrier before returning to your beginning position. Jump upwards with maximum explosiveness. You can add a weighed vest for increased intensity. In addition, you can perform a **Standing Long Jump** without a barrier for variety. As with all plyometrics, minimize contact with the ground. Focus on quickly bounding off the floor.



Bag Push – Forcefully push the heavy bag outward. Catch the bag when it returns to you and immediately thrust outward again. This will develop powerful arms, shoulders, and chest. Also try one hand at a time.



Overhead Throw – Throw the medicine ball overhead against a wall or to a partner. I use a medicine ball that bounces back when thrown against a wall. I recommend using between 10-15 pound medicine balls.



Chest Pass – Push the medicine ball from your chest outward to a partner or against a wall. Focus on maximum exertion. These upper body medicine ball drills enhance punching power.



One Arm Throws – Thrust the medicine ball with one hand. Turn your hips as you would when punching. This move mimics the muscular contractions involved when punching.



Side Throws – Pivot at the waist and throw the medicine ball to the side. Work one side at a time. This exercise is excellent to develop power throughout your hips and pivoting muscles.



Underhand Throw – Bend down with back straight and throw the ball upwards as high as possible. Another option is to grasp a dumbbell with both hands and replicate this motion (*without throwing the weight*). The dumbbell is a great substitute when your training facility does

not accommodate overhead throws. Keep your arms extended and swing the dumbbell in an upward motion before returning it to the starting position. This is an excellent exercise to target the upper back and shoulders.



Backwards Throw – Throw the medicine ball forcefully behind you to a partner or against a wall. Once again, the bouncing medicine balls are very convenient as you can perform all of these drills without a partner. The ball will bounce off the wall.



Trunk Twists – Rotate left to pick up the ball. Bring it around to your right until you place it behind your back again. The ball will make a complete circle around your body. Repeat in both directions. You can swap the ball with a weight.



Trunk Bends – Bend to each side while holding the medicine ball overhead. Keep your arms as straight as possible. This exercise works the torso and trunk.



Steering Wheel – Hold the medicine ball with outstretched arms. Twist your arms as if you were turning the steering wheel of an automobile. This exercise targets the shoulder muscles.



Drop Pass – A partner is required for this drill. He will drop the medicine ball to you upon which you will forcefully toss the ball upward. This exercise works the shoulders, chest, and arms.



Lying Trunk Twist – Hold a medicine ball in between your legs. Keep your arms to your side to maintain balance. Twist your trunk from left to right while your arms remain grounded.



Russian Twist – Twist from side to side with medicine ball in hand. This exercise will increase power throughout your midsection and hips, important areas for punching power.



Twisting Lung – Twist the medicine ball towards your lead foot as you lunge forward. You can perform this exercise while walking or in a stationary lung position. You will work the legs, hips, and the midsection.



Sit-Up Pass – This drill requires a partner. Perform a sit-up while holding the medicine ball. Throw the ball to your partner on your way up. He will quickly throw the ball back as you descend towards the floor.



Barrier Jumps – Barrier jumps are a great way to develop power and strength throughout the legs. In the illustration, I am performing sideways barrier jumps over the medicine ball. Let's review some variations:

- Ø Two leg sideways barrier jump
- Ø Single leg sideways barrier jump
- Ø Two leg front-to-back barrier jump
- Ø Single leg front-to-back barrier jump

You can perform these jumps with one leg or both legs together. Try to work sideways for 30 seconds before switching to front-to-back jumps for another 30 seconds. I perform this drill with both legs to prevent either leg from resting throughout the duration of the exercise.

As mentioned earlier, you can increase the intensity of the plyometrics routine by wearing a weighted vest. Jumping and bounding exercises with a weighted vest should be restricted to well trained athletes.

SUMMARY

There are several variations to plyometrics training. These exercises are excellent to enhance speed and power. As mentioned earlier, we can integrate plyometrics and strength training into one complex routine. This is not the only option, yet is most effective for advanced athletes. Start with a separate plyometrics routine before beginning a complex training routine.

ABDOMINALS - NECK - HANDS

Up until this point we have discussed several aspects of a proper training program. You have learned the values of running, strength training, plyometrics, and conditioning drills. In a later section, you will learn how to develop your own specific program. There are several examples for your use. By following each of these drills, you will surely see improvements in your condition and boxing performance.

SO WHAT IS THIS SECTION FOR...

This section specifically focuses on conditioning the abdominal muscles, neck, wrist and hands. These are the most neglected areas of most fighters. I enjoy pushing myself hard inside the ring. I like to focus my attention to sparring and intense conditioning drills. For several years I boxed without paying attention to my neck, wrist or hands. I always performed my abdominal drills but never to the intensity that I do now.

WHAT MADE ME CHANGE?

Several years ago I was supposed to fight a fellow 147-pound Welterweight. I arrived at the weigh-in to learn that my opponent had pulled out of the fight. After driving more than two hours to the fight, my trainer and I were determined to find another opponent. The only man left was a 165-pound Middleweight who was unbeaten. He was a local fighter and crowd favorite. My trainer at the time, Harry Figueroa, convinced me to take the fight. Harry assured me that despite the Middleweight's obvious size and strength advantage, I could hurt his body...

The fight never got past the first round. The bout was stopped after my opponent went to his knees following a series of body shots. We later learned that I had fractured three of his ribs. After the fight, I felt invincible, yet Harry quickly reminded me that I could have been in my opponent's shoes had he landed a similar body shot. I told myself that I would never be hurt like that so have been dedicated to conditioning my abdominal muscles ever since.

WHAT ABOUT THE HANDS AND NECK?

The hands and neck are frequently neglected. I want to emphasize the importance of each. First, strong abdominal muscles will aid your overall conditioning. They are your first line of defense against a body shot. Do not neglect your abs or someone will make you pay inside the ring.

The neck is of equal importance to the fighter. A knockout is caused by the acceleration of the brain following a punch. Essentially, you are knocked out when your head snaps back at a speed that accelerates your brain to be "KO'd".

You can improve your defense against knockout by increasing the strength of your neck. A strong neck is more difficult to snap back. Consider how Evander Holyfield has withstood punishment from fighters 30 pounds heavier. He has tremendous strength in his neck, which allows him to handle the punches of much larger men. Increase your neck strength and decrease your likelihood of knockout.

The hands and wrist are the “weapons” of the boxer. You strike your opponent by snapping your wrist as your hand connects with his face. It is not human nature to use our hands as a tool to punch solid objects (such as somebody’s head). For this reason, it is best to strengthen both your hand and wrists to better sustain the continuous impact of a fight.

Take my advice regarding the importance of strengthening your hands and wrist. I have broken my right hand on three separate occasions. After my second break, I was still in disbelief that I could undergo such an injury. I began to perform my hand strengthening drills before neglecting them for more intense conditioning drills. Unfortunately, I have learned the hard way as I broke my hand once again. The repeated breaks were caused by my failure to properly heal and strengthen my hand following my first fracture. I learned the hard way and lost an entire year of competition. I remained in the gym the entire period but could not take any actual fights due to the severity of my hand injury.

Fortunately, I have learned from my mistakes and now can share my real world advice with you. Do not neglect the following exercises. **BE VERY CAREFUL WHEN PERFORMING THESE NECK EXERCISES.** If you are uncertain about proper technique, do **NOT** perform these movements!

NECK



Neck Bridges –Rock forward and backward on your head for 12-15 repetitions. Perform this drill while facing upward and downward. As you advance, add weight to your chest when facing upward. I put a towel under my head.



Neck Curls – Hang weight from your neck as illustrated in the picture. These neck-strengthening straps are available at most athletic supply stores. This is a great exercise to strengthen the neck muscles.



Earlier we mentioned the *Upright Row* to work the shoulder muscles. This exercise is also excellent to build the neck.

ABDOMINALS

Knee Hugs – Start with your body fully extended and crunch upwards as your legs simultaneously approach your upper body.



V-Ups – Perform this exercise in an explosive manner. It develops powerful abdominals. Thrust upward so your body forms the shape of the letter “V”.



Bicycles – Bring your left elbow to your right knee, then your right elbow to left knee. This exercise will make your abdominals burn!



Knee Touches – This exercise differs from the bicycle movement, as you will work one side at a time. Touch left elbow to right knee 25 times then switch. Proceed with right elbow to left knee.



Side Crunches – Perform this exercise to isolate the abdominals on your side. This is an important exercise if you wish to stand up to a hard body shot.



Leg Raise – Be sure to keep your legs straight throughout this movement. For added intensity, wear ankle weights.



Twists – Twist from side to side while maintaining a 45-degree angle between your back and the ground. You can hold a weight in your hands as you advance.



Russian Twists – This exercise is similar to the *Twist* but you stop in the middle before going to each side. Twist all the way to the right and left. Arms remain straight. Hold a weight as you advance. Earlier we performed this exercise with medicine ball in hand.



Partner Leg Throw Downs – Hold onto your coach's legs as he attempts to throw your legs to the ground. Do not allow your legs to touch the floor. Keep your legs straight throughout the exercise. Have your coach throw your legs to the side as well. This is an advanced move that will greatly condition the abdominals.



The Wheel – The wheel is an excellent tool to strengthen the arms, abdominals, shoulders, and back. Roll the wheel out straight and to the sides. This simple piece of equipment is a great training device.



Side Bends – Lean to each side while holding dumbbells to work your sides.



Back Extensions – This movement will work your lower back. It is a good idea to work this area whenever you train your abdominals. Lift your feet and chest simultaneously off the ground. Return to a lying position and complete 20 repetitions.

HANDS

The best way to protect the hands is by strengthening the surrounding forearm muscles, which attach directly to the hand.



Reverse Curls – Perform a curl with your palms facing outward. Reverse curls effectively isolate the forearm muscles.

Earlier we illustrated the **Hammer Curl**, an excellent exercise to develop strong hands and wrists.



Wrist Curls – Position the wrists over the knees and curl the weight up with your hand. You can also reverse this movement by facing palms downward.



Backwards Wrist Curls – Hold a barbell behind your back and curl the weight upward with your wrists.



Wrist Roller – Hang a weight from a rope and roll the weight up and down. Roll the bar frontward and backward. This simple exercise is perhaps the most intense wrist and forearm exercise. You will feel this one working!



Gripper – Use a hand gripper to strengthen the hands. Practice squeezing the gripper with both hands. This exercise will strengthen your hand muscles and grip. As your hand strength increases, your likelihood of injury decreases.



Rice Grip – Fill a bucket with rice (or sand) and practice grabbing and twisting the rice in your hand. As you grab the rice in your hand, simultaneously twist in a downward, corkscrew motion. Your hand should twist towards your little finger. This exercise will quickly strengthen the hand.

SUMMARY

I cannot overemphasize the importance of exercising the hands, neck, and abdominals. I personally battled with hand injuries for over a year all because of my failure to perform these hand exercises. I learned the hard way and now include these exercises in my daily routine.

The neck and abdominals are your first line of defense against incoming punches. By strengthening the abdominals, you can stand up to the hard body shots that send many fighters to their knees.

The neck is perhaps the most important area to strengthen as it helps to prevent knockouts. The neck is by far the most neglected area in most training programs. Do not make this mistake. There will be times when you get hit with a hard shot. A strong neck will help you to withstand this punishment.

CONDITIONING DRILLS

Up until this point, we have discussed the importance of strength, power and speed. We are able to improve each aspect through a combination of running, plyometrics, and strength training.

As I have said throughout, we must look to peak our performance for actual fight dates. I have discussed a process of cycling our training routines to continually improve overall strength and condition. Once we have developed a foundation of strength, we can move to more intense sports specific training drills.

These conditioning drills will bring your anaerobic condition (stamina) to optimum levels. As I have said throughout, boxing is a tough sport. Inside the ring can be a lonely place for a fighter who is out of shape. If you enter the ring out of shape, you are asking for injury and pain.

The choice is yours... you can either feel the pain by pushing yourself through these conditioning drills or you can let your opponent beat you into pain. What is it going to be? There is an old saying that reads, "*Only the strong survive*"... Take these words to heart when training. There is no easy road to the top.

Words To Live By

"Let me tell you the secret that has led me to my goal. My strength lies solely in my tenacity." – *Louis Pasteur*

These conditioning drills will push your body to its limits. Many of these drills are patterned around the work-to-rest ratios of an actual bout. You will work either two or three minutes followed by a minute or less rest period. Earlier we discussed the importance of adequate rest between plyometrics drills, these conditioning drills are different. During plyometrics, we look to maximize power by performing the exercise without fatigue. Conditioning drills are designed to increase anaerobic endurance. These drills will fill your muscles with lactic acid. Your mind will tell you to stop. These drills will train your body to keep working! Let's begin the fun...

MINUTE DRILLS

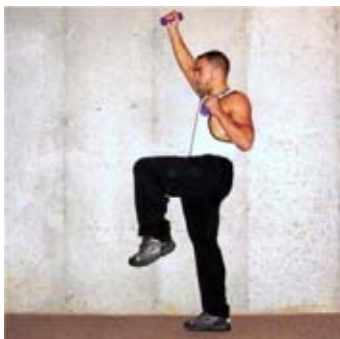
Minute drills are designed to mimic the work-to-rest ratios of an actual bout. We will perform at an anaerobic pace the entire drill. These drills are conducted for three consecutive minutes. If you have never performed these drills before, first start with one and two minute drills. Work your way up gradually. Our rest period will be 1 minute between each drill. Ideally, you should perform one more drill than the number of rounds you will be fighting. For example, if you box 4 rounds, you will perform 5 drills with 1-minute rest between each.

Minute drills consist of a variety of exercises that are performed consecutively **WITHOUT REST**. The purpose of these drills is to elevate your heart rate for the duration of the drill. You can perform these drills either inside or outside. You do not need any fancy equipment. There are **NO EXCUSES** to neglect this valuable conditioning exercise.

Minute drills can be a replacement to interval running on certain days. As we have said throughout, we must add variety to our workout. Variety keeps our training sessions interesting, thus raising motivation. Minute drills can be designed to focus on the upper or lower body, depending on your specific needs. Let's look at some sample exercises that can be performed during these conditioning drills. Always remember that each exercise **MUST** be performed at maximum intensity. Do not look to "slack" or "relax" during these exercises. Let's look at some samples.

SAMPLE EXERCISES

- Ø Sprint
- Ø Sprint backwards
- Ø Run Sideways
- Ø Karaoke Running
- Ø Jump Rope
- Ø Run In Place High Knees
- Ø Run In Place With Alternating Dumbbell Press (*Illustrated below*)
- Ø Shadow Box (with 2 or 3 pound dumbbells)
- Ø Pushups
- Ø Squat Jumps (without weight)
- Ø Split Jumps
- Ø Step-Ups (without weights – focus on fast pace)
- Ø Barrier Jumps (lateral and front-to-back)
- Ø Standing long jumps



In the leftmost picture, I run in place (high knees) while alternating overhead press with a 3-5 pound hand weight. As your left knee rises, press your right arm. As your right knee rises, press your left arm. Continue to alternate leg and arm movement.

(I enjoy the high knee running with alternating dumbbell press so much that I often perform this move for an entire 3-Minute drill... Give it a try!!!)

When shadow boxing for these drills, limit yourself to straight punches. Orthodox fighters will throw a left jab (1), straight right hand (2), left jab (1), straight right (2), etc... You will continue to throw 1-2-1-2-1-2 (1 = left jab, 2 = straight right hand) with hard, explosive punches (**NON STOP**). I perform this drill with 3-pound hand weights. You can first begin without weights until your conditioning level improves.

Throughout each exercise, you must focus on maximum exertion throughout the entire drill. Let's look at some samples. The first routine includes a split jump, which is illustrated below.



Split Jump – Perform a continuous jumping motion from the “split” position. Jump with left foot forward, then right foot forward, and so on. Your body will remain stationary as you legs continue to work.

For 2-Minute drills perform each exercise for 20 seconds. For 3-Minute drills perform each for 30 seconds (unless otherwise noted).

SAMPLE 1 – Inside Drill (Intermediate)

1. Run in place high knees
2. Shadow box (Hand weights optional)
3. 15 Squat Jumps
4. 15 pushups (all out, FAST PACE)
5. 20 Split Jumps
6. Start back at #1 - *Repeat this cycle for 2 or 3 minutes*

SAMPLE 2 – Inside Drill – (Advanced)

1. Run in place with alternating dumbbell press
2. 20 Squat Jumps
3. Jump Rope
4. Shadow box with weights
5. Run in place (without dumbbells – focus on maximum leg speed)
6. 15 Pushups
7. Lateral Jump over medicine ball (or over any object of similar size)
8. Start back at #1 – *Repeat this cycle for 2 or 3 minutes*

SAMPLE 3 – Outside Drill (Intermediate)

For this drill, leave your 3-pound hand weights at your “starting” position.

1. Sprint 50 yards
2. Sprint backwards to starting position
3. Shadow box with hand weights
4. Run in place high knees without weights
5. 20 Squat jumps
6. Karaoke runs 25 yards in each direction
7. 20 Pushups
8. Start back at #1 – *Repeat this cycle for 2 or 3 minutes*

SAMPLE 4 – Outside Drill (Advanced)

1. Lateral Jump over medicine ball – 20 seconds
2. Sprint 50 yards
3. Sprint backwards to starting position
4. 20 Squat Jumps
5. Run in place high knees without weights
6. Sprint 50 yards
7. Sprint backwards to starting position
8. 20 Pushups
9. Start back at #1 – *Repeat this cycle for 2 or 3 minutes*

SAMPLE 5 – Outside Drill (Advanced)

1. Sprint 50 yards
2. Sprint backwards 50 yards
3. 20 Squat Jumps
4. Karaoke Run 25 yards in each direction
5. Sideways Run 25 yards in each direction
6. Run in place high knees without weights
7. Start back at #1 – *Repeat this cycle for 2 or 3 minutes*

Samples 4 and 5 place more emphasis on the legs. These 3-Minute drills can be substituted in place for interval or sprint work on certain days. These drills provide much needed variety. Samples 1 and 2 can be performed at the gym as a supplement to your morning roadwork. These two drills emphasize both upper and lower body. Do not perform Samples 4 or 5 on those days that you run morning sprints or intervals. You would place too much stress on the legs.

There are an infinite number of exercises that you can integrate into these conditioning drills. Be sure to perform these drills at maximum intensity to optimize the conditioning response in your anaerobic strength and endurance.

JUMP ROPE

The jump rope is a great conditioning tool. Unfortunately, most boxers do not jump rope in a sports specific manner. The jump rope has been victimized by many of the myths related to roadwork and boxing. It is common to see boxers jump rope at a moderate pace for extended periods of time. I have seen fighters jump rope for 30 consecutive minutes. What is wrong with this form of jump rope? ...

These athletes are conditioning their aerobic system. As mentioned earlier, boxing is an anaerobic sport. We must exercise under anaerobic conditions if we wish to perform well in an actual bout. If used correctly, the jump rope can be a great training aid.

The most effective ways to jump rope are as follows...



Jump rope while running in place with high knees. You can increase the intensity of your rope session by using wrist weights as shown in the illustration. You can also purchase a rope that includes weighted handles. Many ropes have handles that weigh between 1 and 2 pounds. I prefer to wear wrist weights while jumping with a non-weighted rope. These “speed” ropes are faster, thus provide a more intense workout.



Add variety to your rope session by criss-crossing the rope as you jump.

As you advance, practice twirling the rope twice for each jump. The rope will swing under your feet two times while you are in the air. This is a great way to improve your anaerobic stamina.

You can also run while skipping rope if your training facility has adequate space. You can practice jumping rope while moving frontward, backwards, and side to side. Add variety to your jump rope session to make your workout more enjoyable.

SPECIFIC DRILLS

Earlier we introduced the concept of the 3-minute drill. You can perform this drill with nothing more than a jump rope. You can begin with a 2-minute drill and work your way up to 3 minutes. Focus on jumping at an all out pace throughout the entire work period. Integrate variety throughout the course of the work interval.

For example you could perform

1. 30 jumps per leg with high knees
2. 30 double jumps (2 rope twirls per single jump)
3. 30 criss-cross jumps
4. 30 jumps while running forward
5. 30 jumps while running backward
6. Start back at #1 – *Repeat this cycle for 2 or 3 minutes*

As noted earlier, you can increase the intensity of this drill by wearing wrist weights (1-2 pounds).

To maximize intensity focus more on high knees or double jumps. These two variations are most difficult. You should be able to perform either of these techniques for the duration of an entire round. As your condition improves, begin to decrease your rest time from 1 minute to 30 seconds.

I suggest wearing a stopwatch on your wrist. I typically jump rope for 3-minute intervals with a 30 second rest. If you jump rope in this manner, you will quickly realize the benefits. Get yourself to the point where you can jump rope for 4 rounds with only 30 seconds rest. During these 4 rounds, you should be able to work the rope at an all out pace.

ADDITIONAL ROUTINES

Sample 1 - (Intermediate)

1. High knees jump rope for 30 seconds all out
2. Jump rope at moderate pace, moving side to side and front to back
3. High knees Jump rope for 30 seconds all out
4. Jump rope at moderate pace, moving side to side and front to back
5. Start back at #1 – *Repeat this cycle for 2 or 3 minutes*

Sample 2 - (Advanced)

1. High knees jump rope for 30 seconds all out
2. Double jump (2 rope twirls per single jump) for 30 seconds all out
3. High knees jump rope for 30 seconds all out
4. Double jump (2 rope twirls per single jump) for 30 seconds all out
5. Start back at #1 – *Repeat this cycle for 2 or 3 minutes*

Sample 3 – (Advanced)

Perform sample two with weighted rope or while wearing wrist weights

When you follow these sample routines, you will target your anaerobic system. This method of jumping rope is much more effective than lengthy, moderately paced exercise. I only recommend lengthy jump rope periods as a possible substitute for your distance (aerobic) run. Only make this substitution if you are unable to run due to weather conditions. If you do choose to jump rope for lengthy periods, be sure to include intervals of fast paced work throughout your rope session. For example, if you jump rope for twenty consecutive minutes, integrate hard bursts of 30 seconds every other minute.

JUMP ROPE AND SHADOW BOXING DRILL

Alternate periods of jump rope (either high knees or double jumps) with periods of all out shadow boxing (jab – right hand – jab- right hand etc...). Use 2 or 3 pound hand weights in the shadow boxing drill as you advance. A typical routine would be as follows:

1. High knees jump rope for 30 seconds all out
2. Shadow box with hand weights 30 seconds
3. Double jump (2 rope twirls per single jump) for 30 seconds all out
4. Shadow box with hand weights 30 seconds
5. High knees jump rope for 30 seconds all out
6. Shadow box with hand weights 30 seconds

MIX WEIGHTS AND CONDITIONING

We can combine weight training with conditioning drills to increase stamina levels. The strength training movement for these drills will be either dumbbell shoulder press or standard pushups. The conditioning component of the drill will consist of all out shadow boxing (1-2-1-2). Once again, as your condition level advances, you can add 2 or 3 pound hand weights.



SAMPLE

1. Perform shoulder presses to exhaustion
2. Immediately grab your 3-pound hand weights and punch non-stop for 30 seconds.

You can substitute pushups to exhaustion in place of the shoulder press.



DUMBBELL HOLD - Hold a pair of dumbbells (between 5 and 10 pounds) directly in front of your face with arms extended. Hold your arms out as long as you can. Your arms will begin to burn after about 1 minute. You should be able to work yourself to hold the weights for an entire 3-minute round. Immediately after burning

out on this drill, drop the dumbbells and switch to 30 seconds of all out shadow boxing without hand weights.

These drills will greatly enhance your ability to punch throughout the course of the round. If your arms get tired throughout the fight, these drills will work you back into shape.

SPEED DRILL

This drill will focus more on speed than on improving anaerobic conditioning.

1. Shadow box all out with 2-3 pound hand weights for 30 seconds
2. Rest 1 minute
3. Repeat 4 times

As your conditioning level increases, you can add additional rounds, increase work intervals, or decrease rest time.

HEAVY BAG DRILLS



Throw non-stop punches to the heavy bag for 1-minute intervals. You will punch the entire time without rest. Throw straight punches (*as with the above mentioned shadow boxing drills*) with maximum speed and power. As you improve, you should be able to perform this drill for an entire 3-minute round.

A variation to this drill is to throw the following combination. Left jab – right hand – left jab – right.

Throw this 4-punch combination (1-2-1-2) then reset. Throw the combination again, then reset. Continue this pattern throughout the round. It should only take 1-second to reset your stance and position. The brief 1-second rest will allow you to focus on throwing sharp punches throughout the duration of the drill. You can also work this drill with a partner holding hand mitts.

Another variation involves integrating heavy bag punching with high knee running in place. This drill would be as follows:

SAMPLE

1. 30 seconds of all out punching on heavy bag
2. 30 seconds of all out high knee running in place
3. 30 seconds of all out punching on heavy bag
4. 30 seconds of all out high knee running in place
5. 30 seconds of all out punching on heavy bag
6. 30 seconds of all out high knee running in place

This drill will greatly enhance your anaerobic stamina by strengthening both your punching muscles and legs.

AX SWINGING

Many old time fighters were known to swing an ax to strengthen the muscles throughout the back, shoulders, and arms. Swinging an ax is an explosive movement that develops both speed and power. Not everyone will have access to an ax and wood, but those that do will greatly benefit from this routine. You can substitute the ax and wood with a sledgehammer and old tire. You can either chop wood with the ax or strike an old tire with a sledgehammer.



I typically chop large logs that I can hit continuously while on its side. Larger logs are more effective as they will hold up to the powerful ax swings for a greater period of time before chipping away.

I typically swing the ax for 2 consecutive minutes. Alternate which hand is on top to evenly work your right and left sides. To increase the conditioning aspect of this drill, alternate 30-second high knee intervals with 30-second periods of ax swings.

MEDICINE BALL CONDITIONING

When we perform plyometrics, we do so with the intention of improving speed and power. We must not perform plyometrics to failure as it defeats the purpose of improving our overall explosiveness. With this said, we can use the medicine ball in a DIFFERENT manner to serve as a strengthening and conditioning tool. This conditioning drill is not “*plyometric*”, rather it is a continuous 2 or 3-Minute drill. Here is how it works.

For this drill, you will **alternate between medicine ball chest pass and overhead throw**. This drill should be performed outside in an open area. You will throw the medicine ball as far as you can, then sprint to the ball. Pick the ball up again and throw as far as you can. Sprint to it again. Continue this drill for 2 or 3 consecutive minutes. This medicine ball drill is excellent as it combines upper body strengthening with wind sprints. You must perform this entire drill at an all out pace. Sprint fast and throw the medicine ball as far as possible.

I typically perform this drill on a track or grass field. I usually work 100 yards and then turn around and work back towards my starting position. I continue this back and forth pattern for the duration of the exercise. You will definitely realize immediate benefits from this conditioning drill.

STATIONARY BIKE



The stationary bike can provide a great anaerobic workout. If you choose to ride the bike, remember to focus your attention towards your anaerobic system. You should ride the bike at an all out rate for intervals, just as you would run. As your stamina levels improve, you can ride the bike for longer periods of time.

Here are a few sample routines that can be performed on the stationary bike.

SAMPLES

1. Ride all out for 1-minute intervals with 1-minute rest periods. Work your way up until 2 or 3-minute work intervals. Repeat this drill for the number of rounds you will be boxing. As you improve, you can begin decreasing your rest intervals.
2. Alternate 30 seconds of all out riding with 30 seconds of moderate paced riding. Continue this pattern for 10 minutes.

As you can see, there really is no excuse for skipping interval conditioning drills. There are numerous alternatives to running when the weather is bad.

FOOTWORK DRILLS

These footwork drills will involve bounding back and forth over a straight line.



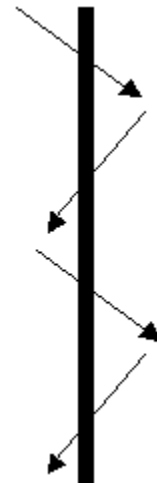
Single Leg – Hop from side to side on one leg as you move frontward and backward. Hop frontward and backwards on one foot, then switch legs and continue.



Double Leg – Hop from side to side on both legs. Hop forward and backward with both legs together.



Double Leg Sideways – Hop back and forth (front to back) across the line. Travel down the line and then back.



You will criss-cross back and forth over the line in each of these drills.

Perform each of the three drills for 1 minute. You will work these footwork drills for three consecutive minutes.

1. Single Leg 1-minute (alternate left and right leg)
2. Double Leg 1-minute
3. Double Leg Sideways 1-minute
4. Rest 1 minute and repeat for 3 rounds

TWISTS



This simple looking exercise is excellent to target your hips and abdominals. As mentioned before, the hips play a key role in the development of punching power. Perform this back and forth twisting motion for 1-minute intervals. Twist back and forth while keeping

your feet on the ground. This is twisting movement, **NOT** a jumping movement.

BALANCE DRILLS

Balance is important for all athletic events. Boxing is no exception as we are often ducking, feinting, dodging, and moving. We must maintain our balance throughout the fight. We must have the ability to throw punches in all directions. The following drills will help to increase your overall balance. Additional balance drills are provided in the chapter on Swiss Ball training.



Leg Lift Balance - Hold one leg up at a time for as long as possible. Perform this drill with both legs. **CLOSE YOUR EYES** during this drill. You should keep your eyes closed to maximize the effectiveness of this drill.



Medicine Ball Balance – Hold the medicine ball in front of you while you balance one leg at a time. Shift the ball from side to side as you remain balanced on one leg. You may keep eyes open for this drill.



Drop and Touch – Bend down to touch 12 inches in front of your opposite foot (right hand to left foot). This exercise is great for balance. It also helps develop the backside of the leg. It is simply looking, yet very effective. Try it!

HOME-BASED WORKOUTS

These workouts are designed for days when you are unable to get to the gym. These routines can be performed without equipment. You can conduct these routines **ANYWHERE** at **ANYTIME**. There are no more excuses to miss training days.

There is one additional exercise not previously illustrated that will be included in these home-based routines.



Standing Crunch – In a standing position, twist your elbow outside the opposing knee (right elbow to left knees). This exercise will strengthen abdominals, legs, and hips.

Words To Live By

“Do what you can, with what you have, where you are.” – *Theodore Roosevelt*

HOME WORKOUT 1 (Intermediate)

1. Warm-up with 100 jumping jacks (or jog in place)
2. Pushups
3. Lunges
4. Standing Crunch
5. V-Ups
6. Dive Bomber Pushups
7. Squat Jumps (20)
8. Knee Hugs
9. Back Extensions (15 repetitions)
10. Run in place high knees 1 minute

Repeat 2-10 for three sets. Perform a different form of pushup on each set. For example, Set 1 = Standard Pushup, Set 2 = Close Grip Pushup, and Set 3 = Depth Pushup. Perform each exercise in succession as a circuit. There is no rest until you complete exercise #10. Rest 1-minute and repeat the circuit. Perform each exercise for 80% of your maximum repetitions (unless otherwise noted). For example, if you can perform a maximum of 50 pushups, perform 40 for this drill.

As your condition level improves add 4 rounds of shadow boxing to the beginning of this routine. As you continue to improve, add 4 rounds to the end of this routine as well. Each round will consist of 3 minutes with 1 minute of rest.

HOME WORKOUT 2 (Advanced)

1. Warm-up with 100 jumping jacks (or jog in place)
2. Pushups
3. Squat Jumps (25)

4. Standing Crunch
5. Run in place high knees (1 minute)
6. V-Ups
7. Drop and Touch (20 each leg)
8. Split Jumps (1 minute)
9. Dive Bomber Pushups (20)
10. Plyometric Pushups (20)
11. Knee Hugs
12. Back Extensions (15 repetitions)
13. Run in place high knees 1 minute

Perform this cycle in the same fashion as **HOME WORKOUT 1**.

As you can see, these home workouts are very easy to develop. With a little creativity, you can develop your own programs. The two previous examples are performed in a circuit fashion (non-stop). You can instead choose to perform 3 sets of each exercise before moving on to the next. The circuit aspect focuses more on conditioning while the latter method focuses more on improving strength.

There is no excuse to miss a workout. These two workouts can be performed in as little as 20 minutes. Once again, as you improve, add 4 rounds of shadow boxing to the beginning and end of these workouts. If you are strapped for time, shadow box in the morning while performing these home workouts in the evening.

If you are looking for a lengthy intense home workout try the following:

HOME WORKOUT 3 (Advanced)

1. Fast paced shadow boxing for 6 rounds – 30 second rest between rounds
2. Speed drill (page 82) with 2-3 pound hand weights. Perform 4 sets of 30 seconds with 1-minute rest intervals
3. 3-Minute Drills – Perform indoor conditioning drills (page 77). Repeat 4 times
4. Complete HOME WORKOUT 2 in circuit fashion
5. Complete Abdominal routine (page 141)

SUMMARY

These conditioning drills are intense, designed to push you to a new level. These exercises are difficult and should not be performed until you develop a solid foundation of fitness. Work your way up slowly until you are able to complete these drills for three consecutive minutes. Many of these exercises can be performed without equipment. There are no more excuses to miss a workout... **GET BUSY!**

BOXING IS A SKILL SPORT

Throughout the course of this book, we have focused on the essentials of transforming your body into a fast, powerful, fighter. You have the information necessary to take your physical conditioning and diet to another level. By subscribing to this program, you will increase strength, power, speed, and stamina. These are perhaps the most important attributes in boxing. Conditioning almost always plays a factor in the outcome of a bout. The stronger, more physically fit fighter will often defeat the more skilled, less conditioned man.

By maximizing your conditioning, you have the ability to outwork your opponent inside the ring. Optimizing your speed and power will greatly enhance your game. With this said however, you must not make the mistake of overlooking the importance of developing skill. Boxing is a skill sport first that relies on a highly conditioned body. As I have said throughout the course of this book, boxing is a complicated sport. It did not get its nickname the “*Sweet Science*” because it was easy.

Rather, the *Sweet Science* is just what the name implies. It is a sport where split seconds can seem like an eternity. The work ethic required of a fighter would bring most men to their knees. A fight can change directions in the short time it takes to land a knockout punch. You can be winning one moment and suddenly stretched out on your back the next. The most conditioned athlete in the world will be unsuccessful in the ring if he does not learn the specifics of our sport. For this reason, it is important to combine our conditioning and strength training with our skill specific training objectives.

To be successful in boxing, you must integrate numerous training techniques into one overall package. Let's discuss the primary forms of boxing specific skill training.

THE BASICS

First let's review our boxing stance and the basics of punching. We will then proceed to discuss boxing specific drills and training.

The descriptions below are for a conventional, right-handed fighter. If you fight southpaw reverse the directions to apply to your stance. For example, when I say left foot in front, the southpaw would reverse this instruction putting their right foot in front.

STANCE: First begin with your feet shoulder width apart. From this position, take a step forward with your left foot. Now turn the body and feet slightly to the right to form a



semi-sideways stance. Keep your body weight evenly distributed on the balls of each foot. Your knees should be slightly bent with your right heel slightly off the ground.

You must move efficiently from this stance. You must learn to punch moving frontward, backwards, and sideways. Your feet should never cross when moving in any direction. When moving, use small steps. One foot should always be in contact with the ground. Always step with your “lead” foot.

Practice moving in a “**square**” so you learn to move in each direction. Move sideways, frontward, sideways, and then backwards to your starting position. Once you master the steps, add punches to the drill. Practice working your jab while moving in each direction.

THE SPECIFICS

Forward: While pushing off the ball of your back foot (right foot), slide your front foot (left foot) forward. Bring the right foot up quickly behind the left to regain your original stance. Remember to always have one foot on the ground. NEVER cross your feet.

Left: Step sideways, first with your left foot, followed by a quick shuffle step with your right foot to regain your original stance.

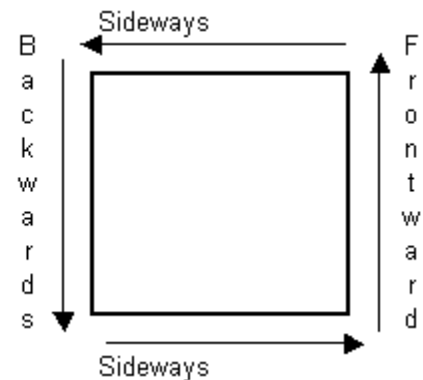
Right: Step sideways, first with your right foot, followed by a quick shuffle step with your left foot to regain your original stance.



Backwards: While pushing off the ball of your front foot (left foot), slide your back foot (right foot) backward. Your front foot follows to regain your original stance.

You can add ankle weights to this drill to increase the intensity. We mentioned earlier that ankle weights are detrimental while running. We should never run with ankle weights, yet they can be used to enhance our footwork drills.

JAB: The jab is the single most important punch in all of boxing. In the orthodox stance, the jab (left hand) is closest to your opponent. A sound technical boxer can win many bouts with his jab alone. The jab is used to score points, to set up more powerful shots (such as the straight right) and to keep your opponent off balance and confused. The jab must be thrown quickly and often.



Your knees should be slightly bent with chin down. The jab must come directly from your "ready" position without cocking. Twist your arm in a corkscrew motion before impact. It is important to turn your jab over sharply to gain **speed** and **snap**. After throwing the jab, retract your hand quickly back to your starting position. Do not drop EITHER hand while jabbing. Many fighters drop their right hand while jabbing with their left, thus exposing themselves to a counter left hook. Another common mistake is to drop your jab hand as you retract back towards your face. By dropping your jab hand, you will be open to a counter right hand.

STRAIGHT RIGHT HAND: The straight right hand is a power punch that is often thrown directly behind the left jab. It is important to not "fall in love" with your right hand. You should rely more on your jab, using the right hand only when the opportunity presents itself. Many young fighters become fascinated by the power of their right hand so throw it far too often. They begin to telegraph the right hand, giving their opponent ample time to avoid the punch. The right hand must be thrown directly from your face. Your right hand should be by your chin when in your "ready" stance. It should be thrown along a straight line directly to your opponent's face. Throw your right hand along a compact, straight line to maximize power and speed. Pivot your hips into the punch as you deliver the right hand. You will generate much more power by violently twisted your hips with the right hand. Do not throw wide, looping right hands. Remember, the knockout comes from the punches your opponent does not see.



LEFT HOOK: If thrown correctly, the left hook can be one of the most dangerous punches in boxing. The left hook is thrown with a "bent" arm. Your left hook should resemble the letter "L". When you throw the hook, start by shifting your weight to your right leg as you rotate your body to the right. Pivot on the ball of your left foot as you simultaneously snap your left arm across your body while maintaining the "L" shape. The power of this punch is derived from the momentum generated by twisting your hips. Many boxers load up with their hooks by throwing wide, looping punches. Once again, the short, compact hook is far more effective. The short left hook can be the punch your opponent does not see when it comes behind your straight right hand or uppercut.



RIGHT UPPERCUT: The uppercut is perhaps the most neglected punch in boxing. It can serve as a powerful punch on the inside, difficult to defend against. Use the uppercut while infighting. Do not attempt to throw this



punch from a distance, as your opponent will easily counterpunch with a left hook. When throwing the uppercut, bend your right knee slightly while simultaneously dropping the right shoulder to your right side. Bend slightly into a crouch position. Do not over exaggerate this movement or your opponent will easily see the punch coming. Never telegraph your punches. Keep your hands up by your face as you form a semi-crouch position. Next, rotate your hips forward as you push off the ball of your back foot. The right arm should stay close to the body as it moves upward in a semi-circle motion. Drive your right hand up towards your target. Drive your hips up as you connect to maximize power.

SPARRING

Sparring is the most important element in your development as a boxer. As the Principle of Specificity states, you must practice boxing in order to improve as a boxer. Sparring is the closest we can come to actual competition. It is an opportunity to practice what you have learned in an actual “combat” situation.

Our conditioning and strengthening drills are designed to improve your speed, power, and stamina. Why do we perform these drills? ... So we can become more powerful, efficient fighters. All of our training is directed towards one single objective, to increase our performance in the ring. For this reason, we must step into the ring to practice and perfect technique.

I consider speed, power, and stamina as tools. I look to improve my tools so I can apply them to my job, which is boxing. It is difficult to perform without a good set of tools. For this reason, we must enhance our tools to peak performance levels. We must then use these tools when we box. Conditioning drills are designed to *enhance the physical condition* of the boxer but not designed to take the place of actual boxing. To improve at boxing, you must get in the ring to box.

Only with sparring can you truly master your timing, counter punching, and combinations. Sparring not only develops reactions and timing, but also helps the boxer to overcome the nerves they will face before entering the ring for an actual bout. Nerves can play a major factor in the outcome of a boxing match. Nervous feelings can leave a fighter “out of gas” before the fight ever begins. The only way to overcome these feelings is through experience. The more you box, the easier it will be to overcome the anxiety.

I can remember my first fight in 1994. I had always been a successful athlete, with a competitive spirit. All week leading into the fight, I told my friends how I would win by knockout. When fight night arrived, I found myself more nervous than I had ever been before. I feared losing in front of my friends and family.

I quickly learned that the only way to master this game and the mental aspects associated with it was to step into the ring and box. Everyone who has entered

the ring has dealt with the nerves you experience when first boxing. Winners are able to overcome these feelings by performing with courage and skill. With experience inside the ring, you build the confidence to deal with the mental aspects of the sport.

Words To Live By

“There is no such thing as a great talent without great willpower.”

Honore de Balzac

Every boxer has dealt with nerves at some point in their careers. Whether it their first fight or first title bout, all fighters have had to quell their nervous feelings at one time. Through experience, you learn to put your anxiety to rest. You learn to rely on your skills and hard work in the gym. This is all part of the development process of a fighter. You must first learn the game then develop confidence and experience. Boxing is not a sport that can be mastered overnight. Rather, it takes several years to truly maximize your performance level.

You should approach each sparring session as an opportunity to improve some aspect of your game. You may choose to work on your jab, on counter punching, or defense. Each round of each session can be different. I recommend that you jump at every opportunity you have to spar with different opponents. The more sparring you have under your belt, the more experience you will gain against different styles. If you are new to the sport, you need to develop experience inside the ring. As your experience level improves, you can focus more on fine-tuning your skills and physical condition.

HOW OFTEN SHOULD I SPAR?

I gauge my amount of sparring depending on when I will be fighting. When I am preparing for a bout, I try to spar 3 times per week. If I do not anticipate fighting in the immediate future, I will reduce my sparring. Certain weeks, we do not spar at all if there are no bouts to prepare for. Sparring can be very stressful on your body.

You will work your anaerobic system to its capacity while suffering punishment from your opponent. You will be hit on your arms, shoulders, stomach, and head. While our objective is not to get hit, this is boxing and getting hit is part of the game. If you spar each day for several rounds you will quickly burn out. You will leave all of your “fight” behind in the gym rather than bringing it to the actual bout. For this reason, I recommend **AGAINST** sparring on consecutive days.

HOW MANY ROUNDS SHOULD I SPAR?

You should base your sparring around the number of rounds you will fight. As an amateur you will fight either 3 (Novice) or 4 (Open) rounds. I suggest sparring one more round than your actual fight. A Novice boxer would box 4 rounds while

the Open class fighter would box 5. Fighters often make the mistake of sparring as many rounds as possible. Long sparring sessions are conducted at a different pace than an actual bout. Suppose you are fighting 4 rounds, why would you want to spar 8 rounds? In a 4 round fight, you will maintain a fast pace due to the limited time you have to score points over your opponent. In an 8 round bout, you have more time to feel your opponent out, which often results in a slower start.

When you spar more rounds than your actual fight, you train your body to pace itself throughout the 8 round sparring session, as opposed to working a furious pace for 4 rounds. I suggest sparring 1 more round than your bout when preparing for bouts of 6 rounds or less. If you are boxing 8-12 rounds, I suggest you keep your sparring at or below the number of rounds you will fight. You will quickly burn out if you try to box 12 rounds every other day. Rather you must plan for hard and light days where you focus more on skill enhancement instead of conditioning. In this situation, it is best to listen to the advice of an experienced trainer. Listen to your coach and most importantly listen to your body.

We must always train smart. We must train hard without over training. Sparring too many rounds will lead to muscular burnout.

SHADOW BOXING

Shadow boxing is one of the most important aspects of your training. Unfortunately, it is perhaps the most neglected training tool in all of boxing. Most guys just “go through the motions” when shadowboxing. They do a few rounds to warm-up before moving on to the “real” stuff such as sparring or heavy bag work.

While shadow boxing serves as a great warm-up, use it for its other benefits. I shadow box at least 4-6 rounds **EVERY** day. I use shadow boxing as a way to practice all my combinations. When you shadow box, you must visualize yourself in the ring fighting an actual opponent. See your opponent punching and respond by blocking, slipping, ducking, or counter punching. I use shadow boxing to practice everything that I plan to use in the actual fight.

I shadow box with my mouthpiece in just as if I was sparring. I envision myself in the fight and throw my punches with the same conviction of an actual bout. Shadow boxing can serve as far more than a mere warm-up tool. You can actually enhance your condition by shadow boxing at an intense pace. I usually begin with 2 rounds more directed towards warm-up before moving to more explosive combination punching. I push myself to throw as many punches as possible.

Words To Live By

"While we are postponing, life speeds by." - *Seneca (3BC - 65AD)*

Consider all the time that is wasted by just "going through the motions". Each 3-minute round that you stroll through is time wasted. This time could be used to enhance your skills. If you are going to train, be sure to get the most out of each session. We do not have time to waste rounds by leisurely throwing our punches to satisfy a shadow boxing requirement. Rather, envision an imaginary opponent and "fight" him the entire round. Practice throwing all of your punches and combinations. Work on the combinations that you have had difficulty landing inside the ring. Always remember that practice makes perfect so use shadow boxing as a tool to edge you closer to perfection.

Shadow boxing can improve your footwork, hand speed, balance, technique and stamina. Practice throwing your punches while moving forward, backwards, and sideways. You must learn to punch while moving in every direction. If you practice this drill everyday while shadow boxing, you have no excuse to lack this skill. Consider the most important punch in boxing, the jab. When you shadow box, practice throwing double and triple jabs while moving in each direction. This practice will lead to improvements in your actual sparring and competition.

Every punch and combination you throw should be something that you have already practiced over and over again while shadow boxing. As your condition level increases, try shadowboxing with hand weights between 1 and 3 pounds. This added weight will increase the intensity of your shadow boxing sessions. By doing so, you will transform your shadow boxing warm-up into an anaerobic conditioning drill.

I typically begin and end my evening workout session with a few rounds of shadow boxing. To begin, it serves as both a warm-up and conditioning exercise. To finish with shadowboxing, you then reinforce everything that you have learned and practiced throughout your training session. In addition, it serves as a great way to cool down and free up the lactic acid that your hard training has left in your muscles. Do **NOT** overlook the importance of shadow boxing. If you cannot make time to shadowbox, make time for losing. There is no excuse to skip this ever-important training exercise. You can shadowbox in your bedroom, living room, in the gym and outside. You can shadow box **ANYWHERE!!** If for some reason you miss the gym (*of course you never will*), you have no excuse to skip your shadow boxing. Always remember, **EXCUSES ARE WEAK!!**

HEAVY BAG

The heavy bag is the place to master combination punching while improving stamina and punching power. Hitting the heavy bag is a great way to improve your anaerobic endurance while mastering technique.



Before you hit the heavy bag, be sure to wrap your hands properly and always wear a suitable pair of bag gloves. Failure to wrap your hands or wear gloves will lead to injury. I have broken my hand in the ring three separate occasions so take my advice that it is important to protect your hands.

When you hit the bag, always throw your punches in combinations. Get used to throwing several punches at a time. Your hard work will lead to success inside the ring. Exhale as you throw your punches. Always practice a variety of combinations. Practice jabs, right hands, hooks, and uppercuts. Practice throwing different combinations moving both to your left and right. As the bag moves, move along with it as if the bag was an actual opponent. Always punch through the heavy bag, rather than at it.

Envision an imaginary opponent when working the bag. Practice feints (fakes) and blocks. Weave under imaginary punches and fire back with counter punches.

APPROACH THE HEAVY BAG WITH A PLAN

When you hit the heavy bag, do so with a purpose each round. Most guys just throw random punches or practice the same combination over and over. Do not make this mistake. Rather, approach the bag with a specific plan. For example, you may choose to fight on the outside by throwing straight punches while mixing in lateral movement. Throw a combination, move right, throw a combination, and move left.

Let's look at some different drills you can work on the heavy bag:

1. *Speed Drill* – Work to throw your punches as fast as possible. Throw a minimum of 4 punches per combination. Keep this pace up the entire round. This drill is a great way to improve your combinations while simultaneously enhancing your anaerobic endurance.
2. *Outside Drill* – Work the entire round from the outside. Box as though you are the taller fighter working straight punches. Throw jabs and straight right hands (*opposite if you are a southpaw*). Practice circling the bag while sticking out sharp jabs. Throw your combinations and then move. Do not stay in one spot the entire round. Avoid becoming a stationary target as you circle, firing off rapid combinations from the distance. Circle the bag in both directions.

3. *Inside Drill* – Work the entire round from the inside. Fight the entire round up close to the bag working combinations consisting of hooks and uppercuts. Mix in head movement and practice bobbing and weaving under imaginary punches. This is a great drill to improve your power on the inside and against the ropes. Practice body and head shots with an emphasis on power. A great combination on the inside is the *left hook – right uppercut – left hook* combination. You can modify this combo by throwing *right uppercut – left hook – right uppercut*.
4. *Change Directions* – As a conventional fighter (jab with left hand), we are accustomed to moving to our left throughout the fight. We are used to throwing all of our combinations while moving left. Practice changing direction for an entire round. If you usually move left, move to your right the entire round. Get used to throwing your jab while mixing in combinations when moving to your right. You must be able to throw every combination in any possible direction. This drill will help you with this skill. (Southpaws should reverse this drill by practicing moving to their left)
5. *Jab* - The jab is the **MOST IMPORTANT PUNCH** in boxing. A talented fighter can win a fight with his jab alone. Practice an entire round throwing only the jab. Throw single, double, and triple jabs. Mix in feints (fakes) with your jabs. For example, throw the following: *jab – feint – jab- jab*. Practice different feints to keep your opponent off balance. Always keep him guessing by throwing different combinations and feints throughout the fight. Do not become predictable or you will be open to counter punches. When working this drill, practice moving in both directions while you snap the jab.

ADDITIONAL COMBINATIONS

These are some additional combinations that you can work on the heavy bag. These combinations can also be practiced when shadow boxing and ultimately when fighting. Try to finish each combination with a double jab. For example, throw a *jab – right hand – left hook* then finish with *two jabs*.

1. Left Jab – Straight Right – Left Jab – Straight Right
2. Left Jab – Straight Right – Left Hook
3. Left Jab – Straight Right – Left Hook to the Body – Left Hook to the Head
4. Left Jab – Straight Right – Left Hook to the Head – Left Hook to the Body
5. Left Jab – Straight Right – Left Hook – Straight Right
6. Left Jab – Straight Right – Left Hook – Right Uppercut – Left Hook
7. Left Jab – Right Uppercut – Left Hook
8. Left Jab – Right Uppercut – Left Hook – Straight Right – Left Hook
9. Left Jab – Left Hook (*Known as hooking off the jab*)
10. Left Jab – Left Hook – Straight Right
11. Left Jab – Left Hook – Straight Right – Left Hook

12. Left Jab – Straight Right to the Body – Left Hook to the Head
13. Left Jab – Right Uppercut – Straight Right
14. Left Jab – Right Uppercut – Straight Right – Left Hook – Straight Right
15. Left Jab – Right Uppercut – Left Uppercut – Straight Right Hand
16. Left Jab – Right Uppercut – Left Uppercut – Left Hook
17. Left Jab – Straight Right – Left Jab – Left Jab
18. Left Jab to Stomach – Left Jab to Head
19. Left Jab to Stomach – Left jab to Head – Straight Right Hand – Left Hook

- Ø Repeat all of these combinations but start with a Double Jab
- Ø Repeat all of these combinations but start with a Jab – Feint – Jab
(feint by faking the jab with your left then fire a jab behind the fake)

This list of combinations should get you off to a good start. Practice these and you will begin to develop your own combinations.

SPEED BAG

The speed bag can increase hand-eye coordination, while enhancing speed and shoulder strength. The speed bag is a great way to condition the muscles used when punching.



When you begin to work the speed bag, be sure to adjust the position of the speed bag to your height. The bottom of the bag should be level with the bottom of your chin. When you prepare to hit the speed bag, stand straight in front of the bag with both hands up by your face. Your feet should be shoulder width apart.

Begin with the backhand punch. Hit the bag with the side of your fist near your pinky finger. When you hit the bag, it will bounce back to the platform, front to the platform, and then back to the platform. As it approaches you again, you will strike with another backhand or straight punch. You may be frustrated at first but through practice you will master the specifics of this bag.

The rhythm for hitting the speed bag is as follows: Punch – 1 – 2 – 3.

- Ø Punch
- Ø 1 = the bag will bounce backward to the platform
- Ø 2 = the bag will bounce forward toward the platform
- Ø 3 = the bag will bounce backward to the platform
- Ø Punch...

The most common mistake is trying to hit the bag before it bounces backward – frontward – backward. As you become more advanced you can alter this rhythm.

Begin by working the bag with one hand at a time. Get the rhythm down with your left and then your right. Take the arm through a circular motion as you continue to strike bag. Once you are able to keep the bag moving, start to alternate hands. Either hit the bag Left – Right – Left – Right or Left – Left – Right – Right.

Start slow and be patient. A fighter must remain calm when training and fighting. Do not allow yourself to get frustrated if the bag is difficult to hit. Practice makes perfect so stop complaining and start working! Eventually, you will be able to throw fast punches at the bag for the entire round without rest. Work the bag fast for the entire round and your shoulder muscles will thank you on fight night.

DOUBLE END BAG

The double end bag is one of the best tools to enhance timing, reactions, and combination accuracy. This bag will teach you to bob and weave, slip and duck, and move your head. I like to hit the double-end bag with a small pair of bag gloves. When you hit the double-end bag, it will rebound back at you.



The bag is attached from floor to ceiling with bungee cord at the bottom, rope at the top. The bag can be used to enhance both offense and defense. When working offense, throw sharp, short punches in bunches for the entire round. Practice different combinations while moving both left and right. This bag will move like an actual opponent, to help develop timing and accuracy. Your footwork will improve as well as you learn to throw punches from different angles while moving in different directions.

To practice defense, hit the bag straight on so it rebounds directly back at you. Avoid being hit by the bag by slipping, ducking, blocking, or sidestepping the bag. As you move or block the bag, practice throwing counter punches as if you were boxing an actual opponent. Throughout each round, mix in defense, offense and lateral movement. If used consistently, this bag can be a valuable training aid.

SLIP BALL

The slip ball is a great way to practice and master the art of slipping and weaving under punches. Also known as the “maize ball”, this ball hangs from the ceiling and is used strictly for defense. You do not strike this bag. Rather, you swing the ball and practice slipping and weaving as it swings towards your head. Practice moving to your left, right, and straight down. Always keep your eyes looking up towards you opponent.



A variation to this drill can be achieved by hanging a rope at shoulder height across the room. Practice bobbing and weaving back and forth under the rope. As you come up from your weave, practice your counter punches. For example, when you weave to your left under a straight hand, you will counter with a left hook to the body or head. When you weave to your right, under a left hook, you will counter with a straight right hand. Mimic these movements with the rope and slip ball to master technique. Practice makes perfect, which leads to victory.

SUMMARY

It is important to remember that boxing is a skill sport. By maximizing our strength and stamina, we are able to compete at optimum levels for extended periods of time. With this said, it is important to include sports specific training and sparring to learn the true “sweet science”. Boxing is a complicated sport that requires strength and skills. Do not neglect either aspect rather include both. Be sure to work these boxing drills into your daily routine.

SWISS BALL TRAINING

Swiss ball training has become one of the latest fitness trends. There are several exercises that can be performed while sitting or lying on the large Swiss ball. Does it provide any value to the aspiring boxer? If used correctly, the answer is a definite yes. Do you need the Swiss ball to become a World Champion? Probably not, but you can add variety to your workout while gaining some sports specific benefits not achieved through weight lifting alone.



When you exercise with the Swiss ball, you balance yourself on an unstable environment. For example, rather than bench press a barbell on a regular flat bench, you can lie on the ball and perform a dumbbell press. The ball provides an unstable platform that can be helpful in developing balance and increased strength levels. Many professional athletes have greatly benefited from Swiss ball training.

I am always looking for ways to add variety to my workout and the Swiss ball does just that. I recommend adding Swiss ball training to your program, not as a replacement to conventional weight lifting, rather as a supplement. It is an enhancement to your program worth trying. I purchased my Swiss ball for only \$12 (US dollars). They are available at any sports or department store.

UNSTABLE ENVIRONMENT

Consider the sport of boxing... it involves dodging, ducking, feinting, and punching. All of these movements must be made while going backwards, forward, or sideways. Such movements can leave a fighter off balance or out of position. By training with the Swiss ball, you teach your body to perform from an unstable environment. The Swiss ball can help prepare the fighter for the unique circumstances he will face inside the ring. Boxing is an unpredictable sport. You must react to the action of your opponent. You will hit and be hit, all actions that put your body in unstable positions. The Swiss ball trains your body to operate as one interconnected, functional unit.

Consider your body as a whole. When you box, muscles throughout your entire body, work together to produce desired actions. Certain muscles contract to initiate movement (such as punching), others help to balance the body (such as when you are hit), and others stabilize your spine to keep it in a safe, neutral position. Although we box with the intention of hitting without being hit, there are times when we cannot avoid incoming punches. Your body must then respond by maintaining balance so you can regain composure and continue fighting. You rely on simultaneous responses from your legs, hips, back and upper body. Your body consists of muscles that are *prime movers* and *stabilizers*.

Stabilizers help keep the bones and joints in a secure position while the prime movers extend and flex the muscle being trained. The stabilizer muscles help align and maintain joint integrity throughout a normal range of motion. They also work to provide balance to the athlete. When we weight train, we focus our energy towards the prime movers with no attention to our stabilizer muscles. Weight training works to develop one muscle group at a time. When we bench press from a flat bench, we isolate the chest muscles through a controlled range of motion. This form of training is very important to build peak strength levels. When you integrate the Swiss ball into your weight training, you are able to focus not only on your primary movers, but also on your stabilizers. Swiss ball training more closely resembles real life situations by forcing your body to balance itself while still exerting force (such as punching while on the move).

Words To Live By

“Any activity becomes creative when the doer cares about doing it better.”
John Updike

Swiss ball training should never take the place of traditional weight training but can be used to enhance your program, thus elevating your performance level. Earlier we spoke of periodization by focusing on different training objectives as you prepare for a fight. Always remember, if you want to improve performance, you cannot train the same way all the time. Swiss ball training provides the variety necessary to enhance your overall condition and performance. It requires your body to operate as an integrated unit to properly perform each exercise. Your joints and muscles must interact as a group to produce functional, efficient movement.

This form of training helps to improve functional, sports specific movement. You will strengthen core areas such as your torso, hips and spine. All power and speed derives from our body's core muscle groups. You will strengthen both conscious and unconscious movements. After all, we do not consciously balance ourselves after being hit with a punch. Rather, this reaction takes place unconsciously by our stabilizing and core muscles groups.

THE SPECIFICS

Below are illustrations and descriptions of many exercises and drills that you can perform with the Swiss ball to enhance your overall ability.



Ball Roll – Hold a pushup position and roll the ball back and forth with your legs. This works the abdominals and hips.

Hip Extension – Lie on the ground with legs resting on the ball. Keep your hips off the ground. Flex your legs and bring the ball forward towards your body. Return to the starting position and continue. This exercise improves balance while strengthening the legs and hips.



Russian Twist – Perform the Russian Twist exercise (previously described) on the ball to increase intensity and improve balance.



Back Extension
Perform a traditional back extension on the ball.



Ball Pushup – Perform a pushup on the ball to increase strength and balance. This move is much more difficult than it looks. Give it a try.



Weight Training – The ball can be used as a bench. In these illustrations I demonstrate the bench press and shoulder press. The ball will improve stabilizer strength while the weights increase overall strength.



Balance Drill – Balance yourself on the ball. This move is extremely difficult but excellent to improve your overall balance and coordination.



Ball V-Up – Begin in a straight out position with ball in between legs. Perform a traditional V-Up while the ball is held between the legs. This exercise is excellent for the abdominals.



Crunch – Perform a traditional abdominal crunch while atop the ball.

SUMMARY

The Swiss ball can be a valuable supplement to an overall training routine. It provides variety while helping to develop important stabilizer muscles. The Swiss ball will increase balance and strength.

The Swiss ball provides several sports specific benefits particularly for aspiring boxers. Balance is an important quality for the fighter who must often dodge, duck, slip, and move. We are often forced to fight from awkward positions. The Swiss ball will develop the body to adjust and respond in these situations.

NUTRITION AND SUPPLEMENTATION

At this point, we have focused all of our attention to the specifics of a boxing training program. Our emphasis has been on the conditioning aspects of our sport. Conditioning is perhaps the most important aspect of boxing. Earlier we stated that when two boxers of equal skill enter the ring, the victor is often determined by the strength and conditioning level of each fighter. If you can sustain your peak performance and punch output throughout the duration of the fight, you will be victorious.

Words To Live By

"The best way to predict the future is to invent it." - *Alan Kay*

To be the best-conditioned athlete, you will have to push your body to the extreme when training. By now, you have seen the various conditioning drills required to optimize your stamina and explosive power. Many of these drills are extremely rigorous and challenging.

The only way that you will be able to complete these drills continuously without sacrificing valuable gym time from soreness or fatigue is through proper nutrition and supplementation. Many fighters believe that if they train hard enough, they earn the right to cheat with their diets. They assume that nutrition is not important as long as they are training hard in the gym.

I cannot tell you how many guys in the sport of boxing completely ignore their diets. What these fighters do not realize is that their failure to eat properly takes away from their performance in the gym. An former fighter and good friend of mine, Muhammad Shabaz, once said the following:

"Imagine that you had a brand new Cadillac. You had the nicest car on the block and were ready to go out on a date. You were supposed to pick up your girlfriend but you had no gas in your tank. No matter how nice the car is or how powerful the engine, without a tank full of gas, the car is useless."

Muhammad used this as an analogy for boxing. You could be the strongest man in the world but if you do not fuel your system properly, you will be unable to maximize your performance.

OVERVIEW

All along I have emphasized the importance of a sports specific training regimen. We must develop our training routine so that it closely mimics our competition. Boxing is a ballistic sport that requires anaerobic endurance, speed, and power. Not only must our training routine reflect these objectives, but also our nutritional

plan. We must design our nutritional program so that it compliments the demands imposed on our bodies through a boxing training program.

Sprint work, interval running, weight training and plyometrics drills will cause the breakdown of our muscle fibers. When we break down fibers, we must refuel our muscles to allow them to grow stronger, thus enhancing our power and our ability to work for longer periods of time. Remember the Overload Principle that stated “in order to improve in strength or endurance, you must apply a greater deal of resistance than you are accustomed to.”

This principle tells us that we must continue to “overload” our muscles with strenuous exercise in order to improve and advance. If we do not eat in a way that maximizes our muscles’ recovery and tissue repair, our hard work will be wasted. Only by stressing our muscles will they grow stronger and faster. To continually punish your body, you must provide the valuable nutrients required for energy and muscular recovery.

NUTRIENTS

The primary nutritional categories consist of the following; carbohydrates, fats, proteins, minerals, vitamins and water. These nutrients all play a role in optimizing our boxing performance. Through intense training, we will deplete each of these nutrients, hence the importance of a scientific nutrition plan. When you lack these nutrients, your performance will suffer.

As athletes our nutritional demands will be much different from the “average” person. Our training and competition schedules will dictate our food intake. You must eat to maximize energy, promote recuperation, restore vitamin and mineral deficiencies, and maintain your optimal fighting weight. Too many boxers today have grown accustomed to fluctuating upward in weight in between bouts. These fighters must go on very restricted diets to properly make weight to fight. If you are serious about boxing, **you will not allow yourself to fluctuate more than 5% from your competitive fight weight.** For example, I box in the Welterweight division so must compete at no more than 147 pounds. In between fights I do not allow myself to increase by more than 5% of 147 pounds (which equals 7.35 pounds). For this reason, I stay between 147 and 155 pounds at all times.

CARBOHYDRATES

To train successfully, you will need energy. Carbohydrates provide the most efficient form of energy for the boxer. Carbohydrates fuel the central nervous system and muscles during physical activity. Carbohydrates should make up 50-70% of your nutritional intake. Our training program is intense. To keep up, you must supply your body with an adequate supply of carbohydrates.

Carbohydrates are converted by the digestive system into blood sugar, also known as glucose. There are three types of carbohydrates (*unfortunately not all carbohydrates were created equal!*). The three primary types are monosaccharides, disaccharides, and polysaccharides. Mono and disaccharides are what we refer to as sugar while polysaccharides are considered complex carbohydrates.

As athletes we must fuel ourselves with complex carbohydrates while avoiding sugar-based forms. Many of the latest health fads consist of carbohydrate-restricted diets. The thought is that carbohydrates make you tired and are stored as fats. You must realize that carbohydrates are not stored as fat when you follow a diet rich in complex carbohydrates rather than those high in sugar. Complex carbohydrates provide prolonged energy sources, unlike the sugar based mono and disaccharides.

Many people associate eating a meal high in carbohydrates with a sudden feeling of fatigue and tiredness. This is not true when you eat the **RIGHT** carbohydrates. This is very important so pay attention... Carbohydrates control the levels of sugar in your blood. As athletes we need to keep a steady level of blood sugar. By doing so, we ensure a steady level of **ENERGY** (required to train). When our blood sugar levels drastically drop, we experience the feeling of fatigue and exhaustion. For example, when you go eat candy, you get an immediate rush of sugar into your blood. You may experience a momentary “rush” from the sugar before quickly feeling tired afterward. Your body senses the unusually high level of sugar so consequently “takes” the sugar out of your blood to feed your cells. All of a sudden, your blood sugar levels bottom out and you feel tired. This **DOES NOT** happen when you consume complex carbohydrates. Rather, complex carbohydrates allow your blood sugar levels to remain constant, which equates to continuous energy for training.

Words To Live By

“Always bear in mind that your own resolution to success is more important than any other thing.” - *Abraham Lincoln*

Examples of complex carbohydrates that **will provide sustained energy** are as follows:

- | | |
|---------------------|----------------|
| Ø Sweet Potatoes | Ø Cereal |
| Ø Yams | Ø Nuts & Seeds |
| Ø Apples | Ø Grains |
| Ø Oranges | Ø Legumes |
| Ø Whole Wheat Bread | Ø Vegetables |
| Ø Whole Wheat Pasta | Ø Oats |
| Ø Brown Rice | |

These foods have “low glycemic index” levels. The glycemic index is defined as the **rate which foods cause an increase in blood sugar levels**. This is EXTREMELY important. Foods that are low on the glycemic index will constitute the majority of our pre-workout and pre-fight meals. Many of the foods that you are accustomed to eating for energy are likely high on the glycemic index. These foods cause sharp swings in blood sugar levels leading to fatigue and poor performance. For example, potatoes are absorbed very quickly and cause a faster rise in blood sugar than common table sugar.

Examples of foods high on the glycemic index that should be avoided before workout sessions are as follows:

- Ø White Potatoes
- Ø White Bread
- Ø White Pasta
- Ø White Rice
- Ø Bananas
- Ø Raisins

As you can see, stay away from those foods made from white flour; instead choose those made with wheat. Always remember to avoid simple carbohydrate foods, such as candy, soda and honey. These foods supply calories without nutritional value. This advice is extremely important if you wish to gain the competitive advantage over your opponent.

Later in this chapter I will discuss the specifics of pre and post-workout meals.

PROTEIN

Moving right along, let's shift our attention to protein. Protein is extremely important for boxers to efficiently repair damaged muscle tissue. Remember that our objective is to break down muscle fiber so that it may rebuild to become more explosive and powerful. Protein is required to facilitate this recovery phase.

When we train at intense levels, protein is excreted from the body through sweat. Protein demands increase in proportion to the amount and intensity of your training. As boxers, our intensity level will be extremely high. For this reason, we will require more protein than the average “fitness enthusiast”. Failure to supply your body with adequate levels of protein will compromise your ability to repair and rebuild your muscles. Do **NOT** make this mistake.

Your diet should consist of approximately 20-30% protein. Due to the extreme nature of our training, it is recommended that you consume between **.7 – .9 grams** of protein per pound of body weight. This equates to approximately **1.54-1.98 grams** of protein per kilogram. These numbers are estimates but provide

an adequate level of protein for your intense training needs. Let's look at an example:

	Moderate Intensity	High Intensity
Body Weight Pounds	150 lbs.	150 lbs.
Grams Per Pound	0.7 g	0.9 g
Protein Requirements	105 g	135 g

Body Weight Kilograms	68.18 kg	68.18 kg
Grams Per Kilogram	1.54 g	1.98 g
Protein Requirements	105 g	135 g

Protein Requirements for a 150 lb. (68 kg) boxer

As this example depicts, it is important to plan your protein requirements according to your training intensity. If you have a lighter day in the gym, plan your intake according to the moderate intensity column. If you have an intense, anaerobic session, plan your intake according to the high intensity column.

After consuming protein, your body breaks these molecules into amino acids. There are 22 amino acids required to create human protein. Amino acids make the enzymes, hormones and neurotransmitters that help to regulate your body. Of the 22 amino acids, 9 are essential. These 9 essential amino acids **MUST** be consumed through your diet. If you lack these 9 essential amino acids, your body will not properly rebuild important muscle fibers.

The most complete source of protein comes from egg whites. Egg protein contains each of the 9 essential amino acids. It is important to consume protein following a strenuous workout. During intense exercise, your body will decrease its rate of protein production. This decreased production period can last several hours after your training routine. What does this mean? ...

When we train intensely, we break down muscle fiber. We must immediately fuel these muscle fibers with protein to ensure adequate growth and recovery. There are 3 Branched Chain Amino Acids (BCAA) that are particularly important for your recovery phase following exercise. The 3 BCAAs are Leucine, Isoleucine, and Valine. These BCAAs must come from your diet. The best time to supplement BCAAs is immediately before and after exercise. By fueling your body with Branched Chain Amino Acids you will prevent muscle damage, thus enhance your ability to sustain intense training levels. Always remember that your protein intake increases in proportion to the intensity of your training. As boxers, we undergo intense training, thus require higher levels of protein than ordinary individuals.

Words To Live By

"Many of life's failures are people who did not realize how close they were to success when they gave up." – *Thomas Edison*

FAD DIETS

While we are discussing the importance of protein consumption, it is a good time to mention the numerous fad diets that preach high protein and low carbohydrate intakes. These diets promise rapid weight loss. One of the most popular carbohydrate restrictive diets is the Atkins Diet. It is important to note that as competitive athletes, boxers **MUST NOT** subscribe to any such dieting methods. We **NEED** high levels of complex carbohydrates for optimal performance.

High protein diets cause the formation of the toxic ammonia called urea. This ammonia-based substance places a great deal of strain on your kidneys and liver. In addition, when insufficient levels of carbohydrates are consumed, the body is forced to utilize protein for energy. When protein is required for energy, it is no longer available to build and replenish the muscle. This creates a negative nitrogen balance in the body causing muscular atrophy to occur. Atrophy refers to a decrease in both the size and strength of the muscle. We **MUST AVOID MUSCULAR ATROPHY**.

YEAH BUT...

"I heard these diets are effective for weight loss"... **WRONG**. Low carbohydrate diets are characterized by initial weight loss, primarily due to excessive water loss. A decreased carbohydrate intake causes liver and muscle glycogen depletion, which causes a large loss of water, since about three parts of water are stored with one part of glycogen. Also, restricting carbohydrate intake reduces the kidney's ability to concentrate urine, leading to an increased excretion of sodium.

Dieters cherish this rapid initial weight loss assuming it represents fat loss. Actually, their body fat stores are virtually untouched. As the body adjusts for the water deficit, the weight loss slows or ceases. Complications associated with low carbohydrate, high protein diets include ketosis, dehydration, electrolyte loss, calcium depletion, weakness, nausea, and kidney problems. Vitamin and mineral deficiencies are also common with crash diet regimens.

By now you should be convinced to stay **AWAY** from these fad diets.

FATS

As boxers our fat intake should consist of approximately 10% of our overall food intake. It is important however that we select the most appropriate forms of fat to make up this percentage. Fat is known as a secondary source of energy. Many endurance athletes rely on fat as an energy source following their depletion of carbohydrates.

As boxers however, the majority of our training consists of explosive, anaerobic conditioning. Our energy must come from complex carbohydrates. Fat does not make an effective energy source for competition. Fat simply does not get used up when you train anaerobically. Our sport (and training) consists of 70-80% anaerobic activity.

A boxer that consumes excess quantities of fat will quickly store it in the body, thus adding unnecessary weight. Consider the following, fat contains 9 calories per gram, while protein and carbohydrates only 4 calories per gram. Based on these numbers, it is easy to see that excess fat consumption will lead to excess weight gain.

SO WHY DO WE NEED FAT?

While it is easy to see that excess fat leads to excess weight gain, we must not completely exclude fat from our diets. Fat serves several important functions for the human body. Fat is important for healthy skin and hair. While this may not translate into an immediate boxing benefit, it still remains important. In addition, fat acts as a transfer agent for pertinent fat-soluble vitamins such as A, D, E, and K. Each of these vitamins is important to body function and performance. Without fat, you are unable to digest and utilize these vitamins. For this reason, it is always important to take your vitamin supplements with a meal (more on vitamins later in this chapter).

It is still important to include a certain percentage of fat. You must be conscious of what kind of fat you eat however. Unfortunately, not all fats “were created equal”. The primary forms of fat are saturated and unsaturated fats. Unsaturated fats are classified as either monosaturated or polysaturated. Saturated fats are those such as meat, butter and milk. These fats remain solid at room temperature and are unhealthy for our bodies.

Saturated fats are those that clog arteries and raise cholesterol levels. Polysaturated fats (such as fish oil) and monosaturated fats (such as olive oil) can actually lower cholesterol levels. Even so, keep your fat intake to approximately 10% of your diet. Focus on consuming either poly or monosaturated forms. **STAY AWAY** from saturated fats. Read the labels on food packages and avoid greasy, fried meals. Always opt to bake your foods as opposed to frying them.

MORE ON “GOOD” FATS

Earlier we spoke of essential amino acids. The same concept holds true for fatty acids. The two essential fatty acids are linoleic acid (*omega-6*) and linolenic acid (*omega-3*). You must supply these fatty acids from food because your body cannot make them. These fatty acids are the building blocks for cell membranes and important chemical messengers. Consider that omega-3 and omega-6 fatty

acids are responsible for the creation of prostaglandin. Prostaglandins regulate many important bodily functions including inflammation, pain, and swelling while also helping to control your heart, kidneys, digestive system and blood pressure. We can clearly see the importance of both linoleic (omega-6) and linolenic (omega-3) fatty acids.

Here are some valuable food sources that include these fatty acids:

Omega-6 = corn oil, safflower oil, sunflower oil, peanuts, and seeds

Omega-3 = canola oil, soybean oil, fish, and seafood

If you do not like any of these foods, you can supplement these essential fatty acids with Flaxseed (or Flax) Oil. I personally take Flax Oil supplement that includes both Omega-3 and Omega-6 fatty acids. I will discuss Flax Oil in more detail when discussing **Supplementation**.

Right now you may be thinking, *“Hey Ross, you sure are focusing a lot of attention on nutrition!” ...*

My response, “Good observation!! Proper nutrition will **ENHANCE YOUR PERFORMANCE**. Do **NOT** underestimate the importance of nutrition!!”

Words To Live By

“There is no security on this earth. There is only opportunity.”

General Douglas MacArthur

FIBER

Moving right along let's take a look at fiber. Fibers are those indigestible complex carbohydrates that make up plant cell walls. Fiber does not supply energy yet provides several important benefits to our diet. Fiber helps promote efficient intestinal function while aiding the regulation and absorption of sugar in the bloodstream.

Perhaps the most important benefit of fiber to boxers is that it promotes satiety (fullness). This means that when you eat fiber rich foods, you are more likely to feel full, thus consume fewer calories. For a boxer who needs to stay within his weight range, this can be extremely helpful.

So how much fiber do you need each day? Most fitness experts recommend between 40 & 50 grams. If eating fiber is new to you, start increasing your intake gradually, rather than all at once. By suddenly increasing your fiber intake, you are likely to get diarrhea, which will quickly dehydrate the boxer.

There are two primary forms of fiber, insoluble and soluble. Insoluble fiber absorbs in water, while soluble fiber dissolves in water. Both forms are important to your diet. Here are some food sources of both...

Insoluble = artichokes, broccoli, nuts, wheat bran, whole grains
Soluble = apples, carrots, cauliflower, citrus fruit, corn, oat bran, oat meal

We all know the old saying “an apple a day helps keep the doctor away”. There is truth to this statement as apples are a great source of fiber. I always try to eat at least one apple a day when preparing for a fight. I find it much easier to maintain my weight by keeping my fiber intake around 50 grams per day.

One last note regarding fiber, cereal can be a great source of fiber as well. Just be careful to read the labels. Many cereals that are advertised as high in fiber are also high in sugar and calories. Get yourself into the habit of reading food labels so you can monitor your caloric intake.

Words To Live By

“The great thing in this world is not so much where we stand, as in what direction we are moving.” – *Oliver Wendell Holmes*

VITAMINS

In addition to eating adequate amounts of carbohydrates, fats, and proteins, we must receive sufficient levels of vitamins. Every human being needs vitamins. As boxers, we need **MORE** vitamins. To perform at optimal levels, it is important to supplement your diet with vitamins. Each vitamin is responsible for specific functions within the body. Below is a list of the functions and food sources of the most important vitamins.

Vitamin A

Vitamin A is a fat-soluble vitamin, meaning that it requires fat for your body to absorb it. Vitamin A is needed for the growth and repair of body tissues, bone & tooth formation, healthy skin, and necessary for night vision. Excess amounts can be toxic.

Food Sources: Liver, eggs, dark green and orange fruits & vegetables, dairy products

Vitamin B-1 (Thiamine)

Vitamin B-1 turns carbohydrates into energy and helps maintain nervous system function. B-1 aids digestion, assists with nerve function, and promotes growth and muscle tone. This vitamin is water-soluble so must be replenished throughout the day. Excess amounts may cause increased urination.

Food Sources: Wheat germ, liver, pork, whole grains, dried beans

Vitamin B-2 (Riboflavin)

Riboflavin is needed for tissue repair and healthy skin. It turns fats, proteins and carbohydrates into usable energy. It aids in cell respiration and the formation of antibodies.

Food Sources: Dairy products, green leafy vegetables, whole grains

Vitamin B-3 (Niacin)

Niacin converts fats, proteins and carbohydrates into energy. It is important for proper brain function, healthy skin, nervous and digestive systems, and blood circulation.

Food Sources: Meat, poultry, fish, nuts, whole grains, dried beans

Vitamin B-6

B-6 plays an important role in converting fats, proteins and carbohydrates into usable energy for your body. It also aids in the formation of valuable antibodies.

Food Sources: Fish, poultry, lean meats, whole grains

Biotin

Biotin is important for your skin and circulatory system. It also works to break down fats and protein. Biotin plays a role in maintaining healthy hair. Biotin also aids in the formation of fatty acids and helps the body to utilize vital B vitamins.

Food Sources: brown rice, soybeans, dark green vegetables

Vitamin B-12

Vitamin B-12 aids in blood cell formation. It also aids in maintaining a healthy nervous system to convert fat, protein, and carbohydrates into energy.

Food Sources: Liver, oysters, lean meat, fish and poultry, eggs, dairy products

Choline

Choline is an agent that aids in the utilization of B vitamins. It is important for brain function.

Food Sources: Eggs

Vitamin C

Vitamin C helps heal wounds and increases your resistance to infection. It also strengthens blood vessels and aids in collagen maintenance. Vitamin C is also thought to reduce post-exercise muscle soreness.

Food Sources: Citrus fruits, melon, berries, vegetables

Vitamin D

Vitamin D helps maintain strong bones and teeth by increasing the absorption of calcium and phosphorus. Sunlight is the best source of Vitamin D. Vitamin D is necessary for healthy bones and teeth.

Food Sources: Egg yolks, organ meats, fortified milk, sun

Vitamin E

Vitamin E promotes healthy circulation, red blood cells, and works as a valuable antioxidant. Many believe Vitamin E to aid in reducing muscle soreness.

Food Sources: Vegetable oils, wheat germ, nuts, dark green vegetables, whole grains

Folic Acid

Folic acid is important in red blood cell formation. It is necessary for growth and division of body cells.

Food Sources: Green leafy vegetables, organ meats, dried beans

Vitamin K

Vitamin K is essential for the proper clotting of blood so internal bleeding and hemorrhages can be controlled naturally.

Food Sources: Green leafy vegetables, fruits, cereal, and dairy products

Right now you are probably thinking, *“Wow, that is quite a long list. Which vitamins do I really need?”...*

My response... **“ALL OF THEM!”** As athletes, we will deplete our vitamin supplies at a much faster pace than the average, sedentary person. Boxing can be very stressful to our bodies. We must maintain adequate levels of vitamins to promote energy production and recovery.

It is critical to supplement your diet with a multi-vitamin supplement. I take between 2 and 3 multivitamins throughout the day. It is almost impossible to meet all of your vitamin requirements through diet alone. Exercise will cause a great demand on your body for vitamins. Suppose you run hard in the morning, the multi-vitamin that you take with breakfast will be gone by dinnertime. For this reason, you must supplement throughout the day.

Furthermore, the RDA (Recommended Daily Allowance) percentages that you read on the back of vitamin packages were created for the average, non-athletic person. When a package says the vitamin contains 200% of the RDA value, this does **NOT** mean that it contains twice as much as you need. We are boxers; the

RDA did not make their recommendations around the vigorous training schedule of a boxer. My only word of caution is to avoid over supplementing the fat-soluble vitamins A, D, E, and K. When consumed in mega quantities, fat-soluble vitamins are stored within your body. Too much can become toxic (this is very rare).

****Later in the chapter I will discuss a complete supplementation schedule.***

MINERALS

Minerals are vital to human life. Minerals are inorganic substances not produced by the body. They are required for proper bodily function. Many studies have shown that mineral deficiencies can prove **DISASTROUS** to sports performance. As fighters, we look to enhance performance, not hinder it. Stressful exercise and competition causes rapid depletion of minerals. It is extremely **IMPORTANT** to add a mineral supplement to your diet. Let's look at the primary minerals...

Calcium

Calcium is essential for strong, healthy bones and necessary for muscular contractions. A lack of calcium can lead to teeth problems, back pain, and weak bones susceptible to breaks. I have broken my hand three times from boxing and now realize the importance of calcium for strong bones.

Food Sources: Milk & milk products

Copper

Copper is required to break down protein to rebuild body tissue. It is required to convert iron into hemoglobin and essential for the utilization of Vitamin C. Our brain nerves and connective tissues depend on copper. Copper is very important to the boxer who must rebuild body tissues after strenuous workouts or competitions.

Food Sources: Oysters, nuts, organ meats, dried beans

Chromium

Chromium helps to break down simple sugars in the body. Chromium promotes the production of insulin.

Food Sources: Brewer's yeast, cheese, whole grains, meat

Iodine

Iodine is important to the thyroid, which controls metabolism. It plays an important role in mental reaction, energy and weight gain.

Food Sources: Seafood, iodized salt

Iron

Iron is necessary for the production of hemoglobin, myoglobin, and certain enzymes. It aids in growth, prevents fatigue and defends against disease. Iron is one of the most important minerals.

Food Sources: Organ meats, meat, fish & poultry, dried beans, whole grains & enriched grains, green leafy vegetables

Magnesium

Magnesium is a mineral that has the ability to relax nerves and muscles. Magnesium is important in converting blood sugar to energy. It helps our bodies to utilize Vitamin C, calcium, phosphorus, sodium and potassium. Magnesium is an **important mineral for boxers** to ensure optimum energy levels. If you lack magnesium, you will experience fatigue and weakness.

Food Sources: Nuts, green vegetables, whole grains, dried beans

Manganese

Manganese helps to nourish the nervous system, brain and regulate muscles in the body. It helps to stimulate enzymes that can convert protein, fats and carbohydrates into usable energy. In addition, it is important for reproductive systems.

Food Sources: Nuts, whole grains, vegetables fruits

Phosphorus

Phosphorus is important for normal bone and tooth structure, the heart, and kidney function. Phosphorous is required for the body to absorb vital B-Vitamins and Niacin.

Food Sources: Meat, poultry, fish, eggs, dairy products, dried beans, whole grains

Potassium

Potassium helps regulate water balance within the body. It aids in the transport of nutrients through the bloodstream. Potassium is also important for our nervous system.

Food Sources: Vegetables, fruits, dried beans milk & yogurt

Selenium

Selenium is an important antioxidant to our body. It helps fight premature aging and hardening of the tissues. Selenium helps to keep tissues flexible and elastic.

Food Sources: Seafood, organ meats, lean meats, grains

Zinc

Zinc is perhaps the most important mineral of all. It is important for RNA/DNA formation, the conversion of protein to energy, the male prostate gland, and bone formation. The heart, brain and productive organs all depend on zinc. In addition, zinc prolongs muscle contractions thus increasing your endurance. (*A great mineral for boxing*)

Food Sources: Lean meats, liver, eggs,

Boron

Boron helps to keep calcium, magnesium and phosphorus within our body and bones.

Food Sources: Leafy vegetables, nuts, grains, apples, raisins, and grapes

ANTIOXIDANTS

Now that you know the importance of each vitamin and mineral, let's look at the importance of antioxidants. Obviously, we need vitamins and minerals for proper body function. A diet rich in vitamins and minerals will definitely enhance our performance as boxers.

Perhaps more importantly though, vitamins and minerals act as powerful antioxidants that capture free radicals inside our bodies. Without turning this into a science project, free radicals are unstable oxygen atoms created in the body from natural processes and environmental toxins such as smoke. These free radicals cause damage to our cells thus impair performance. We **ALL** are exposed to free radicals in our lives. Antioxidants are the body's defense against these cell-damaging radicals. Antioxidants neutralize free radicals, removing them from circulation.

Be sure to get your share of antioxidants. Vitamin A, beta carotene, Vitamin C, and Vitamin E all help to produce antioxidant enzymes that neutralize free radicals.

WATER

Water is the most important substance to the human body. As boxers, we must stay hydrated if we expect to optimize our performance. Water makes up approximately 70% of our total body weight. Reductions in water adversely affect our athletic performance.

When you lose water, your blood thickens. As our blood thickens, it becomes more difficult to deliver oxygen to the brain and muscles. Water is essential for energy production. It also aids in your ability to recover from strenuous workouts. As boxers, we need more water than the average person. A drop in 5% of body

water can reduce physical performance by as much as 30%! It is important to consume water approximately 20 minutes before we exercise. It is best to drink moderate levels of water throughout the day. As our body's main ingredient, water is vital to healthy athletic performance.

Words To Live By

"Victory belongs to the most persevering." – *Napoleon Bonaparte*

THE COMPLETE PLAN

Now that we have discussed the primary components, let's discuss the specifics of a nutritional plan. I will also suggest various supplements to enhance performance.

EAT FIVE MEALS PER DAY

First and foremost, it is important to eat between five and six meals a day. Your meals should be spaced out approximately every three hours. This schedule is often difficult to maintain due to work and hectic schedules. For this reason, I often bring a pre-made meal replacement shake to substitute one meal. When selecting meal replacement shakes or nutrition bars, look for those that are low in sugar, yet packed with protein, complex carbohydrates, vitamins and minerals. I personally supplement my diet with METRx meal replacement drinks.

Our five meals should not be "enormous" meals. The purpose of eating more frequent meals is to keep your blood sugar and energy levels sustained throughout the day. These meals should be of moderate size with a balance of nutrients. (*See examples later in chapter*) In addition, by eating smaller meals throughout the day, we help to keep our metabolism working.

Many boxers severely restrict their food intake in order to make weight. Limiting food intake will adversely affect your performance. If you must stop eating for days to make weight, you are either not training hard enough or fighting in the wrong weight class. Stay within 5% of your fight weight **ALL THE TIME**.

CARBOHYDRATES AND PROTEIN

We mentioned earlier the importance of a diet rich in carbohydrates and protein. Limit your intake of fats, as we will not use fat as an energy source during our anaerobic training. Also plan your meals based on the activities that you have in the next few hours. For example, it is best to consume complex carbohydrates a few hours prior to a workout. You will use these carbohydrates for energy. Do not consume large quantities of carbohydrates before going to sleep in the

evening. You will not require these carbohydrates for energy while sleeping. Always eat based on what you will do.

If you undergo a high protein diet (NOT RECOMMENDED) to rapidly lose weight for a bout, remember to drink extra water. People on high protein diets store less water in their bodies so are more likely to dehydrate. A dehydrated athlete is often an unsuccessful athlete.

FUEL UP BEFORE COMPETITION

Pre-fight meals should consist of low glycemic index foods. It is best to eat a small meal approximately 2 hours prior to your bout (or workout). Low glycemic, complex carbohydrates will provide sustained energy levels while maintaining steady levels of blood sugar. Your pre-fight meal should primarily consist of carbohydrates (70-80%). Protein should make up between 15-20% with fats only contributing up to 5% of your meal. Also, remember to stay hydrated with water.

FUEL UP AFTER WORKOUT

It is important to fuel your muscles immediately following your workout. Many athletes enjoy a cold protein shake following their intense training session. Protein is important following your workout to promote growth and muscular recovery. Carbohydrates are of equal importance after the workout to restore glycogen levels for energy. I suggest a protein shake along with cereal or another form of complex carbohydrates. You do not need a large meal, just enough to “fuel” your body’s gas tank. I recommend approximately 400-600 calories.

DRINK 8-10 GLASSES OF WATER PER DAY

Be sure to drink at least 8-10 glasses of water per day. Space your water intake out throughout the course of the day and stay hydrated during lengthy workout sessions. Drink water 2 hours before your training session (or competition) and then again 20-30 minutes before you begin. Avoid drinking coffee or other caffeine-based drinks. Caffeine will cause you to dehydrate. If you consume caffeine, be sure to increase your water intake. *(Caffeine also limits your extraction of valuable vitamins and minerals. Leave the coffee alone!)*

TAKE VITAMIN AND MINERAL SUPPLEMENTS

It is difficult to consume all of our essential vitamins and minerals through diet alone. Hard exercise quickly depletes our nutrient levels. I recommend a multi-vitamin and mineral supplement twice a day. Take your vitamins with food so that all nutrients are absorbed. Avoid excessive use of fat-soluble vitamins such as A, D, E, and K. These vitamins will accumulate and store in your body.

Vitamin C and Vitamin E are great to take following strenuous exercise. They are valuable antioxidants that reduce soreness and enhance muscular recovery. Be sure to receive adequate amounts of magnesium and zinc. Once again, be careful not to take excessive amounts of these minerals. Your complete multi-vitamin and mineral should be one that has adequate levels of all major nutrients. It is safe to take these 2 or 3 times per day. Many athletes consume multi-vitamins 3 times per day due to intense training programs. Browse through your local pharmacy for those multi-vitamins that are designed for athletes and performance.

ADDITIONAL SUPPLEMENTS FOR BOXERS

Protein Powder Drinks – Most fighters do not receive adequate levels of protein. Our body's tissue is made from protein. Protein is required for muscle growth and repair. Failure to receive sufficient levels of protein will lead to muscle soreness and fatigue. Select a protein drink or shake low in sugar.

Glutamine – Glutamine (also known as L-Glutamine) is the most abundant single amino acid in the blood. It is also the most abundant amino acid inside our muscle tissue. Glutamine comprises over 60% of the amino acid pool in skeletal muscle. It delivers muscle-building nitrogen into muscle cells where it is synthesized for growth. What does this all mean? ... Glutamine has been proven to assist in muscle growth while preventing muscle tissue breakdown. When we train hard, our Glutamine levels drastically drop. Our Glutamine concentrations remain low until the recovery process is complete. This process varies in length depending on the intensity of our workout.

When we conduct an intense boxing workout, much of our Glutamine is drawn from our muscle tissue. We are prone to soreness and slow recovery rates. So what is the solution? The solution is to supplement with Glutamine following your workout. By supplementing this amino acid, we counteract the drop in muscle protein synthesis. You will experience faster recovery rates. I have personally supplemented with Glutamine and experienced obvious benefits. By improving recovery rates, you can say goodbye to soreness. When we overcome soreness, we are able to train harder, thus realize greater improvements in our physical condition. Supplement with Glutamine immediately following your intense training session. I recommend mixing the powder form with a drink or protein shake.

Branched Chain Amino Acids – As we mentioned earlier, BCAAs are essential amino acids. They aid in muscular growth and healing. BCAA supplementation is great to reduce muscle damage thus increase energy levels.

Creatine Monohydrate - Creatine monohydrate induces an increase in body mass while increasing muscular energy reserves. Creatine augments energy

levels by increasing the availability of ATP, the organic compound that yields energy for muscular contraction. Boxers need to be careful when supplementing with Creatine as it can cause moderate weight gain due to water retention by the skeletal muscle. So why bother with Creatine? ... Creatine (if used correctly) can increase strength and explosive power. It can help you get more out of your workout while increasing recovery rates. Boxers should only supplement with 3-5 grams per day. They should avoid the “loading phase” prescribed on most Creatine packages. Most recommend taking a very small amount prior to your anaerobic training sessions. Do not experiment with Creatine right before a fight. It may cause weight gain that will be difficult to lose in time for weigh-ins. If you supplement Creatine correctly, you will not gain weight. Experiment in between bouts or during off-season training.

***Caffeine blocks the benefits of Creatine so say goodbye to coffee*

Ribose – Ribose is an excellent supplement to improve anaerobic endurance and muscular recovery. ATP (adenosine tri-phosphate) is the body’s primary energy carrying molecule. During strenuous exercise, our bodies lose large amounts of ATP. Without ATP, we cannot train anaerobically for extended periods of time. Ribose allows the body to replenish lost ATP energy stores. Ribose supplementation helps us to maintain high energy levels to provide peak performance. Ribose is most effective if taken both before and after a period of anaerobic training (such as sparring, conditioning drills, and interval running).

Ribose can also increase the effectiveness of Creatine. During quick bursts of activity, Creatine plays an important role in energy production. A muscle only stores enough ATP to perform intense muscle contractions (such as punching) for about 10 seconds. The body must develop new ATP for your energy to continue. Creatine and Ribose work hand-in-hand to regenerate ATP and keep your body functioning during intense training. When we box, we need to maintain peak energy levels throughout the fight. A combination of Ribose and Creatine is an excellent supplementation strategy to provide this much needed energy.

Flaxseed Oil – Flaxseed Oil is a great supplement for boxing. Flaxseed not only provides essential fatty acids but also improves stamina and endurance, shortens recovery time, and reduces soreness. Flaxseed oil is perhaps the best supplement of all. I supplement with Flaxseed oil both in the morning and evening.

Glycerol – We all know that dehydration significantly impairs endurance performance. Dehydration is common during intense training regimens. Sports scientists have discovered that by adding glycerol to water before exercise, athletes can increase the amount of water in the body for several hours. Glycerol causes the kidneys, which are responsible for urine production, to retain water. Glycerol can enhance performance by preventing or delaying dehydration. It

helps maintain body water to delay the onset of dehydration, thus allowing the boxer to train harder and longer.

Inosine - Inosine is a naturally occurring compound found in the body. It contributes to strong heart muscle contraction and blood flow in the coronary arteries. Inosine stimulates enzyme activity in both cardiac and skeletal muscle cells for improved regeneration of ATP. Inosine improves anaerobic endurance. You will be able to train harder, thus make greater gains. Inosine is best taken 1 hour before workout.

***Various studies claim Inosine to be ineffective. I disagree. I have seen results and know several world-class athletes that attest to its benefits.*

Pycnogenol – Pycnogenol is another antioxidant that is said to be more effective than Vitamin A, C, and E. It has been shown to promote quicker recovery while enhancing overall energy levels and stamina. Pycnogenol is relatively new to most fitness enthusiasts but said to be very effective.

Cognamine - Cognamine (nick-named BodyQUICKEN) is the only laboratory tested neural speed performance product in the world that has been validated by Olympic and World Champion professional athletes in over 10 sports. Cognamine produces immediate effects on reaction speed, speed output, and speed-strength endurance within 30-60 minutes of the first dose. I have yet to try Cognamine. The research regarding this product seems amazing. It is definitely worth consideration, particularly for boxers. It does pack a hefty price tag however. Expect to pay around \$50 (US Dollars) for a 30-day supply.

Phosphatidylserine – Phosphatidylserine provides improves brain function, protects against cell damage associated with intense training, and helps to prevent post muscle soreness. Phosphatidylserine also aids the immune system. It counteracts the negative affects of overtraining. Phosphatidylserine is a great supplement that can be quite expensive.

WHICH SUPPLEMENTS DO YOU NEED?

Each of the above mentioned supplements provide some degree of performance enhancement. Elite athletes often take numerous supplements throughout the day. I personally take several each day. Unfortunately, supplementation can become quite costly. So which supplements are best? ... That is a difficult question to answer as each provides unique benefits. If you are strapped for cash, I recommend Flaxseed Oil, Glutamine, and BCAAs. This combination will assist with muscular recovery following intense workouts, while enhancing energy levels. Creatine and Ribose are also excellent.

CAFFEINE AND EPHEDRINE BASED PRODUCTS

Let's briefly discuss the various caffeine and ephedrine based weight loss and energy products that have been marketed towards the athletic community. These products have increased in popularity despite the potential dangers associated with their use. Ephedrine is a central nervous system stimulant and decongestant effective for relieving bronchial asthma. It comes from the Chinese herb *Ma Huang*. Ephedrine has been used for centuries as both a stimulant and bronchodilator.

Since 1993 the FDA states that at least 17 people have died and 800 made ill by dietary supplements containing ephedrine. The FDA recommends a maximum daily ephedrine dose of 24 milligrams. Each supplement should contain no more than 8 milligrams of ephedrine per serving and should not be taken continuously **for over a 1-week period**. The side effects of ephedrine include elevated blood pressure, irregular heartbeat, stroke, dizziness, restlessness, irritability, and headache. Combinations of ephedrine and caffeine cause side effects substantially worse than those from either compound alone. The majority of energy enhancement products that contain ephedrine also contain caffeine.

Do these products provide any benefits to the aspiring boxer? After all, boxing is perhaps the most physically demanding sport, where endurance often means the difference between winning and losing. In addition, as boxers we are required to stay within a confined weight range when competing. Unfortunately, these products are **NOT** beneficial to competitive boxers for a variety of reasons.

Caffeine and ephedrine products cause elevated blood pressure and heart rate. When we train anaerobically, we push our bodies to the extreme. We train with the intention of raising our heart rate for extended periods (*remember the equations used to calculate ideal heart rate for anaerobic training*). Ephedrine based products cause our hearts to beat too fast. They are detrimental to the competitive boxer. I have personally experimented with ephedrine products in the past with awful results. In addition, ephedrine causes side effects such as headache and nausea that can last for hours.

The supplements we previously recommended provide a healthy way to enhance performance and improve recovery times. Ephedrine and caffeine will do just the opposite. In addition, they will more quickly deplete the body of valuable vitamin and mineral stores.

Furthermore, both the International Olympic Committee and National Collegiate Athletic Association ban the use of ephedrine-based products. The Professional Boxing Control Regulations of 1996 also lists ephedrine as a banned substance. For this reason, you will not be able to compete with these products at Olympic or Professional competitions. I strongly recommend that you stay away from these products when boxing. There is no substitute for hard work and a proper

diet. Eat smart and train hard and you will be ready to perform at your optimum level.

SAMPLE MEAL PLANS

Now that we have thoroughly discussed the important components of a performance enhancing diet and supplementation plan, let's look at some examples.

SAMPLE DAY 1

MEAL ONE

- Ø 3-4 eggs (no yolks)
- Ø Low fat yogurt
- Ø Cereal – Avoid high sugar cereals, try Special K, Wheaties, Kashi, or Total
- Ø Use skim milk with cereal
- Ø Fruit
- Ø Water
- Ø Vitamin and Mineral Supplement

MEAL TWO

- Ø Fruit (apple, orange, peach etc...)
- Ø Tuna fish sandwich on wheat bread
- Ø Water

MEAL THREE

- Ø Vegetables or fruit
- Ø Pasta (preferably wheat based)
- Ø Chicken breast
- Ø Water
- Ø Flaxseed Oil Supplement
- Ø B-Complex 100 vitamin

MEAL FOUR

- Ø Vegetables or fruit
- Ø Low fat yogurt or cottage cheese
- Ø Whole grain bread or brown rice
- Ø Water
- Ø Creatine and Ribose prior to evening workout

MEAL FIVE

- Ø Sweet potato
- Ø Broiled chicken or fish
- Ø Salad
- Ø Whole grain bread
- Ø Water

- Ø Vitamin and Mineral Supplement
- Ø Glutamine following evening workout

SAMPLE DAY 2

MEAL ONE

- Ø 3-4 eggs (no yolks)
- Ø Wheat bread toast (low calorie jelly or butter)
- Ø Oatmeal
- Ø Fruit
- Ø Water
- Ø Vitamin and Mineral Supplement

MEAL TWO

- Ø Fruit (apple, orange, peach etc...)
- Ø Low fat yogurt
- Ø Trail mix or low sodium peanuts
- Ø Water

MEAL THREE

- Ø Vegetables or fruit
- Ø Baked potato
- Ø Broiled chicken breast
- Ø Water
- Ø Flaxseed Oil
- Ø B-Complex 100 Vitamin

MEAL FOUR

- Ø Vegetables or fruit
- Ø Tuna fish sandwich
- Ø Brown rice
- Ø Water
- Ø Creatine and Ribose prior to evening workout

MEAL FIVE

- Ø Broiled chicken or fish
- Ø Salad
- Ø Pasta salad
- Ø Vegetable
- Ø Water
- Ø Vitamin and Mineral Supplement
- Ø Glutamine after evening workout

It is not always possible to conform to a 5 meal per day schedule. For this reason, meal replacement shakes were developed. Many shakes provide a

complete source of protein and carbohydrates as well as valuable vitamins and minerals. If you are unable to eat 5 meals, be sure to include a meal replacement shake in your schedule.

ESTIMATING CALORIES

It is important to fuel your body with the appropriate number of calories to ensure energy and muscle growth. Keep in mind that too many calories will cause weight gain and increased body fat. There are several complex formulas available to help estimate calorie needs. Rather than make this a math class, let's stick to a simple yet effective method to estimate your calorie needs.

1. Multiply your body weight (IN POUNDS) by 11 for men or by 10 for women to determine your *Basic Intake*
2. Multiply your *Basic Intake* by .5. Add this number to your *Basic Intake*. The .5 represents an *Activity Level Factor*. As boxers our training is intense. Non-athletes would use .3 or .4 based on lower activity levels.
3. Add an additional 10% to your total by multiplying by .10. The additional 10% accounts for those calories used for normal body functions such as digestion.

Let's look at an example. I will use myself and round my weight to **150** pounds.

1. $150 \times 11 = 1650$
2. $1650 \times .5 = 825$
 - a. $1650 + 825 = 2475$
3. $2475 \times .1 = 247.5$
 - a. $247.5 + 2475 = \underline{\underline{2722.5}}$

I should consume approximately 2722.5 calories per day. On intense training days I will increase the .5 *Activity Level Factor* to .6. Remember, these numbers are strictly approximations.

SUMMARY OF NUTRITION TIPS

- Ø Eat five meals per day
- Ø Drink 8-10 glasses of water per day
- Ø Avoid fried foods; instead choose baked or broiled foods
- Ø Avoid high sugar sodas or juices; instead drink sugar free juices or diet sodas
- Ø Plan your meals based on the activities you will conduct in the next few hours
- Ø Prepare your meals for the day ahead of time
- Ø Always read the labels of foods you buy
- Ø Low fat does not always mean low calories. Many low fat products are high in sugar

- Ø Intense physical training increases our need for vitamins and minerals
- Ø It is necessary to supplement to ensure rapid recovery and muscular growth
- Ø Avoid caffeine and ephedrine based products
- Ø Eat complex carbohydrates that are low on the glycemic index
- Ø Supplement with protein powder and BCAAs to ensure muscular growth and recovery
- Ø Eat foods high in fiber to promote and maintain weight loss
- Ø Eat a diet low in fats (avoid saturated fats completely)
- Ø Supplement with Flaxseed Oil
- Ø Eat low glycemic carbohydrates 1-2 hours before competition
- Ø Drink water 2 hours prior to competition and again 20-30 minutes before
- Ø Eat a combination of carbohydrates and protein following your workout to ensure recovery
- Ø USE COMMON SENSE WHEN PLANNING YOUR MEALS

PUTTING IT ALL TOGETHER

At this point, we have demonstrated the primary exercises and movements necessary to develop a complete training program. Our complete program will incorporate the following areas:

- Ø Running
- Ø Strength Training
- Ø Plyometrics
- Ø Conditioning
- Ø Boxing Skill Improvement

These are the primary components that we must integrate into one complete training program. In addition, we must adhere to a strict diet and supplementation schedule. These workouts are meant to be intense. Failure to eat properly will be detrimental to your success.

Before we begin to develop specific programs, let's first review some very important training tips.

1. Every workout will not be your hardest, most intense training session. If we train to failure each day, we will quickly burn out and tear down excessive muscle fiber. Instead, we will cycle our workouts, mixing intense and moderate days.
2. We do not train with the intention of feeling sore the next day. We will train hard and certain mornings we will feel sore but this is **NOT** our primary objective. When we become overly sore, we cannot operate at optimum levels. Always remember to listen to your body. There is no shame in taking a day for rest and recovery. Over training is just as bad as not training. A good way to determine if you are over training is as follows... Check your pulse at a normal time during the day (this is your normal pulse). Check your pulse again the morning after an intense workout. If your pulse is 10 beats or more per minute above normal, your body has not yet recovered and rest is required.
3. Plan your workouts ahead of time. Do not arrive at the gym with no idea what your training session will entail. Instead, prepare your workouts ahead of time so you can move quickly from one exercise to the next.
4. When one muscle group is sore, you can always work another part of your body. Do not get accustomed to skipping workouts. Excuses are weak. To be successful in boxing, you are going to have to work for it. To be the best, you must train the best.

OVERVIEW

As mentioned on several occasions, boxing is an anaerobic sport. The sport has been estimated to be 70-80% anaerobic and 20-30% aerobic. Many trainers like to alternate anaerobic training days with aerobic days. For example, Monday, Wednesday, and Friday would be anaerobic days with activities such as sparring and sprint work. Tuesday, Thursday, and Saturday would focus on aerobic conditioning such as distance runs and moderate paced skill enhancement drills.

This approach splits anaerobic and aerobic training 50/50. The fighters focus half of their time training anaerobically and half aerobically. This “every other day” routine has been successful with many fighters. Is it the most successful routine? The answer is **NO**. You may respond to this answer with a question such as, “Why has this approach been successful in the past?” The reason for this program’s success is based on the following logic... Most fighters today spend the majority of their time training aerobically. These fighters run long distances each day, jump rope for extended periods of time, ... never working in the anaerobic zone.

Those that train 50% aerobic and 50% anaerobic will be more successful than those that train 70-80% aerobic. For this reason, the “every other day” approach has been fairly successful. It is “better” than the traditional method of training but **NOT** “best”.

The best way to train is to integrate anaerobic training into every workout. Certain days will be more intense than others, but each day will provide some degree of anaerobic training and conditioning. (No one said this was going to be easy!)

HOW MANY DAYS

In order to maximize your physical condition and performance levels, you must train 6 days per week. Our program requires training Monday through Saturday, with Sunday a rest day. Your rest day does not need to be Sunday. I recommend consistency however when choosing a rest day. If you would like to take Tuesday off, be sure you take this day off every week. Your rest day will come after 6 days of hard work. The day of rest is as important as our training days. Failure to rest will lead to over training.

NO PERFECT ROUTINE

It is important to remember that no single training program is perfect for every fighter. We all have unique skills and fitness levels. A beginner will not be able to run intense intervals before developing a solid foundation. For this reason, the beginner must first develop a moderate fitness level before moving on to these advanced routines. In addition, the advanced athlete should not perform a

maximum intensity training cycle (*mesocycle*) for an entire year. The important point that I wish to convey is that we must adjust our training routines to mimic our actual performance objectives. There is no single “year round” training program. We need to cycle our workouts according to our individual fitness levels and competition requirements. If you do not have a fight for six months, it does not make sense to begin an intense, complex training program so far away from the bout. We must train specific to our sport and specific to our own individual requirements.

REMAIN FLEXIBLE

There will be days that you cannot make it to the gym due to bad weather, a late night at work, car troubles, etc... We must remain flexible in our training so that when necessary, we can bring our workouts home with us. If you cannot make it to the gym, you now have the knowledge necessary to create an intense home-based workout with little or no equipment.

If you are scheduled to run intervals in the morning but you awake to find a foot of snow on the ground, does this mean you have a day off? **NO**. Rather, you must adapt to your environment and find an alternative to intervals. You can supplement morning interval work with 3-minute drills inside your home.

Always remember that boxing is a complicated sport. As a fighter, you must be intelligent. You need to approach your training with an intelligent mindset. Remain flexible and creative to overcome even the most hazardous weather conditions. As you can see, there are **NO EXCUSES**. Let's now look at the specific components of our program. I will then provide a complete training program.

RUNNING

Running will be an integral component of our training program. Advanced athletes will be expected to run between 5 and 6 days per week. Beginners should start with 3 or 4 days per week and gradually increase the number of days and intensity.

BEGINNING BOXERS

A beginner is someone that is new to the sport of boxing and the physical conditioning that goes along with the sport. We already know that boxing is an anaerobic sport but the beginner must first develop an aerobic foundation before implementing intense interval and sprint drills.

Beginners should start by running every other day for distances between 2 and 4 miles. As their stamina improves, they may begin to include short sprints

throughout the distance run. For example, you could run for 3 minutes, then sprint for 30 seconds and maintain this pattern throughout the entire 4 miles. This introductory period of running can last between three and six weeks depending on your previous levels of condition. You will know you are in shape when you can run each mile in 7 minutes or less. I maintain a brisk pace throughout the duration of my distance work.

ADVANCED BOXERS

Advanced boxers should be comfortable running each mile at 7 minutes or less. When you have achieved this “foundation” of physical conditioning, it is time to move on to more advanced anaerobic running routines.

As mentioned in our running chapter, our primary focus will be on interval work and sprints. I recommend performing these intense running sessions every other day.

Here is a typical week's running program:

Monday – Interval training. Run 5 x 800 meters with 1-minute rest between each interval. If you do not have access to a track to measure the 800 meters, run for three minutes at an intense, sustained pace.

Tuesday – Aerobic training. Run 4 miles. Include one sustained sprint during each mile that you run. A sustained sprint should last for 100 meters.

Wednesday – Interval training. Run 6 x 600 meters with 1-minute rest between each interval. If you do not have access to a track to measure the 600 meters, run for two minutes at an intense, sustained pace.

Thursday – Aerobic training. Run 4 miles. Do not include the sprints that were required on Tuesday's run. This session should instead be a sustained run with each mile completed in 7 minutes or less.

Friday – Interval training. Run 10 x 400 meters with 1-minute rest between each interval. If you do not have access to a track to measure the 400 meters, run for one minute at an intense, sustained pace. These 400-meter intervals should be run at a faster pace than the 600 and 800-meter intervals due to the decreased distance.

Saturday – Sprint training. Sprint 10 x 100 meters with a jog back to your beginning point for rest. You will sprint 100 meters, jog back to the beginning line, and sprint again until you have completed 10 sprints.

Sunday – Rest day.

Let's look at another example to see how we can integrate variety into our routine.

Monday – Interval training. Run 10 x 400 meters with 1-minute rest between each interval. If you do not have access to a track to measure the 400 meters, run for one minute at an intense, sustained pace.

Tuesday – Aerobic and sprint training. Run 3 miles on a standard track. Sprint the straight-aways and jog the turns for your rest intervals.

Wednesday – Interval training. Run 4 x 600 meters with 1-minute rest between each interval. If you do not have access to a track to measure the 600 meters, run for two minutes at an intense, sustained pace.

Thursday – Aerobic training. Run 4 miles. Do not include the sprints that were required on Tuesday's run. This session should instead be a sustained run with each mile completed in 7 minutes or less.

Friday – Hill running. Find a moderately sloped hill and sprint upwards 10 times. Jog down the hill slowly to avoid stress on your joints and ligaments. The hills should be at least 50 meters in length.

Saturday – Sprint training. Sprint 8 x 200 meters with a 30 second rest period between sprints.

Sunday – Rest day.

As you can see, there are numerous options to designing a running program for boxing. Let's look at some important considerations when formulating your own program.

Avoid intense sprint and interval work on days that you will be sparring. You do not want to leave all of your "fight" on the track in the morning. If you wish to perform intervals on a sparring day, consider running after your gym workout. The two examples above were designed around a schedule that would include sparring on Tuesday, Thursday, and possibly Saturday. If your trainer prefers to spar on Monday, Wednesday, and Friday, you will need to adjust your morning interval work accordingly.

Earlier in this chapter we discussed the "every other day" training philosophy. This training philosophy called for anaerobic training one day with aerobic the next. With this program, boxers are required to perform interval work and sparring on the same day. I disagree with this approach, as the interval work will drain the body of valuable energy required for sparring. We should look to spar under controlled, supervised conditions but there are times when the sparring

action in the gym can get rather “lively”. You want to be fresh for a hard sparring session for several reasons. First, you want to practice all of your skills and you do not want to be injured due to excess fatigue.

For this reason, I prefer and recommend concentrating on your aerobic run on those days that you will be sparring. It is OK to integrate some sprint work during these distance runs as illustrated in the previous examples. Intense intervals and hill work however will be too much on days that you must spar. Always remember, we are looking to optimize our performance without getting hurt.

WEIGHT TRAINING

There are several approaches to weight training for boxers. Many fighters lift weights one, two, or three days per week. Let’s quickly review a few weight lifting schedules common among fighters.

1-Day Per Week

Many fighters perform weight training one day per week. They will include a full workout focusing on upper and lower body. Many fighters claim improvements from this routine. Unfortunately, this routine is not most effective at producing optimum results. Although we are limited for time, we can include more than one day per week for weight training. Make time for strength training or make time for losing.

3-Days Per Week

Many fighters lift weights every other day. Each workout will focus on a different muscle group. A common cycle would be as follows:

Monday – Back and Biceps

Wednesday – Chest, Triceps, and Shoulders

Friday – Legs

This routine targets each muscle group only once per week. Although it is divided into three days, the end result is similar to the 1-Day Per Week program. Each routine targets the individual muscle only one day per week. The 3-Days Per Week program simply spreads this full body workout across multiple days.

2-Days Per Week

I have saved the 2-Days Per Week program for last. I believe this weight training system is best for boxers. Avoid programs that require more than three lifting days per week. As fighters, we have different objectives than those of a bodybuilder or power lifter. Our objectives can be met in two strength-training days per week. Is this the only way to train? Of course not, but I believe it to be

the most effective. I have experimented with several training programs and have had the best results with the two-day strength program.

As boxers we must run, spar, hit the bag, work conditioning drills, etc... We have several forms of training that we must include into our overall program. For this reason, we must not focus all of our time (4 days or more) towards weight training alone.

The 2-Days Per Week program will focus on strengthening the entire body. We will work both the upper and lower body on each day. Earlier we listed the primary muscle groups as follows:

- | | |
|--------------|----------------------------|
| Ø Biceps | Ø (Neck) |
| Ø Triceps | Ø Chest |
| Ø Forearms | Ø (Abdominals) |
| Ø Shoulders | Ø Quadriceps (Thighs) |
| Ø Upper Back | Ø Hamstrings (Back of leg) |
| Ø Lower Back | Ø Calves |

Our two-day per week program will focus on strengthening each of these muscles groups. Please note how I have (*italicized*) both the neck and abdominals. These two muscle groups have different requirements thus will not be included in our strength training program. I will discuss these two areas (as well as the hands) later in this chapter.

Let's look at some sample weight training programs. We will first begin with a beginner level weight-training program. This introductory strength routine should be completed for three to six weeks before moving on to more advanced lifting and plyometrics techniques. This program will develop the foundation necessary to sustain more intense training cycles.

FOUNDATION STRENGTH PROGRAM

This workout should be performed two days per week. I conduct my weight training on Wednesday and Saturday. I recommend performing your strength training on days that you do not spar. There are occasions when I spar on Saturday mornings. On those days, I perform this strength routine in the evening, after resting throughout the day.

Lower Body

1. Dumbbell Lunges
2. Calf Raises
3. Drop and Touch (page 86)
4. Dumbbell Step-Ups
5. Dumbbell Toe Touches (page 52)

After performing exercises 1-4 for two weeks, replace Dumbbell Lunges with Squats.

Upper Body

1. Bench Press
2. Shoulder Press
3. Bent Over Row
4. Biceps Curl
5. Triceps Extension
6. Straight Arm Raise and Hold (page 54)

After performing exercises 1-6 for four weeks, replace Shoulder Press with Power Clean Press

You should perform each exercise for 3 sets of 8-12 repetitions. Use weight between 50- 65% of your 1 repetition maximum. This program is designed to develop a foundation of strength, which our more specialized routines will build from.

Right now, you may be saying to yourself, “What about all of the other strength training exercises?” You may wonder why I selected this group of 5 or 6 upper and lower body exercises. My logic is as follows... It is impossible to perform every exercise listed in this book during one workout. It would take too long and cause you to over train. Instead, we must pick a group from the overall “pool” of exercises we have illustrated and recommended. We will adjust and vary our workout to include different exercises. Our objective is to work the entire body. There are several roads that will lead us to this destination. For example, you may choose to perform Incline Bench Press one day as opposed to Flat Bench Press the next. You may wish to perform Lunges instead of Squats. Variation is OK and recommended as long as you do not neglect certain muscles groups.

ADVANCED STRENGTH TRAINING ROUTINES

The advanced strength training routines can be accomplished using the same exercises as illustrated above with two important differences. First, we will change the way we lift by focusing our attention towards speed strength and anaerobic strength. Our workouts will increase in intensity. Please note that these new training objectives can be accomplished with the same set of exercises. I will detail a complete 12-week training cycle later in this chapter.

The second difference involves the introduction of plyometrics. Once we have developed our foundation strength, we can introduce plyometrics to enhance our speed and power.

Earlier we discussed complex training, which integrates strength training, plyometrics, and sports specific conditioning drills into one routine. Our strength routines will focus on this form of training as a final objective. Before we reach this optimum level of fitness, we will gradually introduce plyometrics into our overall routine. As mentioned earlier, plyometrics are most effective when integrated with strength training. It is important to remember however that this form of training is stressful to our body.

We can reap the benefits of plyometrics in more ways than one. Let's look at some sample plyometrics routines.

PLYOMETRICS 1

1. Squat Jumps
2. Barrier Jumps (side-to-side)
3. Dumbbell Twists (or Sideways Medicine Ball Throws)
4. Dumbbell Ax Swing
5. Medicine Ball Chest Pass (or Plyometric Pushup)
6. Medicine Ball Overhead throw

PLYOMETRICS 2

1. Squat Jumps with weighted vest
2. Jump Ups with weighted vest
3. Neider Press
4. One Arm Medicine Ball Throw
5. Swimmer's Stroke with dumbbells
6. Plyometric Pushups
7. Dumbbell Twists (or Sideways Medicine Ball Throws)

The latter routine introduces a weighted vest to increase intensity. This advanced routine should only be performed after your body has been accustomed to plyometrics through the first routine.

Next we must determine when to perform these plyometrics exercises. Eventually we will implement plyometrics into our strength training days. Using myself as an example, this would fall on Wednesday and Saturday. These days would involve complex training where plyometrics and strength training exercises would be performed together. Complex training is intense so should not be maintained year round.

During "off-peak" training cycles, we can perform plyometrics separately as a supplement to the overall routine. Right now you may be thinking, *"Shouldn't we perform plyometrics in a "complex" training routine since this is the most effective system?"* The answer is yes, but only when our bodies are prepared for the stress associated with this routine. I cannot overemphasize that complex training

is effective yet stressful to our bodies. You cannot train at this intensity level year round or you will burn out.

Let's consider our options for plyometrics training (aside from complex training). Many athletes choose to perform plyometrics during a mid-day workout. Let's look at an example:

Morning – Interval Running
Noon – Plyometrics
Evening – Boxing Training

This system can prove effective for those that have time to train three times per day. Unfortunately, most of us must either work or attend school, which prevents us from training three times per day. Our other options include either a morning or evening plyometrics session. When preparing a plyometrics program, do not perform these exercises on days that you must spar. For example, you would not want to conduct plyometrics on a Tuesday morning if you must spar in the evening.

Let's review our current training schedule and include plyometrics into the routine. We have separate morning (AM) and evening (PM) workouts.

Monday (AM)– Interval training (5 x 800 meters)
Monday (PM) – Boxing Workout, ***Plyometrics***

Tuesday (AM) – Aerobic training (4 miles)
Tuesday (PM) – Sparring, Boxing Workout

Wednesday (AM)– Interval training (6 x 600 meters)
Wednesday (PM) – Boxing Workout, Strength Training

Thursday (AM) – Aerobic training (4 miles)
Thursday (PM) – Sparring, Boxing workout

Friday (AM) – Interval training (10 x 400 meters)
Friday (PM) – Boxing Workout, ***Plyometrics***

Saturday (AM)– Sprint training (10 x 100)
Saturday (PM) – Boxing Workout, Strength Training

Sunday – Rest day

I will discuss the specifics of the “*Boxing Workout*” shortly. The purpose of this step-by-step process is to show you how and why our program has been developed. In this example, we have elected to conduct plyometrics on Monday and Friday. We do not want to perform plyometrics on days that we spar or on

days that we strength train. **PLEASE NOTE** – the plyometrics routines can be performed during either the morning or evening sessions. In the above example we have included them at the end of the Monday and Friday evening schedule. You could instead (if time permits) conduct these exercises in the morning.

COMPLEX TRAINING

Complex training integrates strength training, plyometrics, and sports specific conditioning drills into one routine. Complex training typically consists of one strength exercise followed by a plyometrics movement. Complex training will combine the Monday and Friday plyometrics routine with the Wednesday and Saturday strength training routine.

Complex training will not take place until later in the training cycle (when you are approaching peak condition levels). If you perform these complex routines too soon, you will be at risk for injury and over training. I will provide some sample complex routines below. A plyometrics movement will follow each weight training movement. There should be minimal rest between the strength and plyometrics exercise. Rest periods between complex sets (strength + plyometrics) will be significant. I recommend between 2 and 5 minutes of rest. Each of these complex sets will be performed for 3 sets.

COMPLEX ROUTINE 1

1. Bench Press – Medicine Ball Chest Pass
2. Power Clean Press – Medicine Ball Overhead Pass
3. Squats – Squat Jumps
4. Bent Over Rows – Dumbbell Ax Swing
5. Straight Arm Raise and Hold – Swimmer's Stroke
6. Dumbbell Twists

COMPLEX ROUTINE 2

1. Incline Bench Press – Plyometric Pushup
2. Power Clean Press – Neider Press
3. Squats – Barrier Jumps (side-to-side)
4. Pull-Ups – Medicine Ball Overhead Pass
5. Upright Rows – Runner's Swing
6. Lying Trunk Twist with Medicine Ball

Notice how each plyometrics exercise targets the same muscle group as the preceding strength exercise (ex. *Bench Press* and *Chest Pass* both work chest). These complex routines will be performed on Wednesday and Saturday.

BOXING WORKOUT

As mentioned previously, boxing is a skill sport. We must not neglect the importance of learning and mastering the skills of boxing. We will concentrate on boxing specific training in our evening training sessions. On those days that we strength train, we will first concentrate on our boxing specific workout. For example, if we have complex training on Wednesday, we will first shadow box and complete our required boxing workout. Obviously on this day, our boxing training will be less intense than those days that we do not perform complex training.

Let's quickly list and review the primary forms of boxing specific training.

1. Sparring – To be performed 2-3 days per week when preparing for a fight
2. Heavy Bag – Very strenuous, anaerobic in nature. To be performed 3-4 days per week.
3. Double End Bag & Speed Bag – Supplemental training tools to be performed 2-3 days per week if available
4. Shadow Boxing – To be performed each training day.
5. Mitt Work – To be performed with your trainer when available. It is a good idea to hit the mitts 2-3 times per week.
6. Miscellaneous Skill Training (defense, footwork, etc...) – To be performed 2-3 times per week

ABDOMINALS

I recommend abdominal training 6 days per week. Below is an example of a great abdominal workout.

1. V-Ups
2. Knee Hugs
3. Russian Twists
4. Side Crunches
5. Leg Raise
6. Bicycles
7. Back Extension

Perform each exercise for 20 repetitions with no more than 10 seconds of rest between each exercise. As your strength increases, repeat this cycle and increase repetitions.

NECK AND HANDS

Neck and hand training should be performed every other day. I perform neck bridges and neck curls Monday, Wednesday, and Friday. I also perform hand-

strengthening drills such as the gripper, rice grip, wrist roller, and wrist curls on these days.

CONDITIONING DRILLS

Conditioning exercises such as the 3-Minute drill serve an important role in maximizing our physical fitness levels. These drills are extremely intense, designed to push your anaerobic system to the extreme. Do not perform these training drills on consecutive days.

Rather we must integrate these drills into our overall routine without detracting from our skill enhancement and sparring sessions. Conditioning drills should not be performed until an adequate foundation of fitness and strength has been accomplished. The placement of these drills is complicated to avoid over training and burn out. The best way to see how conditioning drills can fit into your workout is by looking at an example. We will take the knowledge we have learned to develop a complete training cycle (*macrocycle*).

Our sample plan has been developed around a 12-week training period. We have divided this program into 4 separate 3-week training cycles (*mesocycles*).

The following page provides two general training schedules. We will provide a detailed explanation of these training exercises and logic for their selection.

GENERAL TRAINING PROGRAM FIRST HALF OF TRAINING CYCLE (Weeks 1-6)

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Morning Session	Morning Session	Morning Session	Morning Session	Morning Session	Morning Session
Interval Running	Aerobic Running	Interval Running	Aerobic Running	Interval Running	Sprint Training
Evening Session	Evening Session	Evening Session	Evening Session	Evening Session	Evening Session
Skill Training Plyometrics	Sparring 3 Minute Drills	Skill Training Strength Training	Sparring 3 Minute Drills	Skill Training Plyometrics	Skill Training Strength Training
Abs Neck Hand	Jump Rope Drills Abs Balance Footwork	Abs Neck Hand	Jump Rope Drills Abs Balance Footwork	Abs Neck Hand	Abs

GENERAL TRAINING PROGRAM SECOND HALF OF TRAINING CYCLE (Weeks 7-12)

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Morning Session	Morning Session	Morning Session	Morning Session	Morning Session	Morning Session
Interval Running	Aerobic Running	Interval Running	Aerobic Running	Interval Running	Sprint Training
Evening Session	Evening Session	Evening Session	Evening Session	Evening Session	Evening Session
Skill Training 3 Minute Drills	Sparring Skill Training	Skill Training Complex Training	Sparring Skill Training	Skill Training 3 Minute Drills	Skill Training Complex Training
Abs Neck Hand	Jump Rope Drills Abs Balance Footwork	Abs Neck Hand	Jump Rope Drills Abs Balance Footwork	Abs Neck Hand	Abs

Let's review these two training schedules.

GENERAL PROGRAM 1

- Ø Interval Running Monday, Wednesday, Friday
- Ø Aerobic Running Tuesday, Thursday
- Ø Sprint Training Saturday
- Ø Skill Training Monday, Wednesday, Friday, Saturday
- Ø Plyometrics Monday and Friday
- Ø Strength Training Wednesday and Saturday
- Ø Sparring Tuesday and Thursday
- Ø 3-Minute Drills Tuesday and Thursday
- Ø Jump Rope Drills Tuesday and Thursday
- Ø Abdominals Monday – Saturday
- Ø Balance Tuesday and Thursday
- Ø Footwork Tuesday and Thursday
- Ø Neck and Hands Monday, Wednesday, and Friday
- Ø Sunday Rest

GENERAL PROGRAM 2

- Ø Interval running Monday, Wednesday, Friday
- Ø Aerobic running Tuesday, Thursday
- Ø Sprint training Saturday
- Ø Skill Training Monday - Saturday
- Ø Complex Training Wednesday and Saturday
- Ø Sparring Tuesday and Thursday
- Ø 3-Minute Drills Monday and Friday
- Ø Jump Rope Drills Tuesday and Thursday
- Ø Abdominals Monday – Saturday
- Ø Balance Tuesday and Thursday
- Ø Footwork Tuesday and Thursday
- Ø Neck and Hands Monday, Wednesday, and Friday
- Ø Sunday Rest

PRIMARY DIFFERNCES

General Program 1 (GP1) is designed as a preparation phase. This program assumes that you begin this program **ALREADY** in shape. You must first complete a foundation period of strength training and running prior to starting GP1. This program separates plyometrics and strength training on different days. GP2 combines these two techniques into a complex training routine on Wednesday and Saturday. When you begin GP2, you will have completed 6 weeks of plyometrics training in GP1. Your body will be prepared for the stress associated with the complex training program.

GP2 shifts the 3-Minute conditioning drills Monday and Friday. In GP1, these drills were performed after sparring on Tuesday and Thursday. During GP2, you will be required to spar more rounds, at a more intense pace. Your sparring intensity should increase as you approach the fight to prepare you for the rigors of an actual bout. For this reason, the conditioning drills are more appropriate on non-sparring days.

GP2 calls for skill training Monday through Saturday. Each day will consist of some form of skill training. This form of training is important as you approach your fight. You need to fine tune skills and develop strategy.

Skill Drills consist of the following:

- Ø Shadow Boxing
- Ø Defensive Drills
- Ø Hand Mitt Drills
- Ø Heavy Bag
- Ø Speed Bag
- Ø Double End Bag

Skill Drills will receive maximum attention on **Monday** and **Friday**.

COMPONENTS OF THE TRAINING CYCLE

GP1 and GP2 will last for 6 weeks each.

GP1 - Mesocycle 1 (Weeks 1-3)

This introductory mesocycle will focus on the following:

- Ø Improve general strength throughout major muscle groups
- Ø Increase muscle mass relative to body weight
- Ø Work to overcome weaknesses (ex. Weak legs will require more squats)
- Ø Reduce body fat
- Ø Introduce light plyometrics

In this introductory cycle, focus on lifting 50-65% of your maximum lift during weight training. Perform 3 sets of each exercise.

Sparring will be controlled, focusing on skill and reaction time development.

Monday and Friday Skill Training = Shadow box for 4 rounds. Work hand mitt drills with coach for 4-6 rounds. If you are unable to hit the hand mitts with a coach, substitute heavy bag work.

Monday and Friday Plyometrics = Light plyometrics

Tuesday and Thursday Conditioning Drills = Begin with 4 rounds of 3-Minute drills. Jump rope drills for 3 rounds.

Wednesday and Saturday Skill Training = Shadow box for 4 rounds before weight training. Shadow box for 4 rounds after weight training. Shadow boxing should be fast and intense, working on combination punching.

GP1 - Mesocycle 2 (Weeks 4-6)

Moving into the 2nd mesocycle, you will have established a solid foundation to build from. We can increase our intensity from *Mesocycle 1*.

This mesocycle will focus on the following:

- Ø Improve limit strength in major muscle groups
- Ø Introduce speed strength weight training
- Ø Begin anaerobic threshold training
- Ø Increase the intensity of plyometrics drills

In this mesocycle, we split our training intensity between each of our two workouts per week. On Wednesday, the focus will be on lifting heavy weights to improve overall limit strength. To achieve this objective, we will lift close to 80% of our maximum for approximately 6-8 repetitions for 3 sets.

On Saturday, our focus will shift towards speed and anaerobic strength training. We will lift weights between 55-70% of our maximum for 3 sets of 8-10. We will also begin to integrate more intense plyometrics within our strength routine.

Sparring will be controlled, focusing on skill and reaction time development.

Monday and Friday Skill Training = Shadow box for 6 rounds. Work hand mitt drills with coach. If you are unable to hit the hand mitts with a coach, substitute heavy bag work. Hit the bag as many rounds as you will be fighting without exceeding 8. If you are fighting 6 rounds, you will hit the bag (or mitts) for 6 rounds. If you are fighting 10 rounds, you will hit the bag (or mitts) for 8 rounds. You should not exceed 8 rounds on the heavy bag. Begin to integrate heavy bag conditioning drills into your routine. Work speed bag and double end bag for 3 rounds each.

Monday and Friday Plyometrics = Increase the intensity of plyometrics training.

Tuesday and Thursday Conditioning Drills = Increase to 6 rounds of 3-Minute drills. Jump rope drills for 3 rounds.

Wednesday and Saturday Skill Training = Shadow box for 6 rounds before weight training. Shadow box for 4 rounds after weight training. Shadow boxing should be fast and intense, focusing on combination punching.

GP2 - Mesocycle 3 (Weeks 7-9)

The third mesocycle will add to the explosive training that we began in weeks 4-6. This mesocycle will focus on the following:

- Ø Maximize explosive strength
- Ø Integrate intense, weighted plyometrics and medicine ball drills
- Ø Continue anaerobic threshold training

In this mesocycle, we will focus on maximizing explosiveness by lifting weights that are 70-80% of our maximum for 6-10 repetitions. In addition, we will incorporate intense, complex training. These three weeks will be extremely intense as you maximize the explosive power that will translate into knockout punching power!

Sparring intensity will increase during Mesocycle 3.

Monday and Friday Skill Training = Shadow box for 6 rounds. Work hand mitt drills with coach. If you are unable to hit the hand mitts with a coach, substitute heavy bag work. Hit the bag as many rounds as you will be fighting without exceeding 8. If you are fighting 6 rounds, you will hit the bag (or mitts) for 6 rounds. If you are fighting 10 rounds, you will hit the bag (or mitts) for 8 rounds. You should not exceed 8 rounds on the heavy bag. Integrate heavy bag conditioning drills into your routine. Work speed bag and double end bag for 4 rounds each.

Tuesday and Thursday Skill Training = If possible work hand mitts with trainer (or substitute heavy bag). Work for 3 or 4 rounds. Finish with 2 rounds of speed bag and double end bag.

Monday and Friday Conditioning Drills = Remain at 6 rounds of 3-Minute drills if you are fighting 6 or less rounds. If you are fighting more than 6 rounds, perform between 7 and 9 rounds of conditioning drills. Jump rope drills for 5 rounds.

Wednesday and Saturday Skill Training = Shadow box for 6 rounds before complex training. Shadow box for 4 rounds after complex training. Shadow boxing should be fast and intense, working on combination punching.

GP2 - Mesocycle 4 (Weeks 10-12)

Our final mesocycle will focus on complex training as we begin to phase out our heavy weight training. It is best to begin phasing out heavy weight training 14 to 21 days prior to a bout. This phase out period is important. We do not want to leave all our power in the weight room. It is more important to bring our power to the ring!

This mesocycle will focus on the following:

- Ø Maximize anaerobic conditioning
- Ø Maximize ballistic training with weighted plyometrics and medicine ball drills
- Ø Heavy weight training is replaced with intense sports specific conditioning

This cycle will not include heavy weight training. Instead, we will opt to maximize our anaerobic and ballistic conditioning. We will reduce our weight training to 50-65% of our maximum for 10 repetitions and 3 sets. Our plyometrics will increase in intensity.

This program will reduce the intensity of the weight lifting while shifting focus towards plyometrics and skill training such as sparring.

Allow for 1 week of moderate – light training at the conclusion of this mesocycle prior to fighting. For example, this mesocycle lasts 3 weeks, thus should be started 4 weeks prior to your bout. This will leave you with 1 final week to recover and reduce the intensity of your training. The final week should be one of light activity such as shadow boxing and moderate running. You do not want to leave your strength in the gym.

Sparring intensity should peak during this mesocycle

Monday and Friday Skill Training = Shadow box for 6 rounds. Work hand mitt drills with coach. If you are unable to hit the hand mitts with a coach, substitute heavy bag work. Hit the bag as many rounds as you will be fighting without exceeding 8. If you are fighting 6 rounds, you will hit the bag (or mitts) for 6 rounds. If you are fighting 10 rounds, you will hit the bag (or mitts) for 8 rounds. You should not exceed 8 rounds on the heavy bag. Integrate heavy bag conditioning drills into your routine. Work speed bag and double end bag for 4 rounds each.

Tuesday and Thursday Skill Training = If possible work hand mitts with trainer or heavy bag. Work for 4 rounds. Finish with 2 rounds of speed bag and double end bag.

Monday and Friday Conditioning Drills = Remain at 6 rounds of 3-Minute drills if you are fighting 6 or less rounds. If you are fighting more than 6 rounds, perform between 8 and 10 rounds of conditioning drills. Jump rope drills for 5 rounds.

Wednesday and Saturday Skill Training = Shadow box for 6 rounds before complex training. Shadow box for 4 rounds after complex training. Shadow boxing should be fast and intense, working on combination punching.

SUMMARY

The guidelines used to develop this 12-week training cycle are applicable to all training schedules. Your intensity will increase throughout the course of your training cycle. You will become extremely ballistic and anaerobic in training during the latter portions of the training cycle.

During your final week prior to a fight, you will want to decrease your intensity to ensure adequate time to recover and recuperate. You should avoid weight lifting, conditioning drills, and plyometrics during the final week. It is best to rest completely the day before the bout. I typically go for a very light jog 2 or 3 days prior to the fight. Avoid any interval or sprint work during the final days of preparation. At this point, (if you have followed the complete program), you will be in excellent condition. Use the final week to recover.

Do not leave your strength in the gym, **BRING IT TO THE FIGHT!!!**

We have several examples of different exercises. I encourage you to select different exercises while training. Variety will increase interest and motivation.

If you do not have 12 weeks to prepare for a fight, adopt the concepts that you have learned to your shorter preparation period.

THE MENTAL ASPECT OF BOXING

Up until this point, our sole focus has been centered on the physical demands of conditioning and boxing training. After all, boxing is perhaps the most physically challenging sport of all. We must enter the ring in amazing shape to fight at peak performance levels round after round.

Unfortunately, the key to success is more complex than simply getting into amazing condition. Throughout this book, I have emphasized the complexity of boxing. Not only is the sport complex, but also are the training programs that enable us to maximize our performance. Once you incorporate the scientific training advice provided in this book, you will be off to a great start towards maximizing your performance.

One last matter that must be discussed however is the mental aspect of boxing. To the spectator, boxing is a sport seen only for its physical elements. We punch, and are punched. Our purpose is to enter the ring to defeat our opponent. We often approach our bouts with the goal of knocking our opponent unconscious. This mindset may sound barbaric but is the nature of the sport. I consider myself as a very nice human being outside the ring. When I am boxing however, I am a completely different person. I am looking to hurt my opponent as I throw punches with bad intentions.

You must turn a different mindset on when you enter the ring. At the same time, you must learn to control this mindset outside the ring. Boxing is not all about brawn and brute strength. Boxing involves a complex mixture of physical and mental training. You have to train your mind to believe in yourself in order to achieve your goals. Simply training the hardest in the gym is not enough. I have seen guys who train like animals inside the gym, yet hardly throw any punches in actual bouts.

Why does this happen? The answer lies within the mind. To be successful, you must have confidence in your ability. You will enter the ring with the intention of knocking your opponent out. You must also realize that your opponent enters the ring with the very same intention. This realization can cause nervousness and fear inside. You may start to doubt and question your ability before the bout has even begun. You essentially “psyche” yourself out. So how do you overcome these feelings? The answer is through experience and mental training. Every boxer has at one time in their lives had to stare fear in the eyes. We have all had moments when we were nervous. True champions rise up to the challenge while others succumb and crumble to their nervousness and fear.

Words To Live By

“Our doubts are traitors and make us lose the good we oft might win by fearing to attempt.” – *Shakespeare*

TRAINING THE MIND

In order to optimize our performance, we must train our mind in addition to our body. You may have heard of the “*Mind – Body Connection*”. This phrase refers to the relationship between your physical actions (body) and your conscious and subconscious thoughts (mind). Consider the words in the following quote:

Words To Live By

If you think you can do it, you're right. If you think you can't do it, you're still right.” – *Henry Ford*

These words are valuable when considering the power of the mind. These words tell us that we must believe in our ability if we expect to maximize our performance. If you doubt your ability, you will suffer in your competition. This holds true for boxing and life in general. Confidence is critical to success, particularly in boxing. An old trainer of mine once said, “*What you think, you become*”. His words translate to the fact that you will be as good (or bad) as your mind allows you to become. When I enter the ring, I do so with confidence in my ability. I realize that my hard work in the gym translates into success inside the ring. I never doubt my training because of the conscious effort I put forth each and every day I train. You must approach your training with the same focus and intensity.

With this book, I have outlined the essential components of maximizing your condition. These are not training principles that I dreamed up, rather these principles are scientifically proven to improve your performance.

Let's look at some specific steps you can take to help you transform your mind into a powerful, performance-enhancing tool.

GOAL SETTING

We all make statements such as “*I want to be the best*”. It is great to feel this way but it is difficult to determine whether or not we are in fact the “*best*”. Instead, we must set goals for ourselves that can be measured and tracked. It is important to set both short and long term goals for yourself. For example, your goals could read as follows:

Short Term Goal #1: Run 1 mile in under 6 minutes

Short Term Goal #2: Run 800-meter intervals in 2:45 seconds

Short Term Goal #3: Increase bench press from 150 pounds to 200 pounds

Long Term Goal #1: Win next bout by knockout

Long Term Goal #2: Win championship in upcoming tournament

Long Term Goal #3: Win World Championship in 2 years

These are all examples of goals that you can set for yourself. It is not sufficient to think these goals in your head, rather you must write these goals down on paper. You must hang them from your wall so that you can review and remind yourself each and every day. I have a list of goals printed on my wall that I review each day before I leave for the gym. By reminding myself, I become more focused in my training session. My training session has a purpose when I attach a specific goal to it.

If you use boxing as a workout without actually competing, your goals could be something such as “I will lose 15 pounds over the next two months”. You must determine your goals based on what you truly want to achieve. Sit down and ask yourself why you are involved with boxing and exactly what it is you wish to achieve through the sport. No one can answer these questions for you. You must determine the answer to these questions on your own. Develop short-term goals that will gradually carry you forward to your ultimate long-term goal.

As you can see in our previous example, it is best to set several short-term goals along with those goals that cannot be achieved so soon. For example, to become a World Champion will require many years of hard work. This can be your ultimate goal but you must have many smaller goals along the way that help steer you towards this ultimate climax.

I continue to set goals for myself based on both training and competition objectives. In the gym, I set goals regarding my workload. For example, I will set a goal to improve the number of punches I can throw in a round or to increase the weight that I lift in a particular exercise. My competition-based goals are specific to my actual bout as opposed to what I do in the gym. A competition-based goal could be something such as “*I will win my bout by knockout*” or “*I will throw 100 punches per round in my fight*”.

You must write down and continuously work towards achieving these goals. Do not be scared to set very difficult goals for yourself. Goal setting gives you a reason to work hard in the gym. Add purpose to your workout by determining exactly what you wish to achieve in the sport of boxing. Remember, performance is self-fulfilling; you get what you expect as a boxer.

BELIEVE IN YOURSELF

In addition to goal setting, you must learn to believe in your ability to succeed and accomplish your objectives. It is not enough to set a goal to win a World Championship if you do not believe in your ability to make this goal a reality. Simply writing a goal on paper does not ensure that you will achieve the objective. Rather, you must learn to overcome your doubts so you can believe in yourself. An old saying reads as follows: “*You can achieve anything that you put your mind to*”. These words are true. You must learn to focus your mind towards

achieving your goals. Once you have a goal, you must not allow anything or anyone to stop you on your quest. Consider these famous words:

Words To Live By

“The greatest discovery of my generation is that a human being can alter his life by altering the attitudes of his mind.” – *William James*

Research has proven over and over again that we are more likely to succeed when we truly believe in our ability to do so. It is not a magical process, rather something that takes time. You cannot gain confidence overnight. Rather, you must work both your mind and body to achieve this new level of belief and motivation. The scientific training program outlined in this book will give you the physical tools necessary to succeed. By subscribing to this program, you will learn to believe in your conditioning and training. You will not doubt your stamina the next time you fight. Through experience, you will learn to rely on your hard work in the gym. A successful boxer has no room for doubt or lack of confidence. Instead, you must believe in yourself. If you do not believe in yourself, no one else will either.

As you continue to train hard, you will notice adaptations in your body. You will gain muscle, lose fat, and increase stamina. By doing so, your mind will start to believe in your newfound strength and power. It is OK to enter the ring with fear, but not with doubt. Stare fear in the face and rely on your hard work in the gym to overcome these feelings.

Words To Live By

“You gain strength, courage and confidence by every experience in which you really stop to look fear in the face.” – *Eleanor Roosevelt*

OVERCOME FAILURE

Perhaps you have lost your last bout or failed in your attempts to achieve past goals. Use your past failures to add fuel to your fire. When I fail, I remind myself of how bad it feels to come up short of my expectations and desires. I convince myself that I never want to lose again. True champions use failure as a stepping-stone to success.

If you have failed in the past, analyze what you did wrong and what you can do in the future to prevent repeat occurrences. Convince your mind that through hard work, you can accomplish anything that you desire. You will often learn more from one loss than you will from all your victories together. You must use your experience as an opportunity to improve in the future. Perhaps you lost a bout due to fatigue in later rounds. Now you have the knowledge to prevent this from happening in the future. Determine your goals, believe in yourself, and accept nothing but the best.

THE VOICE WITHIN

Each day of our lives presents an opportunity to improve our ability. Throughout each and every day, we have conversations with ourselves. This is the little voice inside your head that never stops talking. You must use this voice to your advantage. Do not allow your conscious and subconscious mind to convince you of your inability to succeed. Rather, talk to yourself in a positive way. Tell yourself that you will be a champion and that you will not allow anything to stop you. Many people that lack confidence allow their mind to defeat them before competition ever begins. Their little voice speaks to them by saying they will lose and fail.

Overcome these feelings. Use the voice inside your head to your advantage. Tell yourself over and over again that you will succeed. Remain positive and confident and results will follow. Every minute of every day is an opportunity to improve our confidence and personal beliefs. Throughout each day, I tell myself that I will be champion. I convince myself to train hard each and every day. When I wake up in the morning, I look at the new day as a chance to improve some aspect of my game. The little voice inside my head repeats these positive words to me throughout the day.

You must learn to do this as well. As you reach elite levels of athletics, mental conditioning becomes a major factor in your likelihood for success. We all know how to get in shape. It is up to our mind to allow us to achieve these optimum levels of performance.

You must affirm your ability to succeed and your willingness to work hard. Affirmations are positive statements that you can use to replace your negative thoughts. By stating affirmations, you can transform past attitudes and expectations into positive and vibrant ones.

VISUALIZATION

An old phrase states, “*seeing is believing*”. These words are true in life as well as boxing. Visualization can be a powerful tool to help us achieve our goals.

Words To Live By

“Those who do most, dream most.” – *Stephen Leacock*

Visualization involves imagining in your mind that you are actually performing. Through visualization, you actually see yourself in the competition. You must relax, close your eyes, and envision yourself inside the ring. Visualization is a positive tool for athletes. It allows you to perform the competition in your mind before the fight ever happens. For example, before my bouts, I will envision myself landing the knockout punch. I will put myself in the competition inside my mind. I will tap into all of my senses so that I can hear, see, and feel the fight.

Envision yourself inside the ring. Replay in your mind what you must do to succeed. Visualize yourself both during the fight and afterwards while celebrating. See how happy you are to win and do not allow anyone to take this visualization from you. Instead, replay these thoughts in your mind until the time comes to turn these visions to reality.

Avoid visualizing negative performance. Such images will negatively influence performance. You must focus on the positive to succeed. Losers are negative, winners are positive. Replay vivid images over and over in your head. The more that you see yourself successful in your mind; the more likely you will succeed in actual competition. Mental rehearsal is one of the most powerful tools you can deploy to overcome failure and pressure, on your road to greatness.

Do not under underestimate the power of the mind. The mind will often determine how successful you will be in boxing. Positive thoughts breed positive results. Learn to train your mind as well as your body. I typically take 5-10 minutes each day to visualize myself in competition. I then convince myself throughout the day that I will succeed. I will not allow obstacles to stop me. Rather, I use them as motivation to work harder until I achieve my goal. When my goals have been met, I set new goals to continue to push myself to new levels of performance.

Words To Live By

To accomplish great things, we must dream as well as act. - *Anatole France*

SUMMARY

- Ø Set short and long-term goals for yourself
- Ø Write your goals down and review them each day
- Ø Believe in your ability to succeed
- Ø Convince yourself that you can and will excel
- Ø Transform past failures into opportunities to improve
- Ø Learn from each experience to catapult yourself to the top of your game
- Ø Use the voice within as a tool to improve
- Ø Talk to yourself in a positive manner throughout the day
- Ø Create affirmations regarding your success
- Ø Visualize yourself succeeding inside the ring
- Ø Replay these images until they become reality
- Ø Rehearse the events in your head prior to competition

Use the power of your mind to your advantage. There is no limit to your success when you train hard and believe in yourself.

FINAL WORDS FROM THE AUTHOR

At this point, you are packed full of knowledge that will enable you to truly enhance your performance inside the ring. While boxing is a skill sport, peak physical conditioning provides the platform necessary to utilize these skills. Boxing is a very difficult sport. There is no way to survive in this sport if you neglect your physical conditioning.

This book provides you with the tools to maximize your performance. You can cut through the myths that have existed in this sport for years. Science does not lie. The techniques in this book have been proven. If you wish to excel in the sport of boxing, you are going to have to train to be the best.

Previously, you may have directed your work towards long runs or other common mistakes. You now know the proper way to train. To be a champion, you must not only train hard, but also train smart. There are no shortcuts in this sport.

Words To Live By

"One can never consent to creep when one feels an impulse to soar."

Helen Keller

No one will decide how successful you will be in this sport but YOU. To be the best, you are going to have to work hard. You will need to eat, sleep, and dream boxing. Boxing has to become your life. Many will read this line and say, "But I do not have time".... If you do not have time to dedicate your life to the sport, you do not have time to be the best. You need to decide your goals. Do you want to lose weight? Win a regional tournament? Or become a world champion? Your training must be directed towards your goals.

If you wish to become a World Champion, you are going to need to work harder than you could ever imagine. Make the decision for yourself. Once you decide your ultimate goals, do not allow ANYONE to stop you. Believe in yourself and you can accomplish anything. Do not impose limitations on your ability.

Words To Live By

"Success usually comes to those who are too busy to be looking for it"

Henry David Thoreau

Train hard and good things will happen. Boxing is a sport that revolves around hard work. Do not rely on luck, as it will lead you nowhere. Chart your own course by training hard each and every day. Do you remember the old saying, "If at first you don't succeed, try, try again". Apply this simple phrase to your life. Turn your obstacles into opportunities. No one said that being the best would be easy. After all, if it were easy everyone would be the best. Rather, to be the best, you are going to have to work for it. Each day that you train, keep in mind

that there are thousands of other fighters training with the same goals as you. They wish to be the best as well.

Words To Live By

“Every great and commanding moment is the triumph of some enthusiasm.”

Ralph Waldo Emerson

Whatever your aspirations in life are, do not accept anything but the best. Apply this philosophy to your life and you will reach new levels of success.

Train hard, train smart, and never quit. The words “can’t” and “never” are no longer part of your vocabulary.

Good luck to you in your boxing future. You now have the tools required to succeed. Take these tools and use them to advance your game.

Always remember, the knowledge in this book will not make you the best, unless **YOU USE IT...**

GET BUSY AND ACCEPT NOTHING BUT THE BEST... YOUR BEST!!!

Words To Live By

The spirit, the will to win, and the will to excel are the things that endure. These qualities are so much more important than the events that occur.

Vince Lombardi