MEDICINE BALL TRAINING AND THEN SOME...

COMBAT POWER WITH MEDICINE BALLS, DUMBBELLS, SANDBAGS, AND MORE

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ABOUT THE AUTHOR

You did not purchase this book to learn about my life. For this reason, I will keep this section brief.

My name is Ross Enamait and I am the founder of RossBoxing.com and WarriorForce.com. I am the author of **The Boxer's Guide To Performance Enhancement** and **The Underground Guide To Warrior Fitness.** I have been involved with fitness and competitive athletics my entire life. I continue to compete in the sport of boxing and work as a Strength and Conditioning Coach for several athletes. I am a Certified Fitness Trainer with the *International Sports Sciences Association* and hold a Bachelor of Science from the University of Connecticut and a Master's degree from Regis University.

My life revolves around athletics, with particular attention directed towards strength and conditioning endeavors. My purpose in developing this book is to teach fellow athletes how to develop explosive power and speed without wasting their hard earned money on expensive fitness gadgets and courses.

I will teach you effective exercises that will increase explosive power, speed, and core strength. The routines provided in this manual will integrate the use of medicine balls, sandbags, dumbbells, and more.

The equipment required for these exercises is inexpensive, yet effective. Today's fitness industry is riddled with individuals who market bogus fitness gadgets and "courses". These individuals promote their proprietary services as the next best thing since sliced bread.

The exercises and routines in this book are as effective as any you will find. I will teach you to create your own training equipment, including medicine balls, tornado balls, and sandbags. You can develop much of this equipment for less than $10.

There is no need to refinance your house to perform the exercises in this book. These routines will maximize results while minimizing cost. Our society has been conned to believe that a hefty price tag denotes value. When we see a training device that is expensive, we immediately perceive quality. Unfortunately, price has no relation to quality.

You do not need any fancy inventions to develop explosive power and speed. Let's cut through the bullshit and stick with what really works.

It is time to keep it real and go old-school with our training equipment. Let's get this party started…

INTRODUCTION

The medicine ball has been around for many years. Historians have traced the use of weighted balls for therapeutic exercise to ancient times, almost two thousand years ago. More recent history points to the United States military using medicine balls in the 1800's as a way to strengthen and condition the soldiers. During the 1930's, President Edgar Hoover started a game known as Hoover Ball. The President and his staff played Hoover Ball each morning with a weighted medicine ball. The object of the game was to throw the weighted ball over an 8 foot high net. The medicine ball gave the President and his staff a fun way to strengthen the arms, legs, trunk, and core.

Fast-forwarding to modern times, the medicine ball has recently gained widespread popularity. Medicine balls can be found in all sizes and colors at most fitness gyms. Despite the resurgence in medicine ball training, these weighted balls are far more than a fitness trend.

Dating back to the 1800's, pugilists have regularly included the medicine ball as an integral part of their training routine. The medicine ball serves as an excellent tool to develop speed, power, and strength. These attributes have a direct carryover in the combat arena. Combat athletes have much to gain from a medicine ball training program. Proper medicine ball training can help the athlete improve his explosive speed while strengthening the core and trunk.

Unfortunately, most athletes who use the medicine ball are content with a handful of movements, never utilizing the vast assortment of exercises and routines that can be performed with this weighted ball. An even greater percentage of combat athletes neglect the medicine ball entirely, instead opting for a few days of iron pumping activities in the weight room. Although strength training is important, it is equally important to transfer this strength into improved power and speed.

RANGE OF MOTION

The biomechanics of athletics involve several planes of motion. It is important to achieve harmony throughout the sagittal, frontal, and transverse planes. Most weight lifting exercises only train one plane of motion. Athletic movement takes place in three planes, hence the importance of designing a training program that includes these movements.

Medicine ball workouts provide resistance throughout a full range of motion. The medicine ball is a unique tool that allows athletes to perform explosive, functional exercises. The ball develops core strength and mobility by providing resistance through circular, rotational, and power movements. Unlike weight machines that restrict natural movement, medicine ball training provides weighted resistance throughout all planes of movement.

Consider the act of throwing a punch... The punch is delivered with speed and power. The fist strikes its target with direct force at maximal speed. The medicine ball is excellent to enhance the power of this motion since it allows you to accelerate your muscles throughout the entire movement. You cannot simulate this motion as effectively with weights. When you train with weights, you must decelerate at the end of the exercise for safety reasons. When you bench press a bar, you can explode with the movement, but you must also stop your motion as your arms extend.

The medicine ball is different, as it allows you to follow through with maximum force. Throwing exercises enable you to deliver the ball with maximum force throughout the entire range of the movement. This form of training has obvious benefits for combat athletes.

Do you slow down your punch before striking an opponent? If you do, you should consider other endeavors such as basket weaving.

In combat, you must explode with force and aggression. The best way to condition this response is to train in an explosive manner. When you throw a punch, you should deliver it with the intent of knocking your opponent to the ground. You must train explosively to develop explosive power. The medicine ball can help you attain this explosive power. You can throw the ball to a partner or against a wall. You can deliver maximum force without deceleration.

Medicine ball training will help you develop the power necessary for combative sports. As a combat athlete, it is important to train throughout a complete range of motion. You must develop functional power to condition the body to attack from all angles and motions. Combat is unpredictable. You must teach your body to develop power from all positions, often when off balance. Do not neglect this form of training.

MORE THAN EXPLOSIVE POWER

Later in this training manual, I will discuss the specific benefits of Plyometrics and Complex Training (strength training + plyometrics). The medicine ball is effective for both forms of training, but also much more…

The medicine ball develops core strength and joint integrity. Functional strength originates from the core and trunk. Joint integrity is equally important. Your joints direct the body's muscle movements. For this reason, joint strength is integral to the athlete who requires explosive power and speed.

It is common to for muscular athletes to suffer from nagging injuries associated with weak joints in the shoulders, hips, and knees. Medicine ball training can help strengthen these areas while enhancing power and functional strength.

Improved strength and a decreased rate of injury equates to an athlete who is more effective today and tomorrow.

You are only as strong as your weakest link. Whether it is a shoulder, elbow, knee, or ankle, these injuries continue to plague today's athletes. You surely know someone who has suffered a torn ACL, a sprained ankle, and various other shoulder and elbow injuries. These injuries often result from weak musculature surrounding the joints. Medicine ball training is one of the best ways to strengthen the supporting musculature around your joints. Medicine ball training can help develop joint integrity around the shoulder, elbow, knee and ankle areas.

The medicine ball has become a staple in the training programs of today's record-breaking athletes. Medicine ball training will help you develop functional strength and explosive power. You will gain flexibility, muscular endurance, and balance.

The medicine ball has a unique ability to target and strengthen the body's core. By strengthening the torso, abdominals, and back, the medicine ball can help you develop explosive power throughout a vast range of motion. The combat athlete requires tremendous core strength. Arm and leg strength originate from the core. Whether you throw a punch, deliver a kick, or tackle an opponent, the power transmitted through your arms and legs is only as great as the power generated from your core.

Medicine balls condition your body for realistic motions. You can and WILL develop power for the functional demands of combat athletics. You can forget about the single plane of movement you are accustomed to with weight machines. If you perform slow, restricted movements, you will become slow and restricted. We are in the business of developing the power necessary to knock our opponents unconscious. It may sound brutal, but that is the beautiful nature of our sport. You must train your body to perform with explosive, ballistic movements. The medicine ball will develop new muscle firing patterns that will significantly increase power output throughout all ranges of motion.

The medicine ball is a perfect tool to develop core strength and explosive power. Self-appointed experts often preach the importance of functional strength and power. They will then follow up with information on a new fitness tool for prices that will force you to refinance your house.

Forget the nonsense. The medicine ball is a convenient, inexpensive training device that delivers world-class results.

FUNCTIONAL POWER

One of the latest buzzwords in the fitness industry is “functional”. Trainers commonly market their services as “functional training”. We have all heard about the importance of functional training, but very few athletes grasp the true meaning and significance of this exercise methodology.

Most athletes and fitness conscious individuals are content with exercises such as the bench press and biceps curl. An even larger percentage of athletes have turned to nautilus training equipment that dictates and restricts the range of motion for each exercise.

Ok, so what the hell is a functional exercise?

Great question. Let’s clarify the confusion and discuss why it makes sense to train with functional movements. From a technical standpoint, functional exercise is classified as multi-plane and multi-joint movements. Earlier, I mentioned that athletics take place throughout several planes of motion. Conventional strength training is often confined to a single plane. Obviously, this form of training does not meet the criteria for functional exercise.

Functional training involves preparing the body for real-world challenges. This form of training conditions the body for the rigors that it will face in the competitive arena. Have you ever had an opponent sit on the nautilus machine and force you to push him with a leg press? Of course not!

The movements involved in competition are spontaneous, explosive, and multi-directional. The best way to prepare for such situations is through a functional training program.

Unfortunately, many of today’s athletes have suffered from “bodybuilding syndrome”. There is nothing wrong with bodybuilding, but please recognize that the training requirements of a combat athlete are much different. The combat athlete must train with movements that incorporate strength, balance, explosiveness, core stabilization, and coordination. The functional movements and exercises necessary for these objectives are superior to those exercises that target individual muscles in a uniform manner.

Strength training remains important, but is only one piece of a complete training program. A successful athlete must integrate several forms of training. Much of this training should be conducted in a functional manner. The body works as a functional unit. You will never approach an opponent from a preacher bar machine and be forced to curl your way out of trouble.

Still not convinced? OK… What is the most common question asked in the gym?

This question should be easy to answer. I could walk into any gym in the country and guarantee that I will hear someone ask, “How much can you bench press?” I have no problem with the bench press, but when will you ever be forced to produce strength while lying on a bench with your back completely supported?

Never!

You will never lie with your back against a bench, with no need for core stabilization, and be forced to produce strength in competition. And do not forget the need to decelerate your motion at the end of the bench press. Do you ever decelerate in competition?

Of course not!

I have never seen a football player slow down before tackling an opponent. Deceleration is not functional. It does not apply to real-world situations that athletes encounter in the competitive arena. Regardless of your competition, your body operates as an interrelated, functional unit. The BEST way to condition your body is through a functional training program.

You must train with exercises that target the entire body, challenge the core, and guide you through several planes of motion. Today’s gyms are filled with individuals who train muscles rather than motions. These men and women can curl large amounts of weight, but are not functionally capable of significant athletic movements. They lack explosive speed and power because their body is not conditioned to respond in this fashion.

When you train muscles instead of functional movements, your applicable strength becomes one-dimensional. If you train with one plane of motion, your body will become unfunctional. You will be training your body to work its muscles on an individual basis. Your body will lose its ability to operate as a functional unit. Injuries will become more frequent, while your performance suffers.

Functional training will improve functional (useful) strength, flexibility, core stability, coordination and applicable muscular endurance. The body does not function with individual muscular movements. The body was not designed to operate in this manner. When you train, you should not isolate one muscle from the rest of the body. This unfunctional, one-dimensional form of training will do little to improve your performance.

There is nothing wrong with exercising to develop a well-conditioned body. Not everyone trains with the intention of competing as a world-class athlete. This is irrelevant. Whether you compete or not, you should make best use of your training time. Why not develop your body into a USEFUL, functional unit? Forget about developing superficial strength that lacks real-world functionality.

Consider the act of purchasing a car… Would you purchase a car that does not drive? I sure as hell hope not!

What good is a fancy looking Ferrari if you cannot get it out of your driveway? The same logic applies to the human body. Why develop a body that provides no useful purpose?

You must become a functional machine capable of multi-planar and multi-directional action. Combat is an unpredictable, action packed sport. You will dodge, slip, duck, feint, punch, kick, and tackle. You will be forced to react and attack from an infinite number of positions. Each attack or reaction will require the body to move in an explosive manner. You will never throw the same punch twice. You will always be at a different angle against a different sized opponent.

Do not brainwash your body with one-dimensional movements in the gym. Train in a manner that mimics the physical demands you will experience in combat. Train in a manner that will maximize your performance.

How do you achieve these training objectives?

The best method of attack is a program that integrates medicine balls, plyometrics, sandbags, dumbbells, sport specific movements, skill training, and conditioning. You can forget about fancy nautilus machines that restrict range of motion. There is a boatload of opportunity waiting for you in the gym. You must expand your training repertoire to include functional movements. Do not focus on individual muscles. Focus on movements and the muscles will take care of themselves. The medicine ball is one of the best training devices to develop functional power. The medicine ball allows the athlete to:

- Perform whole body exercises
- Train with a full range of motion
- Mimic sport-specific movements
- Perform multi-plane/multi-joint movements
- Integrate flexibility, strength, power, coordination, and balance

Combat sports require functional power. Actions include swinging, kicking, punching, twisting, and tackling. Athletes involved in these sports require rotational strength and power. The medicine ball can strengthen the entire body, throughout all planes of motion. You can move the ball up, down, left, right, diagonally, and in any other direction you can think of. The vast array of medicine ball exercises and movements will help you achieve awesome strength and power.

IMPORTANT CONCEPTS

An athlete who possesses speed and power has an advantage over his competition. Consider the boxer who possesses this integral mix. A boxer who is fast and powerful is a dangerous man. The wrestler who can explode from the mat and drive his opponent to the ground is equally dangerous. Regardless of your sport or training objective, you must take the initiative to maximize your speed and power. One of the best ways to develop speed and power is a sport specific medicine ball routine.

Before discussing the specific exercises, let's first clear up some confusion regarding speed and power attainment. It is important that you understand these training principles if you wish to maximize your potential.

Without turning this into a science class, let's take a look at a few important concepts…

THE GENETIC DECK OF CARDS

At birth, we are all dealt a unique deck of *genetic cards*… We have all heard political debates about equal rights and human equality. I am all for equality but unfortunately we are not created equal. All humans have a distinct arrangement of muscle fibers. A certain percentage of the fibers are fast twitch (white fiber) while the remaining fibers are slow twitch (red fiber). The ratio of fast to slow twitch fiber is determined genetically before birth.

Fast twitch fibers predispose a person to quick, explosive movements such as a soccer player sprinting across the field or a boxer throwing a combination. 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 ten seconds. These athletes sprint at unbelievable speeds for a short duration of time.

Slow twitch fibers are muscle fibers that allow for excellent performance in endurance activities. Slow twitch muscle fibers are responsible for the sustained cardiovascular endurance evident in athletes such as marathon runners. Slow twitch fibers are 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. There is a reason why world-class marathon runners do not compete as 100-meter sprinters. The marathon runner does not have the genetic makeup to compete as a sprinter. The marathon runner does not possess the fast twitch fibers necessary to sprint at a world-class level…

Which muscle fibers are best? The answer to this question varies according to sport. For example, a marathon runner would prefer slow twitch, endurance fibers. A sprinter would prefer fast twitch fibers.

The primary muscle fibers include…

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

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

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

Type I, *Type IIa*, and *Type IIb* are the primary forms of muscle fiber. Each athlete will possess a unique combination. All muscle fibers serve a purpose in the competitive arena. For example, a boxer delivers a lightning fast combination by recruiting his fast twitch muscle fibers. Through proper training, he will recruit as many fast twitch fibers as possible to maximize the force behind his punch.

The boxer also requires a certain percentage of slow twitch fibers. These are the muscle fibers that allow him to circle the ring for 12 continuous rounds. Both muscle fibers are important. We are all born with a unique arrangement of these specific muscle fibers. Those who possess primarily slow twitch fibers tend to have more endurance, while those of us with fast twitch fibers are more explosive in nature.

As combat athletes, we must maximize our ability to recruit and utilize our fast twitch muscle fibers. Combat athletes win bouts with fast, explosive movements. Whether you are wrestling on the mat or throwing a combination in the ring, you will execute your attack with speed and power. These explosive movements originate within your fast twitch fibers.

THE HELL WITH GENETICS

At this point, you may be wondering whether you are a natural fast or slow twitch athlete. You now have an understanding of muscle fibers and the role of genetics, but let's get one thing straight, the **HELL WITH GENETICS!**

You cannot alter your genetic makeup. Does this mean you are doomed by your genes? NO!

There is still plenty that you can do to alter your current level of power and speed. There is a muscle fiber known as *Type IIc*. These fibers have the ability to develop characteristics of fast or slow twitch fibers. Through proper training,

you can teach *Type IIc* muscle fibers to act as fast twitch fibers. You can also train your fast twitch fibers to become more efficient at developing explosive power.

A proper training program can undoubtedly increase your power and speed. These improvements will directly enhance your performance. If you participate in combat sports, you can develop more explosive punches and kicks. You can develop the explosive power necessary to deliver lethal combinations.

Why do so many athletes lack explosive power?

This is a great question that it easily answered. Many athletes train in a manner that is counterproductive to their functional power and speed. As an athlete, you can train your fibers to behave as explosive, fast twitch muscles. Unfortunately, you can also teach your fast twitch fibers to behave as slow twitch fibers. By doing so, you negatively condition the fast twitch fibers.

How does this happen?

Consider the following… Many boxers focus a great percentage of their time towards aerobic endurance training, without concentrating on explosive power development. These fighters run long distances each morning at a slow pace. Many boxers jog 5 miles each morning. This form of training conditions the muscles to develop slow twitch, endurance-type characteristics. Although the fighter believes he is improving his performance, he is actually detracting from his explosive power. Boxing and other combat sports are anaerobic and explosive in nature.

Anaerobic training means to conduct an activity without oxygen. Anaerobic events, such as boxing, wrestling, and grappling, require muscles to contract at maximum intensity for short periods of time. An example is a five-punch combination in boxing or a take down in wrestling.

Aerobic exercise consists of low to moderate intensity activities, performed for extended periods of time. Distance running is a perfect example of aerobic exercise.

Boxing and other combat sports are primarily anaerobic. Many estimate these sports to be 70-80% anaerobic. These sports require explosive power and speed (from fast twitch fibers). Excessive long distance, aerobic training will retard the training goals of these athletes. Although aerobic training has its place, it should NOT become the predominant method of training for combat athletes.

You must recognize that your muscle fiber ratio is predetermined. You cannot go to the grocery store and order additional fast twitch muscle fibers. It takes hard work to improve the genetic deck of cards that you have been dealt. Do not take

two steps backwards for every step forward by training with excessive bouts of aerobic exercise. Instead, you should focus on enhancing your current fast twitch fibers and teach your *type IIc* fibers to adopt explosive characteristics.

I did not discuss the relationship between genetics and muscle fibers to discourage you. Rather, I want to ensure that you are informed about YOUR body. By understanding what you are working with, you can better formulate a training program that will benefit YOU for competition. There are plenty of tests that can determine your percentage of fast twitch and slow twitch fibers. These tests are costly and painful. Forget about wasting your money on a muscle biopsy. You should already have an idea of your muscle fiber makeup. Are you naturally a sprinter or distance runner? Do you throw lightning quick punches or are your movements slower?

There are world-class athletes born with a high percentage of fast twitch fibers, others with slow twitch fibers, and others with an equal combination of both. You are born with your muscle fiber ratios already determined. Does this mean you should give up on your athletic dreams if you have not been dealt the most desirable deck of genetic cards? Of course not!

Rather, you must maximize what you have by teaching your body to recruit a maximum number of explosive muscle fibers. If you are a boxer, you must throw punches with explosive force and power. You must train your body to react explosively by implementing functional power training into your routine. Your training should include a mix of plyometrics, complex training, and other explosive training drills. This form of training will teach your body to react as an explosive, fast twitch machine! The medicine ball is one of the most effective tools to assist with these goals.

PLYOMETRICS TRAINING

A successful athlete will master the skills required of his sport. If you are a boxer, you will spend many long nights in the gym practicing combinations, footwork, defense, sparring, and other skill enhancing drills. If you wrestle, you will spend many hours practicing takedowns, holds, and other moves that will enable you to outclass your opponent.

Regardless of your sport, skill training will play an important role in your success. One of my former trainers often said, "*Skills pay the bills*". There is truth to these words, but skill training is only one piece of the complex equation required to develop a successful athlete.

In addition to skills, the athlete requires power and conditioning. A combat athlete must develop explosive power to produce forceful punches, kicks, and takedowns. Conditioning enables the athlete to apply his skills with power for the duration of the bout.

To summarize, first the athlete requires skill. Next, he must develop explosive power to execute his technique with maximum force and effectiveness. Lastly, the athlete requires conditioning to deliver this power throughout the entire bout or competition.

PLYOMETRICS

Plyometrics is one of the most effective forms of training to develop the power required for combat sports. Plyometrics has become a buzzword in recent years, but have been around for several decades. Plyometric training was first witnessed in Russia during the 1960's. It was originally referred to as jump training or shock training. The name "plyometric" originated from Latin roots. The Latin word "Ply" means *increase* while "Metric" means *metric*. Plyometrics lead to *measurable increases* in performance. Plyometrics consist of a variety of exercises that enhance starting speed, acceleration, and power. By strengthening the nervous system, plyometrics teach the body to react quickly and explosively. These drills can greatly improve performance.

Plyometric training helps develop explosive, fast twitch muscle fibers. Early plyometric training consisted of exercises such as jumping, bounding, and leaping. Track and Field athletes have trained with plyometric programs for many years. Basketball players have used plyometrics to increase their vertical leap. Many athletes have improved their vertical jump by 20-30 centimeters after a few months of dedicated training. These improvements in vertical jump are extensive and well documented.

At this point, you may be wondering how a vertical jump program will benefit a combat athlete. The vertical jump program may or may not help you. The point I am attempting to illustrate is that plyometrics irrefutably increase explosive power and speed. Plyometric programs originated with a focus on the lower body. Fortunately, we can use the medicine ball to enhance our upper bodies as well. But rather than emphasizing the upper OR lower body, your focus should instead be on the ENTIRE body. The body is a functional unit. If you wish to maximize power, you must maximize your explosiveness throughout the entire body. The medicine ball can help you achieve these goals.

If I had a nickel for every athlete that I have seen train with only a handful of exercises such as the bench press and biceps curl, I would be rich man. Our program will be much more comprehensive. A complete program will integrate explosive plyometrics with explosive strength training.

Plyometrics are an intense form of training that you can use to improve speed, agility, and power. Plyometric exercises involve fast, explosive exercises designed to improve power output and neural activation of the muscles. This form of training teaches the muscles to contract quickly and powerfully. No one is denying the importance of strength training. Unfortunately, many coaches become overly concerned with weight lifting numbers, instead of building better athletes. Medicine ball training and plyometrics can serve as a bridge between strength training and sport.

PRINCIPLES OF PLYOMETRIC TRAINING

The benefits of plyometric training originate from the Stretch-Shortening Cycle (SSC). The SSC may sound complex, but is easy to comprehend. The SSC means that the muscles are rapidly stretched and then contracted eccentrically. As the muscle lengthens, it contracts and produces elastic energy. The force applied to the muscle increases. The muscle then contracts concentrically. The muscle shortens and the energy, which has been stored, dramatically increases the force of the contraction.

The eccentric contraction is the loading phase of the plyometric movement. During this loading phase, the muscle stores elastic energy. Muscular tension increases. The elastic energy that has been stored is available for powerful, dynamic movements. The muscles learn to respond with more speed and explosiveness. After a complete training program, the athlete can increase his vertical jump, sprint speed, and punching power.

By stretching the muscle before it contracts, the muscle will contract with more force. A consistent plyometric training program will increase the efficiency of the stretch-shortening cycle. Plyometric training will teach the muscles to store more elastic energy. Eventually, the muscles learn to develop more power in less time.

The concept of plyometric training is not a fitness fad or training myth. The results from plyometric training are real. World-class athletes choose plyometric training for a reason. These athletes recognize the importance of power development and enhancement. For many years, plyometrics were confined to Olympic training facilities. Now, this form of training is available to athletes at all levels. If you follow the routines in this book, you will teach your muscles to respond with maximum power. Many coaches believe that power cannot be taught. These coaches instead focus their time on skill development. An athlete can learn a new skill such as boxing. These coaches do not realize that muscles can also learn and advance. Muscles can learn to develop new power with proper training. You are not confined to your natural power.

PREPARATION FOR PLYOMETRICS

Plyometrics exert great force against the musculoskeletal system. It is extremely important that you first develop a solid base of strength before incorporating these exercises into your routine. This form of training is very stressful to the body. Plyometric training involves intense, explosive movements. You should not embark on a plyometric routine until you have developed a foundation of strength.

It is important that you build your *House of Power* on a solid foundation. Build your foundation with rock, not sand. If you start a plyometric program without first developing a foundation of strength, you are asking for injury. Plyometrics are not designed for unconditioned individuals. These routines are designed for warriors who want to kick ass with explosive power!

Plyometrics are often blamed for over training and injury. These accusations are undeserved if a proper training program is conducted. Injuries result when athletes do not follow the guidelines that pertain to plyometric training.

TRAINING THE RIGHT WAY

Plyometric training emphasizes quality, not quantity. You should never train to failure during plyometric drills. The *No Pain, No Gain* approach to training does not apply to plyometrics. Save this warrior mentality for your anaerobic conditioning drills. Plyometrics routines are unique from strength training, anaerobic training, and aerobic activities. Plyometrics combine strength and speed to create power essential for combat.

Exercises must be stopped if speed and technique can no longer be maintained. Plyometrics training emphasizes speed and power. To maximize these objectives, we must perform quality repetitions with adequate rest between sets.

COMPLEX TRAINING LEADS TO ULTIMATE POWER

Plyometric training can help you develop explosive speed and power. These training principles may be new to your routine. You may be wondering how to integrate plyometrics into your already busy training schedule. One option is known as *Complex Training*.

Strength training alone will not maximize your speed and power. Many athletes conduct separate training sessions specifically for plyometric drills. For example, these athletes may conduct plyometrics on one day, and strength train the next. This system can be effective, but is not always the best way to train. As you approach peak fitness levels, it is worth considering a complex training routine.

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 also improve your rate of force. Weights will assist with force development, but rate of force improvements make the athlete jump higher, start faster, and punch harder.

Plyometrics alone will increase your speed and power output. To maximize power however, you should integrate plyometrics into a complex training program. Complex training consists of a strength exercise followed by a plyometrics movement. For example, you will perform power cleans with weight for 8 repetitions. Immediately after this exercise, you will perform 10 overhand medicine ball throws. Another example would be to perform 10 pull-ups and then 10 underhand medicine ball throws.

When conducting complex training routines, you activate the nervous system and fast twitch muscle fibers with a strength training exercise (such as power cleans). You then conclude with a plyometrics movement, which activates a high percentage of fast twitch fibers to enhance the training benefit. You can more effectively target these fibers after the strength training portion of the complex set. By strength training first, you "*turn the fibers on*". The concluding plyometrics exercise then stresses the fibers that have already been activated by the strength training half of the complex training equation.

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 these routines. In addition, complex routines are so intense that proper rest between sets is essential to ensure maximum results. You may be accustomed to working at a fast pace with minimal rest in between exercises. This is not how to work with complex training and plyometrics drills. You will first perform a strength training exercise and then proceed with a plyometrics movement. The strength training portion of the complex routine should be intense. It should consist of fairly low repetitions with maximum intensity.

The strength training exercise of the complex cycle activates the nervous system. The muscles remain activated during the plyometric half of the complex cycle. During this activated state, the muscles have a tremendous ability to adapt and improve in explosive power. A complex training set will match one strength exercise with one plyometric exercise. Complex training works the nervous system and muscle fibers simultaneously. This form of intense training can teach slow twitch fibers to perform like fast twitch fibers. Remember the line about genetics…

THE HELL WITH GENETICS!

After the complex set is complete, you must allow adequate time for the muscles to recover before proceeding with your next set. Failure to rest will put strain on your aerobic system. We do not conduct complex training for its aerobic benefits. Rather, we are working to improve speed and power. Typical rest periods between complex training routines range from 2 to 5 minutes. A sample complex training set is listed below:

- Power cleans
- Overhand medicine ball throws
- Rest 2-5 minutes before proceeding to next set

As you can see we first conduct a strength training exercise, followed by a plyometrics movement, and finally a 2-5 minute rest period. In between the strength and plyometrics movement, you may take up to 1 minute of rest. 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 takes approximately 20-30 seconds.

If you prefer bodyweight exercise to weight training, you can fulfill the strength portion of the complex training equation with exercises such as one-legged squats, handstand pushups, and pull-ups. For example, perform 10 one-legged squats per leg and then conclude with 20 explosive squat jumps. An upper body complex set could consist of 10 handstand pushups followed by 10 overhand medicine ball throws.

Later in this manual, I will discuss several plyometric routines and complex training programs.

A DISCUSSION ON PUNCHING POWER

Although this book is not designed exclusively for enhancing punching power, many of the routines and exercises will help to improve this combat specific power. Whether you are a boxer or a martial artist, the act of throwing a punch or kick requires you to activate fast twitch muscle fibers to generate maximum speed and power. Power originates from natural ability and muscle characteristics developed through proper training.

One of the oldest debates in boxing and martial arts is whether or not punching power can be enhanced. There are those who believe punchers are born and those who believe punchers are made. The most common question that I am asked by aspiring fighters is how they can enhance their punching power. This leads to the ultimate question…

Is it possible to improve punching power?

Punching power can definitely be improved. Natural punchers are born, but all individuals have the ability to improve their punching power. Punching power involves many characteristics. Just a few of these characteristics include:

- Technique
- Timing
- Punch placement
- Leverage
- Speed
- Power

Much of a punch's power originates from the core, trunk, and legs. When you deliver a punch, you pivot off your feet, turn your hips, and snap the wrist. Punching power involves timing and leverage. A well-placed punch often equates to a powerful punch. The punch you do not see is the punch that hurts. Leverage, timing, and proper technique takes time to develop. These are acquired skills.

What about speed and power?

Much of a punch's speed originates from proper technique. For example, a straight right hand should be delivered with a quick pivot and snap of the wrist. Power punches are short punches that are delivered along a direct path. You must stay relaxed when punching. If you are tense, you will restrict movement and reduce speed, which reduces power. It is important to stay relaxed to let your punches flow.

What does this have to do with plyometrics and the context of this book?

Great question! Plyometrics and complex training will not influence your technique, but will enhance the effectiveness of your fast twitch muscle fibers. Proper training can teach your slow twitch fibers to behave more like fast twitch fibers. Your fast twitch fibers will also improve, thus creating added power and explosiveness. It is up to the athlete to deliver this newfound power through proper technique. All fighters have the ability to learn and apply proper punching techniques. All fighters also have the ability to train in a manner that maximizes the efficiency of their nervous and muscular systems.

Why are certain athletes able to punch so much harder than others?

This is another great question. Earlier I mentioned the argument that punchers are born, not made. There is truth to this statement, based on the training practices of most athletes today. Most boxers and martial artists do not train in a manner that allows them to enhance their punching power. For this reason, power remains based on technique and natural abilities. When no one takes the time to apply the training principles that are proven to change your body, no one improves their genetic deck of cards.

I agree that there are boxers who are natural punchers. I have boxed with individuals who never lifted a weight in their life. Many of these men have never heard of "plyometrics", yet they possess awesome punching power. These men are natural punchers. They have learned proper technique and applied their explosive muscle characteristics to their punches.

Consider the following analogy... There are certain baseball pitchers who can throw a fastball at over 95 mph. These pitchers throw a baseball with natural speed. No matter how hard I train, I will never throw a 95 mph fastball. This analogy illustrates the fact that certain individuals have been dealt a superior genetic deck of cards.

Most professional baseball pitchers throw the ball with proper technique. Despite their technical proficiency, all pitchers cannot throw a fastball at 95 mph. The same logic applies to punching power. Not everyone can become a knockout artist like Mike Tyson. Does this mean that you should pack your bags and give up?

Of course not! You have the ability to make CONSIDERABLE improvements in power by teaching your muscle fibers to perform as explosive fast twitch fibers. When you combine this power with technique, leverage, and timing, you can dramatically improve your punching power. There is no denying this fact. Plyometrics and complex training will improve your power, regardless of your athletic event.

Unfortunately, only a handful of professional fighters perform complex training. I often hear people suggest that heavy bag training will improve punching power. This only holds true for an unconditioned, untrained fighter. All boxers hit the heavy bag, but all boxers are not effective punchers. Once your technique has been mastered, there is more that you can do to enhance your power. The time will come when your technique can no longer be tweaked to improve power. Eventually, you will learn proper form, timing, leverage, and placement. When you reach this plateau, you must challenge the body with complex training. By doing so, you enhance your muscular system and nervous system. This will enhance your power. This training may sound complex and foreign but it should

not be. Very few athletes take the time to learn the specifics of an explosive training program.

Separate yourself from the mediocre world and you can make noticeable improvements. There are countless myths that clout the sport of boxing. Many of these myths have been disproved with science. The fact that punching power is entirely natural is the latest myth to be exposed. There are very few combat athletes that follow the intense training routines required to make improvements in power. Take the initiative to learn the techniques that work.

To summarize, let's answer two common questions…

Are punchers born? – Yes, certain athletes are born with more explosive power than others.

Are punchers made? – Yes, you can improve your muscular power and technique to become an effective power puncher.

Do not allow an old school trainer to dissuade you from improving your punching power. We were not all created equal in terms of genetic ability, but we were all created with the ability to improve. When was the last time an old school trainer put his fighter through a complex training cycle? Probably never! Take the initiative to improve and you will see undeniable results.

Complex training works, but it takes time. Most fighters do not take the time. Do not make this mistake.

FINAL THOUGHTS

There is no denying the effectiveness of plyometrics and complex training. As an athlete, you owe it to yourself to maximize your explosive power. Traditional strength training is not enough. You have the ability to improve the efficiency and effectiveness of your muscle fibers. It will not be easy, but it is possible. It takes hard work and a consistent effort to make noticeable changes. Make the decision today to become the explosive machine that you are capable of! Rome was not built in a day. Explosive power is no different. It takes time and a consistent effort. There is no such thing as an overnight miracle regarding power development. Dedicated training however will lead to undeniable improvements.

THE IMPORTANCE OF THE CORE

Medicine balls can be used for a variety of exercises, not just plyometric movements. The medicine ball is one of the most effective devices for training the core and trunk. The core of the body consists of the abdominal and low back musculature. The core serves as the foundation for the arms and legs. It provides stability in movement, such as when you punch or kick. The core supports your vital organs while offering protection for the nervous system. The abdominal region provides internal pressure to support and stabilize the spine.

All movements begin at the core. As you move, your ability to generate force transcends through these muscles. Core strength directly impacts your capacity to develop force. The old adage that you are only as strong as your weakest link shines light on the importance of core training. The trunk and torso are capable of an infinite number of movements. Competition is unpredictable, consisting of the same infinite number of movements. You must be able to respond quickly and react from awkward positions. Core strength is essential if you wish to respond and react with effectiveness.

Most athletes do not understand the relationship between core training and performance. A powerful core is important for all athletic movements. A strong core is required for rotational strength and power. The act of punching or kicking draws upon the muscles of the core. The abdominal and lower back muscles work in sync to control movement of the trunk. The force that is generated when punching or kicking is delivered through the core and trunk regions.

Core training is essential for optimal sports performance and injury prevention. The muscles of the torso stabilize the spine and provide the foundation for movement. The core muscles lie deep within the torso. These muscles attach to the spine and pelvis. When these muscles contract, they stabilize the spine and pelvis to create a solid base of support. This foundation allows us to generate powerful movements. A strong torso is required to stabilize the body to efficiently transfer force.

Combat athletes such as boxers, grapplers, wrestlers, and martial artists require considerable torso and rotational strength. Training the core muscles correctly will help develop neuromuscular motor pathways throughout this region. These pathways will teach your body to initiate movements in the most efficient way possible. The martial artist and boxer will use the core to deliver powerful kicks and punches. A wrestler or grappler utilizes core and torso strength for takedowns, throws, and when struggling to get off the mat. Competition often calls for random, unpredictable, movements of the trunk. Considerable trunk musculature is necessary to accommodate this stress.

As an athlete you must strengthen the entire core to develop joint stability and a foundation that allows the primary muscles to perform. If your core is weak, you are weak. You are vulnerable to injury and will never realize your true strength potential.

Proper core training involves more than long nights of crunches and sit-ups. Everyone wants a six-pack without recognizing the importance of strengthening the abdominal muscles. There are plenty of athletes and fitness enthusiasts who have minimal body fat and a six-pack abdominal wall to show. The six-pack however does not mean that the individual possesses true core strength. As mentioned earlier, the muscles of the core lie deep within the torso. You will need much more than a few sets of crunches to condition and develop this region.

The medicine ball serves as one of the most effective training devices to condition the core and torso. There are a multitude of medicine ball exercises that directly or indirectly strengthen the core and torso. The combat athlete can use a medicine ball to train the core region in an explosive manner. Combat is fast, powerful, abrupt, and unpredictable. To condition the core for combat situations, you must train with functional, explosive movements. Traditional single-plane exercise lacks sport specificity when training the core. Medicine balls however utilize a high level of trunk activity. With the medicine ball, an athlete can train the core with exercises that incorporate flexion, extension, and rotation. High repetition crunches will not achieve this important training objective.

Later in this manual, I will illustrate numerous core and trunk strengthening exercises. I will also provide several routines that will convert your core into a functional machine!

UNDERSTANDING THIS BOOK

I began this book with the intention of focusing solely on medicine ball training. I view the medicine ball as one of the most useful training devices. You can use the medicine ball for conditioning, power development, and core strengthening. The medicine ball is convenient, inexpensive, effective, and fun.

As I began writing this book, I recognized the need to include additional exercises, outside the realm of medicine ball training. There are several exercises that you can perform during a medicine ball workout that will help complete the equation necessary for optimum power development. For this reason, I have included additional sections on sandbag training and dumbbell training. Sandbags and dumbbells are similar to medicine balls in that they are convenient, inexpensive, and fun. With these two additional training tools, you can develop awesome strength and functional power.

I hate to see trainers and fitness authors focus on a single apparatus or training mentality. There are many self-appointed experts who preach about the superiority of a particular training device. I am sure you have seen your share of arguments about the effectiveness of bodyweight exercise vs. weight training. Others will argue the benefits of kettlebells vs. dumbbells. The list goes on and on…

I did not want to create a book that portrayed the medicine ball as the only piece of training equipment that you should use. Although you can achieve a full body workout with a medicine ball, I prefer a more integrated approach to training that utilizes different pieces of equipment (including your own bodyweight).

The primary theme that I wish to convey is the need for variety and cost effectiveness. There is no need to pay hundreds of dollars for “secret” fitness inventions. You can achieve world-class results with several inexpensive training devices. In the next chapter, I will illustrate how to create a homemade medicine ball. Later in this manual, I will teach you to create an adjustable sandbag.

Between your bodyweight, a few dumbbells, a medicine ball, and a sandbag, you will have all the equipment you need to create a powerful, functional body ready for combat.

Never overlook the importance of variety. Variety will make your workouts more effective. By incorporating variety, your body will be less likely to adapt to a particular form of training. It is important to keep your muscles guessing during your pursuit of optimum speed and power.

BUY OR BUILD YOUR MED BALL

CHOOSING A MEDICINE BALL

The fitness industry has a habit of overexploiting and overpricing “breakthrough” training products. The medicine ball is one of the industry’s latest victims. Although the medicine ball has been around for years, its popularity has suddenly resurged, making the ball the latest trend in the fitness and sports performance industry.

There are many styles of medicine balls to choose from including leather, rubber, and polyurethane designs. There are bouncing and non-bouncing varieties. The leather balls do not bounce. Most rubber and polyurethane balls bounce when thrown against a wall.

LEATHER MEDICINE BALLS

Leather is the traditional cover for most medicine balls. Leather medicine balls are often found riddled with dust and sweat on the floor of old boxing gyms. The traditional leather medicine ball is a non-bouncing style. These balls are excellent for throwing exercises, but have a tendency to fall apart after extended use. The stitches on these balls will eventually give out. Leather medicine balls should be used indoors or in dry outdoor conditions. Water will expedite the wear and tear of the ball’s stitches and seams.

Although the leather ball may wear sooner than its rubber counterpart, there are several athletes who do not train with anything but this non-bouncing ball. I can remember a leather medicine ball at one boxing gym that was older than me! Usual wear and tear is nothing that a little duct tape cannot fix.

Many athletes prefer the non-bouncing leather ball because it is softer on their hands. The leather balls are also easier to control during high throws such as the underhand throw or squat throw. The bouncing balls are more likely to “bounce” away after they hit the ground. The leather balls do not bounce away, rather they hit the ground with a bold THUMP! If you use a bouncing rubber ball, you may end up spending the majority of your time chasing down the ball after it lands.

The leather balls also offer certain benefits during wall throwing exercises. For example, suppose you are performing the chest pass against a brick wall. You can throw the leather ball as hard as possible without worrying about it bouncing back in your face. In my experience, I have seen athletes put more force behind the non-bouncing balls because they require a harder throw to rebound off of the wall.

PROS

- Less expensive
- Easier on the hands when catching
- Easier to control during overhead throws
- More suitable for impact exercises, such as throwing the ball at your partner's midsection (a favorite exercise at most boxing gyms)

CONS

- Seams and stitches more likely to wear
- Do not retain original shape as well as rubber or polyurethane balls
- Must be used in dry areas
- Do not bounce back when thrown against a wall (this can be viewed as either a pro or a con)

RUBBER MEDICINE BALLS

A recent breakthrough in medicine ball training is the creation of the rubberized medicine ball. This version of the medicine ball "bounces" when thrown against a wall. There are several brands of rubberized medicine balls. These balls allow you to perform bounce tosses against a solid wall or pavement.

Rubber medicine balls retain their shape longer than leather balls. The rubber balls are also easier to grip when they become wet from perspiration. The rubber around these medicine balls forms a non-slip grip cover.

Many athletes prefer these bouncing medicine balls for convenience reasons. The athlete can throw the ball against a wall without the need to retrieve the ball. You can throw the ball and have it bounce back to your starting position.

PROS

- Last longer than leather medicine balls
- Bounces off hard surfaces during individual drills
- Water resistant cover
- Easier to grip

CONS

- More expensive
- Harder on the hands during pass and catch drills
- Difficult to control during overhead throwing drills

POLYURETHANE MEDICINE BALLS

Polyurethane medicine balls are very similar to the rubber bouncing balls. The polyurethane balls also bounce, retain their shape, and can be used in wet environments. One well-known polyurethane medicine ball is the OOOF Ball. This brand of medicine ball has gained widespread popularity in recent years. Plyoball is another common polyurethane medicine ball.

I have trained with polyurethane medicine balls but did not identify any significant differences when compared to the rubber version. Both bounce when thrown against a hard surface and both will cost you much more than a traditional, leather medicine ball. The pros and cons of the polyurethane balls are similar to the rubber medicine balls.

WHAT SIZE MEDICINE BALL DO YOU NEED?

There are several factors that you should consider when choosing your medicine ball. You should consider your age, size, strength, and training objective. Another important factor is cost. Medicine ball prices rise in proportion to their size.

If you purchase a medicine ball, it is a good idea to start with a ball that is between 8 and 12 pounds. If you go lighter than 8 pounds, you may not realize the true benefits of the ball. If you go over 15 pounds, the ball may be too heavy for certain exercises.

Most throwing exercises should be performed with balls that are between 10 and 15 pounds. During plyometric movements, it is important to move the ball in a fast, explosive manner. I perform most of my throwing exercises with a ball that weighs 12 pounds. I also use a 25-pound ball for various strength and conditioning exercises.

BIGGER IS NOT ALWAYS BETTER

It is only natural to purchase the heaviest medicine ball that you can find. We automatically assume that bigger is better. This is not always the case. Medicine ball training is designed to increase your explosive power. If you select a ball that is too heavy, you will not be able to explode throughout the exercise. Do not train with a ball that slows or impedes your movement and range of motion. Use a ball that is heavy enough to provide resistance without sacrificing your accuracy and control. Remember that you must train fast to be fast. Training with a medicine ball that is too heavy can negatively affect your explosive speed. If you train explosively, you will become explosive. If you train slow, you will become slow.

A few questions that you can ponder when selecting a ball are listed below…

1. How strong are you?
2. What is your age and current level of physical fitness?
3. What are your training goals and objectives? Are you looking to build stamina, balance, or explosive power and speed?
4. What sport are you training for?
5. Will anyone else be using the medicine ball?

It is also important to select a ball that will benefit you for many months. Do not purchase a medicine ball that you outgrow after a few weeks of training.

MEDICINE BALL + ROPE = DYNAMICE MOVEMENT

One of the most recent advancements in medicine ball training is the ball that is attached to a rope extension. One well-known brand is the Tornado Ball. The purpose of the rope is to allow dynamic swinging movements and exercises. These balls allow for excellent rotational, swinging, and chopping drills.

You can find various medicine ball manufacturers that have created balls with a detachable rope. You can remove the rope to use the ball as a traditional medicine ball. Exertools manufactures a medicine ball product line known as ExBalls, which have a rope attached for dynamic drills. Another brand name is the Converta Medicine Ball.

HOW MUCH WILL IT COST?

If you want to save money, you should consider constructing your own medicine balls. By constructing homemade medicine balls, you can create various sized balls without emptying your bank account. Before I discuss the instructions for a homemade medicine ball, let's take a quick look at some common medicine ball prices. You will soon see why I take the time to build my own medicine balls.

LEATHER MEDICINE BALLS

- One major boxing equipment supplier offers leather medicine balls for $39.99. This price is consistent among various suppliers. The leather medicine balls are often priced the same, regardless of their size.

RUBBER MEDICINE BALLS

- Rubber medicine balls are more expensive than their leather counterparts. You can expect to pay around $40 for an 8-pound ball. The price then rises proportionately with the weight of the ball. I purchased my 12-pound

rubber medicine ball for $50. The ball has held up nicely, despite 3 years of continuous use.

- If you are looking for a professionally crafted ball without spending big bucks, check out the 10-pound rubber medicine ball by **Stamina Products**. This ball is constructed with a slip-resistant textured surface. This rubber ball does **NOT** bounce. I purchased this ball for only $16 at Wal-Mart.

MEDICINE BALL + ROPE (TORNADO BALL)

- The Tornado Ball is advertised online for $100. The weight of the ball is approximately 8 pounds. The Converta Medicine Balls range in weight from 1 kg all the way to 7 kg (which is a little more than 15 pounds). The 7 kg ball is advertised for $149.95.

WHERE TO BUY?

There are several different medicine ball manufactures. You can find a wide variety of medicine balls at any boxing equipment supplier. A few examples include Ringside, Everlast, and Title Boxing. You can also purchase a medicine ball at a sports equipment store such as The Sports Authority.

You can also browse through one of the many online auction sites. I have spotted several bargains on sites such as EBay. The downside with purchasing a medicine ball online are the hefty shipping charges that go along with it.

SAVE MONEY - DO IT YOURSELF

OK, I have listed a boatload of medicine ball varieties and the price associated with each.

How can you train with a medicine ball without emptying out your bank account?

Great question!

As mentioned earlier, I purchased a 12-pound rubber medicine ball for $50. Eventually, I had the need for different weights. It was too expensive to purchase several medicine balls for $50 each so I choose to experiment with a few “do-it-yourself” creations.
I now train with several medicine balls, each varying in size and weight. You can make your own medicine ball for less than $10. There are a few different ways to build your own…

PLAYGROUND BALL

You can make a medicine ball from one of the playground balls used at most elementary schools. As a child, we used these balls for games such as kickball or dodge ball.

You can find one of these playground balls for less than $5.

1. Pull the plug out of the ball using pliers. Try to find a ball that has a plug that is exposed. It will be in the shape of "T". Some plugs have no cap on top, making them harder to remove. Be sure to check the plug out before you purchase the ball. I found several balls that had an air plug that was **very difficult** to remove.

2. Once the plug is removed you should squeeze the air from the ball.

3. Fill the ball with water. You can use a funnel to pour the water into the hole.

4. Squeeze the remaining air from the ball and top off with water.

5. Squeeze the plug back into the ball and you are ready to go!

Most playground balls will fill to approximately 10 pounds. These balls are fairly durable. You will be surprised how long these balls last. You can make 10 medicine balls with the $50 it would cost you to purchase a new ball.

Eventually however, the playground balls may break. For this reason, I prefer to use a basketball…

BASKETBALL BALL = PREFERRED METHOD

You can make a homemade medicine ball with a basketball and sand for less than $10. Your equipment will include…

1. Basketball
2. Sand
3. Duct tape
4. Super Glue
5. Polyurethane sealant

You can purchase 50 pound bags of sand from any lumber or hardware store. I recently purchased a 50-pound bag for less than $3.

You can find a cheap rubber basketball for around $3 in the sporting section of most department stores. You can also opt for a smaller basketball, soccer ball, or volleyball. I prefer a basketball because they provide the best grip surface.

A standard basketball will fill to approximately 25 pounds. You can use a mini-basketball if you are looking for a 10-15 pound ball.

Let's look at the step-by-step instructions…

1. Remove the air from the basketball. You can stick a needle from any pump in the air hole to extract the air.

2. Cut a hole in the basketball. I prefer to make a 1-inch incision in the shape of a two-sided square as illustrated.

3. Fill the ball with sand. You can use a funnel to avoid spills. If 25 pounds is too heavy, you can mix rice in with the sand. The rice is not as heavy as sand. You can also use dry pasta such as Orzo noodles. It is easy and inexpensive to experiment.

4. After filling the ball, seal the two-sided square with Super Glue. Once the Super Glue has dried, cover the area with a polyurethane sealant for added protection. After the sealant has completely dried, you can add several layers of duct tape for extra protection.

I have created several medicine balls with this technique. The balls have held up well. I have never broken a homemade medicine ball filled with sand. These balls are heavy and excellent for explosive movements. The only potential downside is that the balls do not bounce (if this is a feature that you desire).

If you wish to throw this homemade ball against a brick wall for throwing exercises, I recommend that you stand fairly close to the wall. The ball will only rebound a few feet so you can gauge your distance to catch the ball before it lands. This will allow you to throw and catch without wasting time retrieving the ball from the ground.

Another approach to sealing the basketball is by melting the rubber back together. Although I do not use this technique, I know several individuals who have melted the

rubber slit in the basketball together with a torch. If you opt for this technique, be careful not to burn yourself and inhale the fumes from the rubber. Be sure to read over the disclaimer before you start melting any rubber basketballs!

HOMEMADE MEDICINE BALL + ROPE

Whether you call it a tornado ball, a tethered medicine ball, or a medicine ball on a rope, the underlying principle is the same. These contraptions are excellent for explosive, dynamic movements. The only downside is the $100 price tag that accompanies this style of medicine ball.

Take my advice and **MAKE YOUR OWN!** Save your hard earned money! At least give the homemade version a try before you part ways with your cash. You can always spend your money later (if you really want to).

There are a few variations to this homemade style ball. Let's take a look at each…

BASKETBALL NET

A basketball net can serve as a great start for your homemade creation. I recommend a ball that is around the size of a mini-basketball. The full size basketball will be too large for the net and too heavy for the dynamic exercises. I personally use the 10-pound medicine ball from **Stamina Products**. In case you are wondering, no I do not have ANY affiliation with this company, I am just passing along a bargain that I found while shopping.

Figure 1

Figure 2

In the illustrations, you can see that I have tied the net off with a leather shoelace. I interweave the lace at the bottom of the net (Figure 1). I have then tied off the lace in Figure 2. I proceed to tie off the other end of the basketball

net, just above where the ball sits. I then take the large loops from the net to create a handle. I have secured the handle with duct tape as illustrated in Figure 3. This contraption is very effective for dynamic movements.

There are several striking and swinging exercises that can be performed with the basketball net contraption. If you would like to extend the handle of this ball, you can simply tie a short piece of rope (18 – 30 inches) around the handle. This contraption also allows for convenient removal of the ball for traditional medicine ball training.

Figure 3

A PAIR OF PANTS

This may sound a little strange, but you can actually create a pretty durable "rope" extension with a pair of pants. Simply cut off one pant leg from a pair of old jeans or sweat pants. I am sure that you can find an old pair lying around that you no longer wear.

As you can see in the illustration, I have simply placed the ball at the end of my pants leg. I have then secured each end with a leather shoelace. Carefully secure the shoelace to avoid heaving your medicine ball out the end of the pants leg.

In the illustration, I have also twisted and duct taped the end of the pants leg to create a rope-like handle to hold during the exercises. This step is optional.

A CANVAS BAG

Another option for your "rope" attachment is a simple drawstring canvas bag (or even a canvas laundry bag). I purchased my canvas bag for less than $5. Simply place the ball inside the bag and secure it with a leather shoelace. You can then use the bag as is, or twist the bottom of the bag into a rope-like handle that you can secure with duct tape. The only downside to securing the bottom of the bag with duct tape is that you will be unable to remove your ball without unraveling the tape.

When choosing a bag for your ball, look for a **durable** material such as canvas. You can opt for a pillow case cover but the canvas material will last much longer. The ball will be slamming off the ground so choose a material that will hold up to the abuse. The canvas bag that I constructed has held up nicely after several months of abuse! Another option is a potato sack bag.

ADD YOUR OWN ROPE

Another option for this dynamic training device is to insert a rope through a homemade medicine ball. You can first construct a medicine ball filled with sand. Use a mini-basketball to minimize size. You can then insert a 1inch thick rope through the ball. This version of the homemade ball will require more craftsmanship and patience, but is an option if you like this type of project. You will need some quality sealant to secure the rope.

I personally prefer to use a durable canvas bag. It is easy and effective. For $5 I can find a nice bag. Simply throw the ball in the bag, tie it off, and you are ready to go!

ONE LAST OPTION

If you really want a secure setup, I suggest that you start with the basketball net method. After you have secured the medicine ball inside the net (*Figure 3, page 34*), you can add another layer of protection by placing this contraption inside a durable canvas bag. Here are the steps…

1. Secure ball inside basketball net
2. Tie 1-2 feet of rope to the end (the handle) of the net
3. Place the net contraption inside a durable canvas bag
4. Tie a shoelace or rope around the canvas bag, just under the ball
5. Allow the rope extension to hang down, through the canvas bag.

This homemade creation will provide 2 layers of protection. The basketball net rope will absorb much of the shock. The canvas bag will provide extra protection.

This device requires a few extra steps but you can expect several months of intense action!

FINAL THOUGHTS

As you can see, there are plenty of choices to consider when selecting a medicine ball. If you do not have a medicine ball of your own, I strongly recommend that you give the homemade version a try. You will be surprised at their durability and effectiveness.

If you prefer to purchase a ball, be sure to shop around. I was quite happy to find a 10-pound ball for only $16.

Whether or not you make your own ball, you should definitely construct your own "rope attachment" device. The workouts that you can perform with this simple apparatus are awesome for core strength and functional power. Spend the $5 and make your own. The workouts that you receive from this simple device will surprise you.

MEDICINE BALL CORE EXERCISES

Throughout this section, I will illustrate numerous core and trunk exercises. Next to each exercise, I have created an alphanumeric code such as **MBE 1**, meaning **Medicine Ball Exercise 1**.

I have created these codes to assist you when following the training routines listed later in the manual. Many of the exercises have names that will be new to you. If you are unsure of a particular exercise name when conducting a routine, you can quickly refer to the alphanumeric code to determine the exercise. It is not important to memorize the names of each exercise. Rather, use this manual as a reference while training.

CORE EXERCISES

The medicine ball is very effective for abdominal exercise. The following exercises provide variety and intensity for your abdominal routine. There are several complete routines listed in a later chapter.

Behind the Head Sit-Up (MBE 1)– Hold the ball behind your head throughout the sit-up motion.

You will notice in this illustration (as well as others throughout the book) that I have used dumbbells to secure my feet to the ground. You can increase the difficulty of these exercises by freeing your feet from the dumbbells (or by minimizing contact between your feet and the dumbbells). Without securing your feet, perform the exercise while keeping your feet on the floor. You will quickly see that **MBE 1** can become a **VERY** challenging movement when your feet are not secured to the ground. Also, when performing sit-ups, keep your feet close together, and your knees apart. By separating your knees, you minimize the involvement of your hip flexors, instead isolating the abdominal muscles.

Med Ball Crunch (MBE 2) – With arms extended, perform a crunch with the med ball in hand.

Use a heavy ball and focus on squeezing the abs.

Med Ball Sit-Up (MBE 3) – A variation to MBE 2 is to proceed all the way into a sit-up. Keep your arms extended throughout the movement.

One Arm Crunch (MBE 4) – Hold the med ball with 1 arm and crunch upward. Perform this exercise with both arms. This exercise is excellent for balance and coordination. You will quickly notice that your primary hand performs this exercise with much more ease than your weak hand. Use a heavy ball for this exercise. Give it a try!

Knee Crunch (MBE 5) – Place the med ball between your knees and perform a crunch. You should use a heavy ball for this exercise.

Step1

Step 2

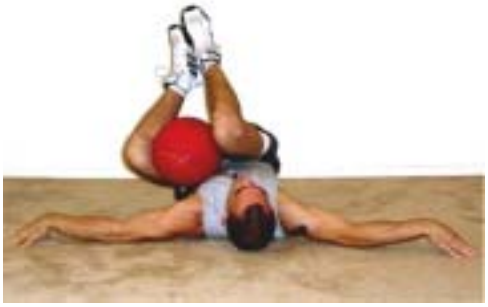
Knee Raise to Shoulder (MBE 6) – Begin with legs bent and the ball positioned between the knees. Arms should be extended and in contact with the ground throughout the movement.

Lift the ball to one shoulder, return to starting position, and repeat to the opposite shoulder. Continue lifting the ball to left and then right. This exercise is great for the core.

Definitely include this movement in your workout.

Step 3

Step 4



Straight Arm – Straight Leg Sit-Up (MBE 7) – Begin with arms and legs fully extended. Perform a sit-up, bringing the ball to your feet.

Rolling Straight Arm – Straight Leg (MBE 8) - Add a dynamic movement to MBE 7 by rocking back until your feet almost touch the floor. Spring back into a sit-up position until the ball returns to the feet.

Complete Leg Raise (MBE 9) – Begin with legs extended, ball between feet. Lift legs all the way back without touching the floor. This is a great exercise.

Sit-Up Twist (MBE 10) – Perform a sit-up with med ball in hands. At the top of the motion, twist left and then right as show in Steps 3 and 4.

Conduct this exercise at a brisk pace with a heavy medicine ball.

Step1

Step 2

Step 3

Step 4

Twister (MBE 11) – Assume a crunch position with abs tightly contracted. Twist back and forth, touching the med ball to the floor on each side. Use a brisk pace. Do not secure the feet to increase difficulty.

Med Ball Plank (MBE 12) – Assume the upright position of a pushup with hands on the med ball. Hold this position for 2-5 minutes. This move looks much easier than it feels!

One Arm Plank (MBE 13) – If the Med Ball Plank is too easy, give the One Arm Plank a try. This exercise is GREAT for the core, while improving balance and coordination. Try to hold this movement for as long as you can. You will feel this one burning quickly.

This is one of my favorite exercises. Definitely give it a try. Most athletes struggle to hold this position for 1-minute.

Both the 1 Arm Plank and Med Ball Plank are variations of the traditional Bodyweight Plank. The Plank is a great exercise for the core.

Plank – The Plank is a tremendous exercise to develop the abdominal wall. Start in a pushup position, and then drop your elbows to the ground. Only your forearms and toes should touch the ground. Keep your back straight and hold. It may look easy but you will change your mind after 1 or 2 minutes!

Knee Hug (MBE 14) - Start from a lying position with med ball in hands. Thrust your upper and lower body together until you "hug" your knees. Do not allow your feet to touch the ground between repetitions to maintain tension on the abs.

Knee to Elbow (MBE 15) – Start from a lying position with med ball held over your chest. Crunch up, bringing right elbow to left knee. Return to starting position and bring left elbow to right knee. This exercise is very challenging.

Chinnies are very similar to the **Knee to Elbow** medicine ball exercise. You can start with one set of Knee to Elbow with med ball and burn out with a set of Chinnies. Repeat this for three cycles.

Chinnies

To perform Chinnies, bring left elbow to right knee, then right elbow to left knee (*as illustrated to the left*).

Med Ball V-Ups (MBE16) - Start from a lying position with med ball in hands. Contract your abdominals as you thrust your legs and arms together. Your body will come together like the letter "V". Do not allow your feet to touch the ground between repetitions to maintain tension on the abs. This is one of the **best** abdominal exercises available.

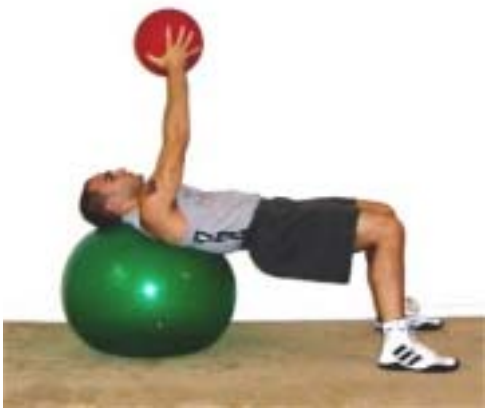
You can modify this exercise and place more emphasis on the lower back by placing the med ball between your legs, instead of your hands.

Med Ball Reverse V-Up (MBE 17) – Perform the Reverse V-Up exactly as you would the traditional V-Up, except place the med ball between your legs. Start out with a light med ball, as this exercise is very challenging.

If these exercises are too difficult, you can begin performing V-Ups **without the medicine ball**. Be sure to include V-Ups in your routine, with or without the med ball. Eventually, you will be able to perform several reps with a heavy med ball. It takes time but your effort will be well worth it.

Straight Leg Twists (MBE 18) – Begin with arms and legs extended, ball in hands. Crunch up with upper body, bring med ball across your body. Feet will remain grounded as you touch med ball to the ground, outside your thigh. Alternate from side to side. Use a heavy ball for this exercise.

Russian Twist (MBE 19) - Twist side to side with arms straight. Maintain a semi-crunch position to keep tension on the abs. Keep eyes **focused on the ball**. Perform this move from an incline to increase the difficulty.



Russian Twist Variation (MBE 20) – Perform this exercise on a stability ball to improve balance while working the core. **The Russian Twist is one of the best exercises!**

Hanging Leg Raise (MBE 21) – Hang from a pull-up bar with ball between legs. Lift your knees up to your chest. You can also add a twisting motion by lifting the knees to the left shoulder, and then right shoulder**.**

Jackknife (MBE 22) – This is one of the best exercises for the abdominals and hips. Maintain balance throughout, as you drive the legs in and out while balanced on the medicine ball.

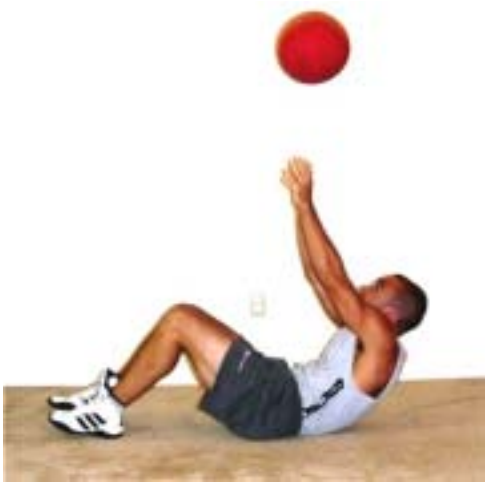
One Leg Jackknife (MBE 23) **–**Balance with one foot on the ball. Roll the ball in and out with one foot, while the other foot stays off the ground. Work both sides evenly. This exercise will challenge the core, as well as your balance and coordination.

Sit-Up Pass (MBE 24) – This move is commonly performed with a partner. Perform a sit-up with ball in hand. As you come up, throw the ball to your partner. You can perform this exercise alone by throwing the ball against a wall. You will need to determine the proper distance to sit from the wall to catch the rebounding ball. Once you are able to determine the proper distance, this exercise can be easily performed without a partner.

Rolling Sit-Up Pass (MBE 25) – Add a dynamic move to the sit-up pass by starting from a roll. Roll forward to initiate the throw. Catch the ball, roll back until your feet approach the ground, and uncoil into the pass.

Side Sit-Up Pass (MBE 26) – Sit parallel to a wall (or partner). Contract the abs by leaning back 1/3 of the way into a sit-up. Rotate to your right, and throw the ball to your left. Catch and continue. Work both sides.

Thus far I have illustrated a few abdominal exercises that involve throwing the ball to a partner or against a wall. I typically use a brick wall or a wall at an outdoor racquetball court. You can use a cement wall in your basement or a brick wall at a local school. For those days when you cannot train near a wall, you can perform the **One Man Sit-Up Pass** (MBE 27).



Perform a traditional sit-up with ball in hands. On the upward portion of the sit-up, thrust the ball into the air. Catch and return to the start position. Continue and be careful not to throw the ball through your ceiling.

You can add to the intensity by performing a **One Hand Crunch Pass** (MBE 27a). Perform a **One Arm Crunch** (MBE 4) and add a throw to the end of the movement. This variation is great for the abs and will challenge your balance and coordination.

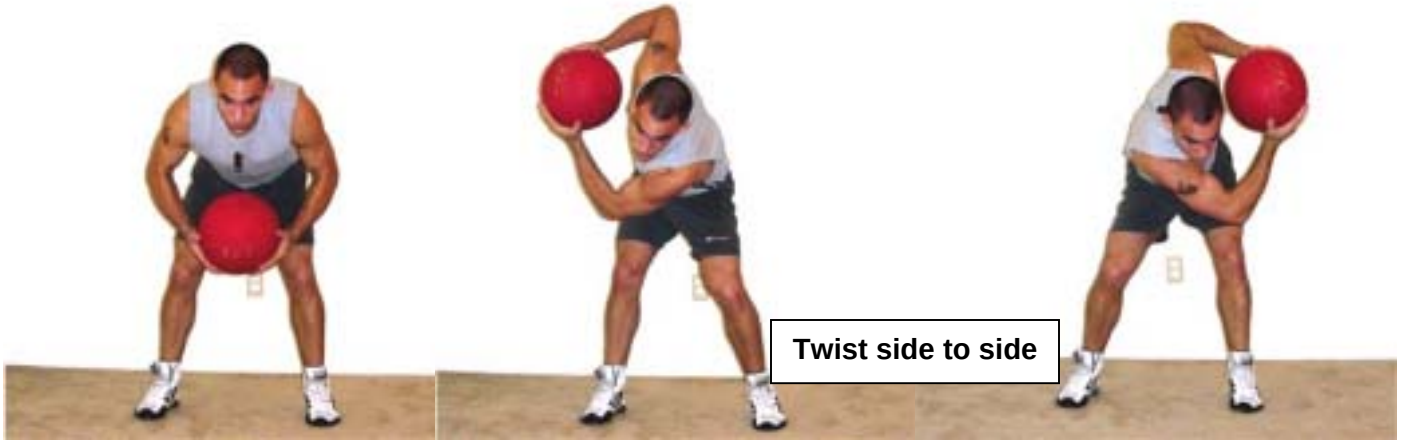
Med Ball Drop to Abs (MBE 28) – With abs tensed, hold the med ball with arms extended. Drop the ball to your abdomen. This exercise is commonly performed in boxing gyms where the trainer will drop the ball down to the fighter. You can mimic this exercise alone.

Another common variation is to stand while a partner throws the ball against your flexed abdomen. Many will call this exercise “barbaric” but these are the same individuals who do not appreciate the beauty of combat sports. In the ring, you can expect to be hit with body shots. This type of exercise will condition you to endure the punishment.

MORE CORE AND TRUNK EXERCISES

You can perform numerous abdominal exercises with the medicine ball. The next section will illustrate additional core exercises with more emphasis on the back and trunk. The following exercises offer more variety for your core routine.

Bent Arm Twists (MBE 29) – Begin with a slight bend in the knees. Bend over with ball in hands, arms bent. Twist the trunk, bringing the ball to your far left and then right. Repeat this back and forth motion for the desired number of repetitions. The pace should be brisk. This exercise is excellent for rotational power development. You can eventually progress to a heavy ball for this movement.



A variation to this movement can be performed with straight arms as illustrated below. Both movements are excellent. You can alternate between each.

Straight Arm Twists (MBE 30) – Begin with a slight bend in the knees. Bend over with ball in hands, arms extended. Twist the trunk, bringing the ball to your far left and then right.

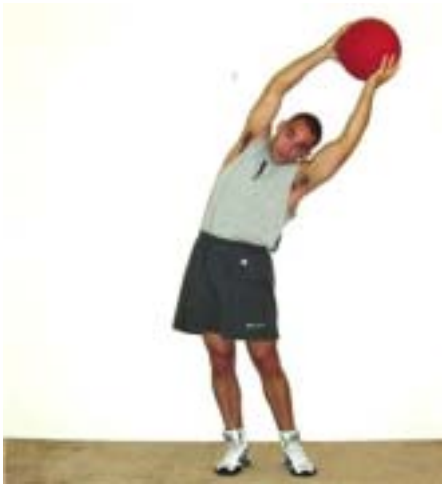
Straight Twist (MBE 31) – Hold ball at chest level. Move ball left and right along a straight line **without** rotating the upper body. This exercise will target the shoulders.

A variation to the Straight Twist is the **Standing Twist** (MBE 32). Pivot the upper body throughout the movement. As you rotate from side to side, the ball should remain in front of your chest. This exercise is excellent for rotational power.

Another variation is the **Straight Arm Standing Twist** (MBE 33). This exercise offers similar benefits while strengthening the arms and shoulders. Perform this exercise with straight arms.

Seated Twist (MBE 34) – Start with the ball behind your back. Rotate to your right, pick up the ball. Then rotate left until you place the ball behind your back. The ball will make a **circle** around your body. Repeat for the desired number of repetitions, and then reverse the direction of the exercise. This exercise can also be performed with a partner who sits back-to-back with you.

Bent Arm Side Bends (MBE 35) – With arms bent and ball behind head, bend side to side. Maintain a slight bend in the knees.



A more difficult variation is the **Straight Arm Side Bend** (MBE 36). Perform this movement with straight arms. Maintain a straight back throughout.

Diagonal Chop (MBE 37) – Begin with ball above and behind ear. Chop the ball downward and diagonally outside your knee. Return to the beginning position and repeat. Work both sides evenly.

One Leg Diagonal Chop (MBE 38) – Increase the difficulty by performing this movement while balancing on one foot. This exercise is great for balance and trunk strength.

Single Leg Balance Twist (MBE 39) – Stand on one leg with ball in front. Move the ball from side to side without rotating the torso. Balance yourself by contracting the abs. This is an excellent exercise!

Back Bend (MBE 40) – This is a great exercise for the lower back. Begin on knees, with ball in outstretched arms. Lean back, bringing the ball overhead. If core training is new to you, this exercise is a great way to begin working the low back.

Good Morning (MBE 41) – This is another great introductory exercise for the low back. Begin with ball behind head, lean forward until upper body is almost parallel to the floor. Maintain a slight bend in the knees.

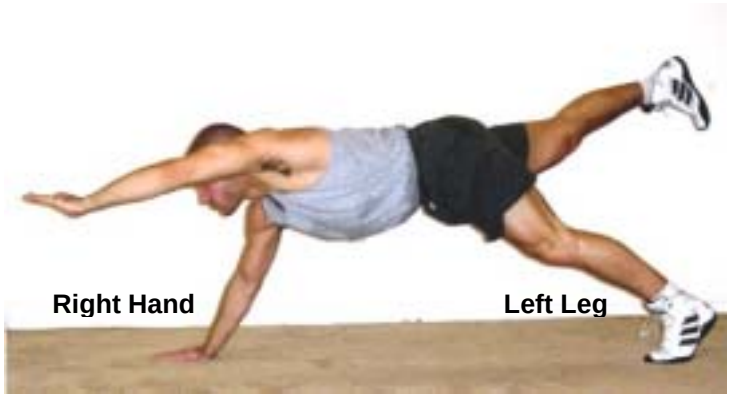
Modified Good Morning (MBE 42) – For this variation, extend the ball outward as you partially bend forward. Maintain a bend in the knees.

Med Ball Superman (MBE 43) – Begin lying face down, with ball behind head. Lift your arms and legs off the ground. Hold for 2 seconds and return to the ground. Below are three variations without the medicine ball. All of these exercises are **excellent** for the lower back.

Superman – Without the medicine ball you can easily see why this exercise is called the "Superman". As you extend your arms and legs, you will resemble Superman flying through the air. Although the name may sound childish, the results you will feel in the lower back are far from juvenile. This is a great exercise for the back.

Alternating Superman – Lift one leg and arm at a time. Lift opposite sides, for example the right arm and left leg.

Superman Pushup – Perform this version from the upright pushup position. This exercise will strengthen the core and challenge your balance. Use an alternate hand and leg position (ex. left arm and right leg). Exercise both sides.



Med Ball Toe Touch (MBE 44) – With ball in hands perform a toe touch.

Step and Touch (MBE 45) – Perform a toe touch while stepping to your right. Return to starting position and repeat to left side.

Reach and Twist (MBE 46) – Step and twist to the rear. Bring med ball to the ground and return to starting position. Work in both directions.

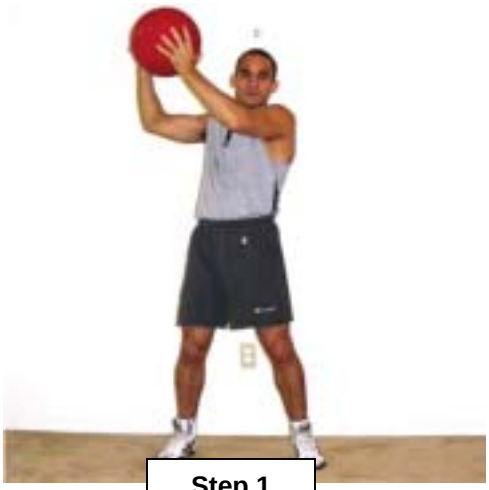
Front Reach (MBE 47) – Step forward and bring med ball to the ground.

These step and reach (toe touch) exercises are excellent movements for warm-ups and core training.

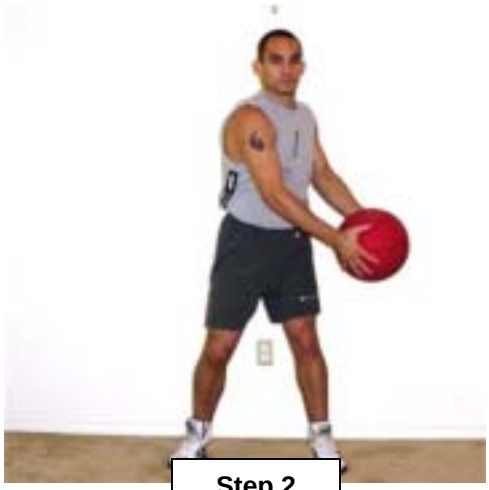
Bent Knee Hip Swing (MBE 48) - Lie with arms out to the side. Flex legs at 90-degree angle with med ball between knees. Lower knees to right side, then left. Shoulders and back should remain grounded.

Lying Hip Swing (MBE 49) – A more difficult variation to MBE 48 requires straight legs, with ball positioned between the feet. Swing from side to side **without** touching the ground.

Stand and Twist (MBE 50) – Stand with the med ball held overhead. Twist your hips and trunk as you drive the med ball behind your back. Return to the starting position. Work this movement in both directions.

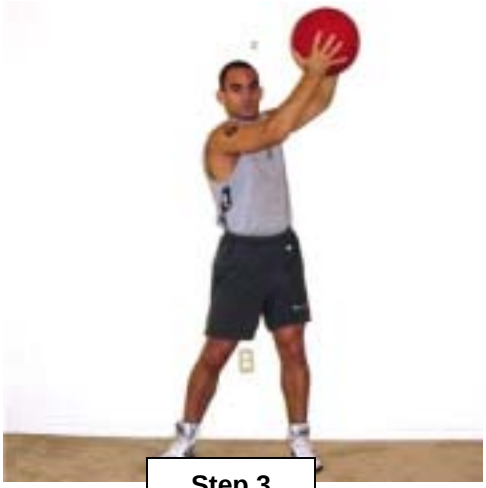


Step 1

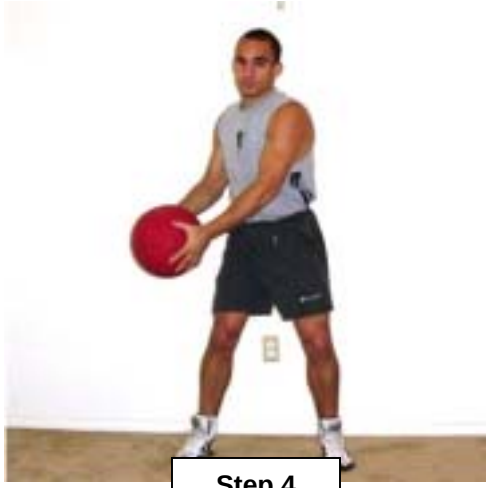


Step 2

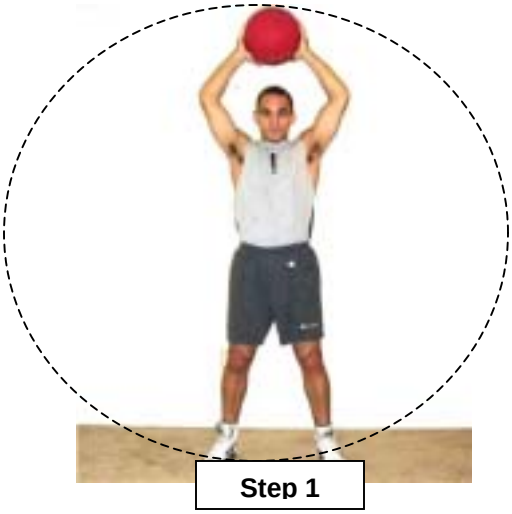
Figure 8's (MBE 51) – Move the ball through a Figure 8 pattern from right to left across the body. This is an excellent exercise for the core.

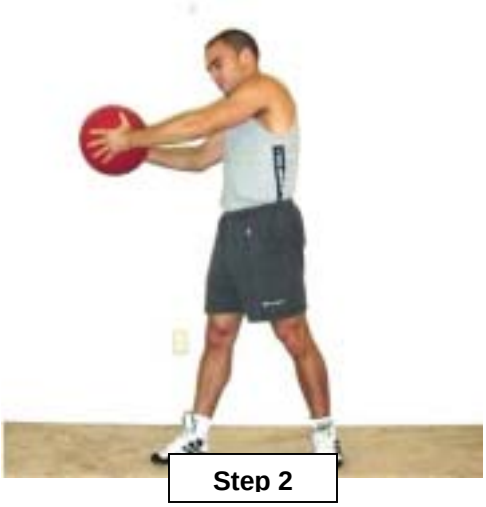


Step 3



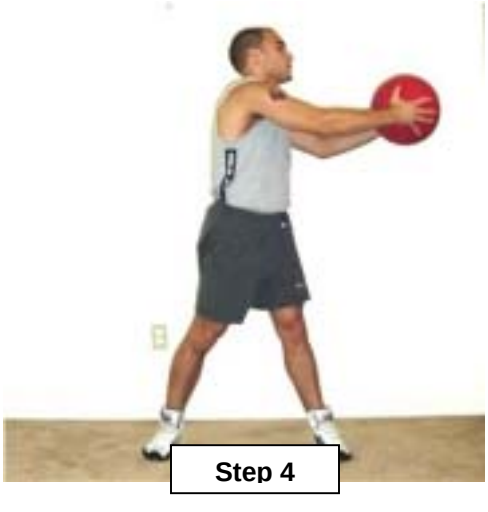
Step 4


Step 1


Step 2

Giant Circles (MBE 52) – With knees slightly bent and arms extended, sweep the ball around in a giant circular motion. This exercise is excellent for the core. Work in both directions.

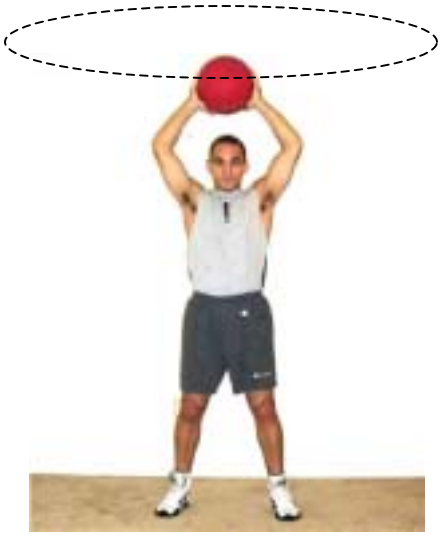

Step 3


Step 4

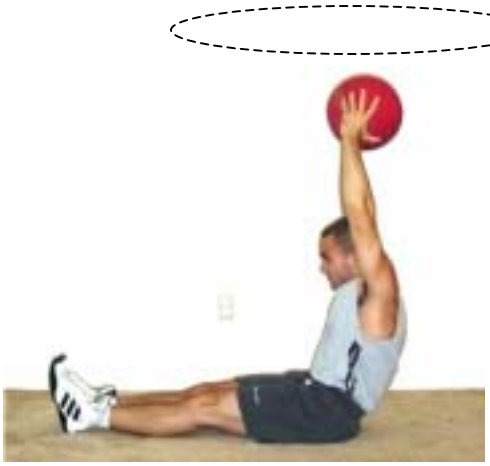
Keep your eyes focused on the ball throughout this movement.

Giant Circle Variation (MBE 53) – A close variation to this exercise can be performed by maintaining a straight back throughout the movement. Instead of bending down in Step 3, you will maintain a straight back and *bend at the knees*. For this variation, you will move the ball through a circular motion while the back and arms both remain straight. The only bend you will experience is at your knees. This variation will put less stress on the lower back.

Giant Circles and Figure 8's are excellent exercises to strengthen the core throughout a vast range of motion. I highly recommend these exercises.



Overhead Circles (MBE 54) – With arms extended overhead, move the ball and upper body in a circular fashion. Try to move the ball in large circles to achieve maximum benefit for the core, while also improving balance.



Seated Circles (MBE 55) – A variation of the Overhead Circle can be performed while sitting with legs extended. Hold the ball overhead as you move through a large, circular fashion. This exercise will challenge your balance while strengthening the core.

CORE AND TRUNK STRENGTH REVISITED

Now is a good time to quickly revisit a few important training themes. You may be asking yourself how the heck you are going to include all of these exercises into your routine.

Why did I include so many core and trunk strengthening exercises?

Perhaps I had too much time on my hands or nothing else better to do? NOPE! I choose to include a vast selection of exercises for one specific reason…

VARIETY!

You will constantly hear me preaching about the importance of variety in exercise selection. Everyone recognizes the importance of variety, yet only a handful of athletes actually take the time to incorporate variety into their routines.

We all know someone who performs the exact same abdominal exercises day after day, week after week. It is uncommon to see an athlete take the initiative to change their routines every 4-8 weeks. I know several experienced boxers who continue to finish each training session with the same set of sit-ups and crunches. These athletes may possess a six-pack look on the outside, but lack the functional strength that accompanies a proper core training routine.

You should not crave a six-pack look for purely aesthetic reasons. A powerful core will greatly improve your performance. There is nothing wrong with looking good, but looking good will do little to improve your performance in the ring. There is nothing wrong with crunches and sit-ups, but there is DEFINITELY a much better way to train the core and trunk area.

All of your power is either generated or delivered through these areas. You have the ability to dramatically improve your overall power and performance by committing to a program that targets the muscles of the core. By doing so, you will develop a functional core and a great looking abdominal wall.

This form of training may be new to you, as many athletes have never trained the muscles of the low back and trunk. There are several routines provided for you in a later chapter. The routines range from intermediate to very advanced. There is no shame in starting slow. Most individuals NEVER train the muscles in the lower back region. I wonder why so many middle-aged men and women suffer from lower back pain?

Actually, I am joking, the answer is quite obvious. No one takes the time to exercise these muscles! Our quest for a six-pack causes many to spend long hours performing abdominal sit-ups while completing neglecting the opposing muscles of the back. The abdominals improve in strength while the back remains weak and unconditioned. This situation is hazardous to athletic endeavors and life in general. No one wants to spend their elderly years plagued by back pains. Take the time to strengthen the core. Separate yourself from the majority and include core training in your training schedule.

The core will improve your performance as an athlete and prevent back problems later in life.

A FUTURE REFERENCE

Do not be concerned with memorizing the core and trunk exercises when reading this manual. Rather than memorizing the exercises, use this book as a reference when training.

I would prefer to see you remember the importance of incorporating variety in your workouts. There is no reason to work the same 2 or 3 abdominal exercises day after day. Mix it up a little! There are more than enough exercises included in this book to keep your muscles guessing for a while.

When you exercise, your body responds to the stress with a reaction. You begin to grow stronger, more powerful muscles. As you continue to work the same exercise, the reaction becomes less and less. This process is known as habituation.

Consider the person who performs abdominal crunches each night after their boxing routine. We all know someone who fits this mold. After several years, this individual can pump out several hundred crunches in one sitting. His body has become accustomed to this movement. It now takes hundreds of repetitions to generate a reaction. There is a good chance that the individual will no longer improve his abdominal strength, rather he will simply maintain his current level.

Do not fall into this habit! Keep the muscles guessing by incorporating variety. This means changing your exercise selection on a regular basis. Hit the muscles from as many angles as possible. Forget about maintaining your current strength. We are in the business of making IMPROVEMENTS! Maintenance is a word that should be associated with automobile work, not human body development. You probably change your automobile oil every 3 months or 3000 miles. Get used to changing your exercise selection at least this often. I recommend incorporating variety every 4-8 weeks.

LOWER BODY STRENGTH

It is difficult to categorize medicine ball exercises according to body part, as many of the movements work a vast array of muscle groups. For example the Front Reach (MBE 47) works the legs and core. It could have been placed in this section, which focuses on the lower body.

Although certain exercises will work many muscles, I have grouped the exercises according to the major muscle groups that are targeted. The following exercises work the muscles of the lower body. Additional explosive movements for the legs will be included later in this section.

Arms Extended Squat (MBE 56) – This exercise at first appears similar to a bodyweight squat. After a few repetitions, your shoulders will tell you it is much more difficult. Hold the medicine ball at arms length while you squat.

You should go down to the point where your butt approaches your heels. As you can see, my heels have come off the ground at the bottom of the movement. This ensures a full range of motion. This exercise will strengthen the legs while developing strength and stamina throughout the arms. This is a great exercise to condition your arms if you are a boxer or martial artist who fights with gloves.

If you are accustomed to competition inside the ring, you know that the gloves can feel very heavy after a few rounds. This exercise is excellent to condition the arms to keep your hands up round after round. If you think the gloves feel heavy, you ain't seen nothing yet!

Try to work yourself up to a 100 repetitions. When you reach 100, increase the weight of the ball.

Ball Push Squat (MBE 57) – This is a close relative to MBE 56. The difference is that you push the ball out as you squat down. Return the ball to your body as you straighten the legs. Try to rotate between sets of Ball Push Squats and Arms Extended Squats. You can add 1-minute of heavy bag work between sets to really burn the shoulders. For example…

- Arms Extended Squats x 50
- 1-Minute of heavy bag punching
- Ball Push Squats x 50
- 1-Minute of heavy bag punching
- Repeat 2 times - - - *minimize rest between exercises*

If you do not have a heavy bag, you can substitute the bag work with jump rope or shadow boxing with light hand weights (2-5 lbs).

*Another close relative to the **Arms Extended Squat** and **Ball Push Squat** is listed below…*

Lateral Ball Push Squat (MBE 58) - Step to the side into a lateral squat position. As you step sideways, push the ball outward. Return to the starting position and continue in the opposite direction.

One Legged Squat (MBE 59) – Drop down into a one legged squat. As you begin to squat, simultaneously press the ball forward. The ball should help you to maintain balance. Your non-working leg will extend straight in front.

One Legged Squats are very difficult, but awesome for functional leg power. This exercise will quickly strengthen the legs while developing a new sense of balance. As you advance, you can add an explosive jumping motion to this exercise by thrusting upward from the bottom position.

Wall Squat (MBE 60) – The Wall Squat is one of the most mentally challenging exercises available. This exercise will strengthen the legs, hips, and of course the mind! Begin by placing a medicine ball between the legs while standing next to a wall. Slide down the wall until your thighs become parallel to the floor. Squeeze the ball as you hold this parallel squatting position. Hold for as long as you can. When you can maintain this position for several minutes, you are making excellent progress. Squeeze hard on the ball to target the hips. This exercise will quickly develop the mental toughness necessary for combat.

Overhead Squat (MBE 61) – Perform an overhead squat with med ball in hands. Use a heavy ball for this exercise. Keep arms extended. Squat all the way down to increase your range of motion.

Lunge Twist (MBE 62) – Begin with ball at chest level. Lunge forward and twist towards your lead leg, bringing the ball to your side. Work both sides evenly. This exercise is excellent for the legs and rotational power.

Kneeling Lunge Twist (MBE 63) – Perform the lunge twist by starting from a kneeling position. This variation will be less taxing on the legs while still targeting the core.

Med Ball Butt Raise (MBE 64) – Lie with knees bent, med ball between knees. Lift your butt off the floor. This exercise will work the glutes and hips.

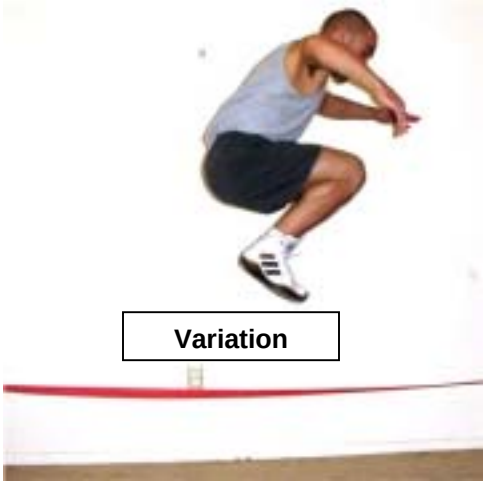
EXPLOSIVE LEGS

The medicine ball is often associated with throwing and passing exercises. Such exercises are excellent, but often fail to target the lower body. If you are looking for explosive legs, the exercises below are just what the doctor ordered. Many of these exercises can be performed indoors…

Knee Kicks (MBE 65) – Begin with med ball placed just above your knee. Your hand will hold it in place. Thrust your knee up explosively, launching the ball into the air. Your weaker leg may feel uncoordinated with this movement. With practice it will improve. This exercise will develop awesome power throughout the legs and hips. This is a great movement for martial artists who are looking to add explosiveness to their kicks. Use a heavy ball to avoid blasting the ball through your ceiling.

Ankle Jump (MBE 66) – Begin with the med ball between the ankles. Jump upward, bringing the med ball up towards your hands. Catch the ball and return it to the floor. Repeat for the desired number of repetitions.

Front to Back Jumps (MBE 67) – Stand in front of the ball. Jump over the ball. As soon as you land, jump backwards, returning to start position. Continue front and back jumping. Minimize contact with the ground.



Lateral Jumps (MBE 68) – Stand on the side of the ball and jump over laterally, back and forth. Minimize contact with the ground. Another variation is illustrated where I am jumping over a rope that stretches across the room.

180-Degree Jumps (MBE 69) - Start facing the ball. Make a 180-degree jump over the ball so that you land facing the ball from the opposite direction. Repeat this jumping motion back and forth. Minimize contact with the ground.

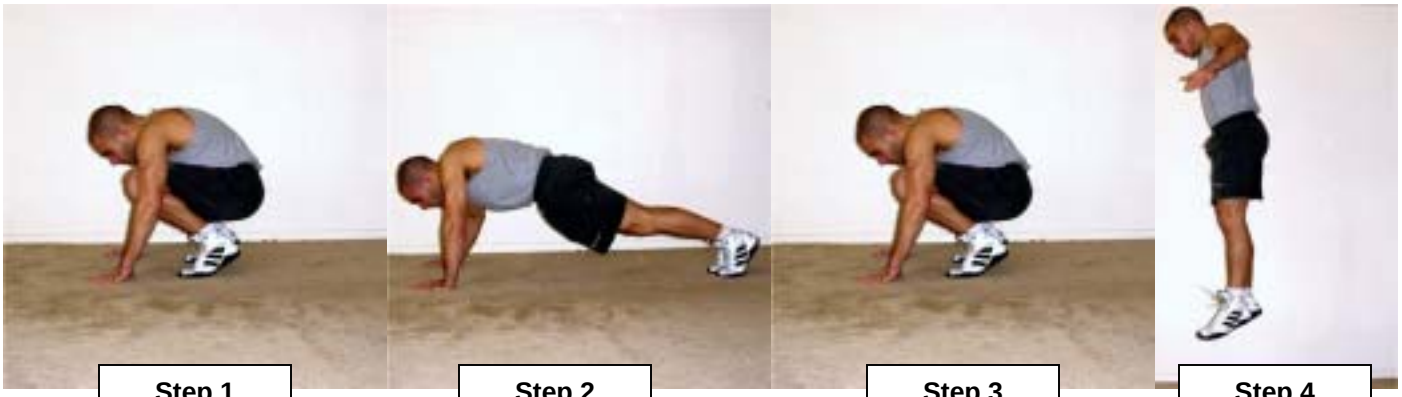
You may notice that these jumping movements can form the plyometric portion of the complex training equation. You could begin with a set of Squats and finish with a set of Lateral Jumps. These jumping movements can also be used for conditioning. For example, one well-known boxing drill is to hit the bag for the first 2 minutes and 30 seconds of a round and finish the last 30 seconds with Lateral Jumps over the medicine ball.

I will include several complete conditioning drills in a later chapter. One exercise that you can expect to see in many of the drills is the Burpee…

Burpees are perhaps the most intense and effective conditioning exercise of all. There are several variations to this classic movement that will leave your legs screaming and your heart pumping!

BURPEES

Begin in a squat position with hands on the floor in front of you (1). Kick your feet back to a pushup position (2). Immediately return your feet to the squat position (3). Leap up as high as possible from the squat position (4). Repeat, moving as fast as possible.



Step 1 **Step 2** **Step 3** **Step 4**

If I had to choose one exercise to include in my routine, burpees would be at the top of my list. This exercise will strengthen the upper and lower body while developing a whole new sense of anaerobic endurance and explosiveness.

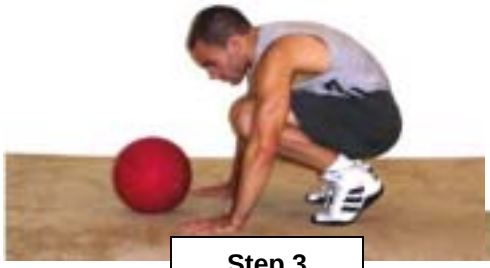
If you take the time to include burpees in regular training schedule, you will definitely notice the results. There is no denying the effectiveness of this exercise.

Now let's look at a few variations to the traditional burpee that will really kick up the adrenaline…

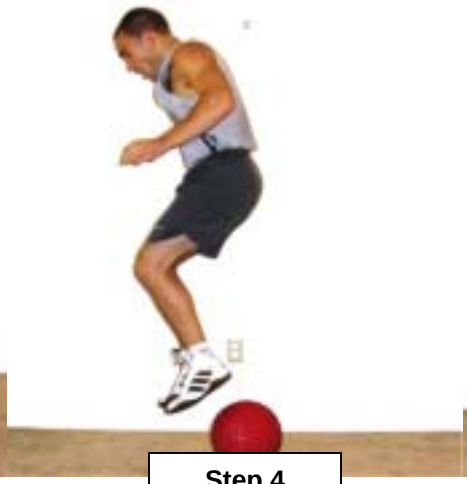
Burpee + Front to Back Jump (MBE 70) – Begin in the crouch position directly behind med ball (1). Kick back into pushup position (2). Spring legs back to starting position (3). Perform a front jump over the med ball (4). Perform a back jump as soon as you land to return to the starting position (5). Repeat.

Step 1

Step 2



Step 3



Step 4

Step 5

This variation will quickly fatigue the legs. As you perform each repetition, focus on minimizing your contact with the ground following each jump. When you jump forward, you should land and immediately return with a backwards jump. As soon as you land, assume the crouch position from Step 1 and continue.

The cadence of this exercise should be brisk. You will definitely feel this exercise working after a few repetitions.

Burpee + Lateral Jump (MBE 71) - Begin in the crouch position with med balls at each side. (1). Kick back into pushup position (2). Spring legs back to starting position (3). Perform a lateral jump over one med ball (4). As soon as you land (Step 5), perform a lateral jump in the opposite direction to return to the middle position (6). Return to crouch position and continue. Change the direction of your lateral jump for each repetition.

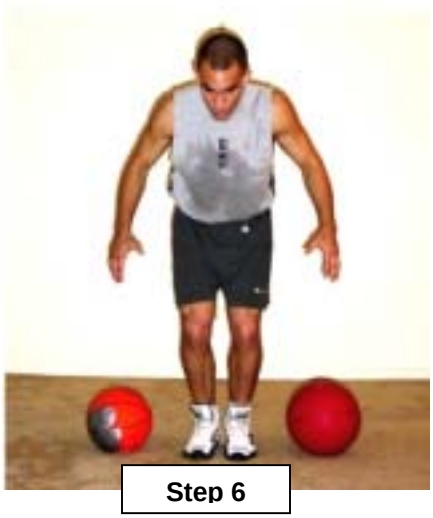
Step 1

Step 2

Step 3

Step 4

Step 5



Step 6

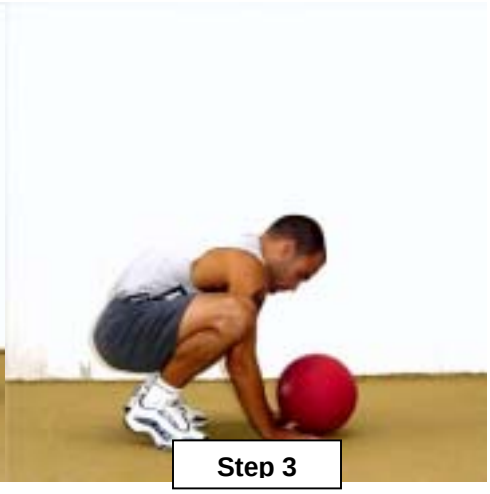
A more difficult variation of this exercise involves 4 lateral jumps per repetition. From Step 4, you would land at Step 5, and then perform 2 lateral jumps until you are outside the med ball on your far right. You would then perform another lateral jump to your left to return to the starting position. This variation puts more emphasis on the lateral jump portion of the exercise.

Another variation to these jumping burpees can be performed with barriers instead of medicine balls. You can jump up to a barrier rather than laterally hopping over the ball. For example, you can jump up to a chair and then return to the starting position, as opposed to jumping over the medicine ball.

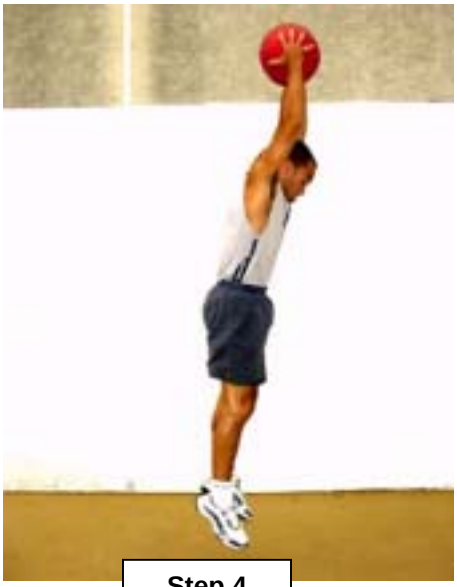
You could place a barrier in front of you and jump up onto the barrier at the end of your burpee. As you advance, you can raise the height of the barrier. As you can see, there are several variations to the burpee. Below I have illustrated one of my favorites which involves jumping with a medicine ball in hands…

Step 1

Step 2



Step 3



Step 4

Medicine Ball Burpee (MBE 72) – For this variation you will perform a traditional burpee with one exception. After returning to the crouch position in Step 3, you will grab the medicine ball and jump upwards, bringing the ball overhead with outstretched arms. Place the ball back in the starting position and repeat.

This exercise is excellent for a total body workout. You can gradually increase the weight of the ball as you improve.

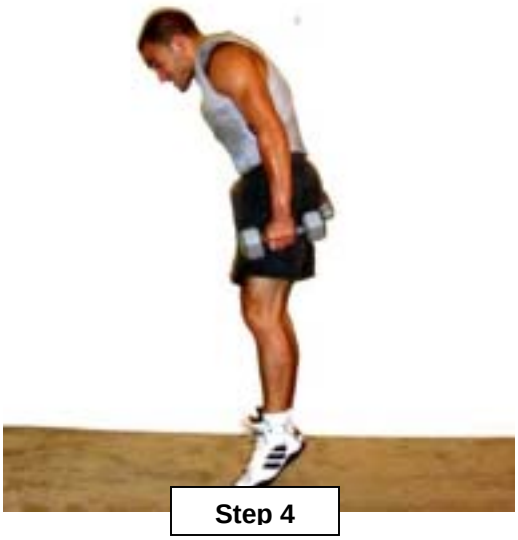
If you have limited time to train, drop down and perform a few of these. It won't take long for your entire body to feel the pain!

Another similar variation to this exercise can be performed with dumbbells. You may wish to exercise indoors without fear of driving the medicine ball through your ceiling. If you have "ups" *like Mike*, you may be better off with the dumbbell variation that is illustrated next…

Step 1

Step 2

Step 3



Step 4

Dumbbell Burpee – For this variation you will perform a traditional burpee with dumbbells in hand. After returning to the crouch position in Step 3, you will jump upwards with the dumbbells by your sides. The dumbbells will really add to the intensity of this exercise. I recommend starting with a light pair of dumbbells such as 10 – 15 lbs.

You may wish to place a pillow on the floor below the dumbbells to avoid scraping the surface (if you have hardwood floors).

Another variation that you can use for your burpees is a wide leg kickout as illustrated. Rather than kicking your legs straight out, you can kick them out to the sides.

This variation will target the legs from a slightly different angle. You can perform the side leg kickout with any of the burpee variations. It is simply another way to add variety to your training program.

MORE PLYOMETRIC JUMPS

Below I have illustrated some additional plyometric movements that you can incorporate into your routine. These exercises all target the legs. You can either perform these exercises on their own or incorporate them into a complex training routine.

Squat Jumps - Begin with your feet shoulder width apart in a squat position. Explode upward, jumping as high as you can into the air. Land under control with your hips back. Immediately repeat for the prescribed number of repetitions. Squat jumps are excellent to develop explosive power throughout the legs.

Semi Squat Jumps - With your knees slightly bent, jump up and down from your toes. Concentrate on quick and precise jumps. Explode off of your toes. This exercise will develop explosive calf muscles. This is a great exercise to add to a complex training split that includes weighted Calf Raises.

For example…

- Calf raises x 12 (with weight)
- Semi Squat Jumps x 20

Star Jumps - Start from a squat position. Jump up, taking your hands and legs out to the side. On landing, bring both feet together, lowering back into the squat position. Star jumps will develop explosive power while coordinating the upper and lower body.

Knee Tucks - Begin in a semi-squat position with your knees slightly bent. Jump as high as you can, bringing your knees **to your chest** at the top of the jump. Minimize contact with the ground.

Knee to Standing Jump - Begin in a kneeling position. Thrust off the ground, jumping up to your feet. This exercise develops power and coordination. You can also add a Squat Jump or Star Jump to the end of this movement.

Depth Jumps - Depth jumps involve stepping down from a barrier and immediately jumping upward as high as possible. Step from the barrier and drop to land on both feet. As you step, you will naturally bend into a semi squat position. From this position, spring upward as quickly and forcefully as possible. This is one of the most ADVANCED plyometric exercises, only designed for ADVANCED athletes. This exercise is excellent for lower body power and vertical jump development. Use a barrier that is between 1 and 2 feet in height.

A variation of the Depth Jump involves jumping from the ground, up to the barrier. This jump is known as a **Box Jump**. Start on the ground and jump upward onto a barrier that is directly in front of you. Immediately return to the starting position and continue.

You can also combine the Box Jump and Depth Jump by first jumping up to the box, then stepping down and exploding from the ground with a Depth Jump.

UPPER BODY STRENGTH

Now we will turn our attention towards medicine ball exercises that specifically target the upper body…

Medicine Ball Swings (MBE 73) – This exercise could have been placed in the leg category. It is actually a total body exercise. Start with your legs bent, back straight and the ball between your legs. Swing upward with the ball, driving up with your legs and hips. Raise the ball completely overhead.

This exercise should be performed with a swift cadence. You should be able to use a heavy (20 lbs or more) medicine ball for this movement.

Bend and Reach (MBE 74) – This exercise is very similar to the swing. The difference is that you will reach the ball down between your legs. Do **not** let it touch the ground. This exercise is excellent for the back, hamstrings, and just about every other muscle you have!

Steering Wheel (MBE 75) – Hold the ball in front of your chest with arms extended. Rotate the hands back and forth as if you were turning a steering wheel from an automobile. Each hand should rotate from top to bottom position.

The Steering Wheel is excellent to develop the shoulder muscles. This exercise works the shoulder muscles that are stimulated when punching.

Ball Pushups (MBE 76) – Perform a pushup with hands atop the ball. This variation of the pushup is much more challenging than a traditional pushup.

Med Ball Plyo Pushup (MBE 77) Begin with hands placed outside the medicine ball. Explode the hands upward, off the ground. Land with the hands on the ball. Drop them back to the ground and continue with a brisk pace.

Med Ball Power Overs (MBE 78) - Begin with one hand on the ball, one hand on the floor. Thrust your torso up as if you were performing a pushup. Your torso will be propelled into the air. The hand that started on the ball will head to the floor, while the hand from the floor is thrust upward to the ball. There will be a split second where the hand that started on the ball is airborne heading down, while the hand from the floor is heading up towards the top of the ball. As soon as your hand reaches the floor, quickly drop into a pushup position. Immediately **explode** back up, once again lifting the hands from the floor. Your hands will thrust side to side from the floor to the ball. This is one of the BEST upper body movements that you can perform with the medicine ball. You will develop explosive power, coordination, and balance with this plyometric exercise.

Plyometric Pushup – Another variation to these plyometric medicine ball pushups can be performed with nothing but your own natural bodyweight. Simply perform a traditional pushup and explode your upper body off of the ground. You can add a handclap while in the air to increase the difficultly.

Ball Pass (MBE 79) – Lie on the ground with the ball at chest level. Explode with the arms, pushing the ball into the air. Use a heavy ball to avoid damage to your ceiling!

One Hand Ball Pass (MBE 80) – Lie with the ball resting in one hand. Thrust the ball into the air. Keep your head off the ground to add momentum. This exercise looks easy but will challenge the coordination of your weaker arm.

Circle Walks (MBE 81) – Begin in an upright pushup position with feet resting on ball. Walk with your hands around the ball. The ball should not move during this exercise. Circle the ball in both directions.

EXPLOSIVE EXERCISES…

One of the true benefits of the medicine ball is its ability to train the upper body through explosive throwing and passing exercises. The next section of exercises will be plyometric in nature. These exercises can be performed either alone or with a partner. If you are like me and enjoy training alone, you can find a rebounding surface for the medicine ball in a variety of locations. Here are a few common surfaces…

- Brick wall at a local school
- Cement wall in your basement
- Walls at an outdoor racquetball court
- The air! Throw the ball and run to retrieve it.
- Homemade med ball rebounder. You can make one from a trampoline. Simply put it on its side and throw the ball into the rebounding surface.

Do not limit your training because you lack a training partner. Think outside the box and find a way to include these exercises.

Chest Pass (MBE 82) – Begin with the med ball held by your chest. Extend both arms and forcefully propel the ball forward.

Shot Put Throw (MBE 83) – Begin with right foot in back, with the ball behind your face. Twist the hips and deliver the ball with your hand. Pivot off your back foot as if you were throwing a straight right hand punch. Perform this exercise for both hands. You will find that your weak hand may feel uncoordinated at first. For example, if you are right handed, it may feel awkward to perform this exercise with your right leg in front and your left arm delivering the throw. This exercise closely mimics the act of throwing a punch. Be sure to explode with great force to achieve maximum results.

Overhead Shot Put Throw (MBE 84) – A variation to the Shot Put Throw can be achieved by throwing the ball straight up rather than forward against a wall. Begin with the ball in the same position. Lean back on your right foot to point the ball in the upward position. Propel the ball up as if you were throwing a shot put in a track and field contest. Be sure to work both arms evenly. These two exercises are excellent for developing the muscles utilized when delivering a punch.

Overhand Throw (MBE 85) – Begin with med ball behind head with arms bent. Throw the ball forward as if you were throwing a soccer ball into play.

Overhand Step Throw (MBE 86) – Perform an overhand throw and step forward to generate more power. Alternate which foot you step with to develop coordination between the lower and upper body.

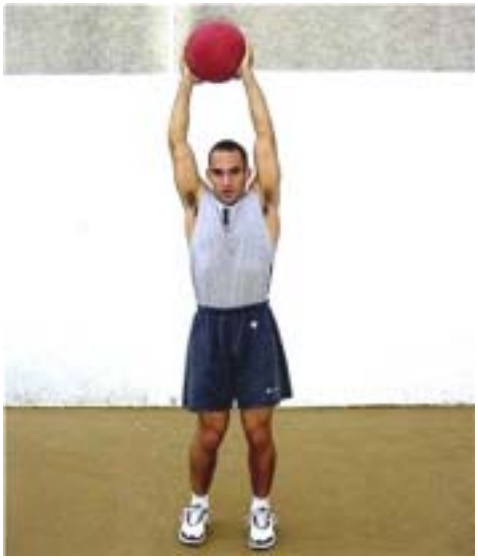
Slam (MBE 87) – Start with ball held overhead. Slam the ball to the ground in front of you. If you use a bouncing style ball, be careful to avoid rebounding the ball off of your face. Tilt your head out of the way if the ball bounces up.

Lunge Throw (MBE 88) – Begin with the ball by your chest. Step forward into a lunge and deliver a chest pass. Alternate legs for each repetition. You can also combine the lunge with the Overhand Throw.

Bent Over Throw (MBE 89) – Bend over with ball held in extended arms. Maintain straight arms as you thrust the ball forward. Use your arms, shoulders, and back to generate the force in this throw.

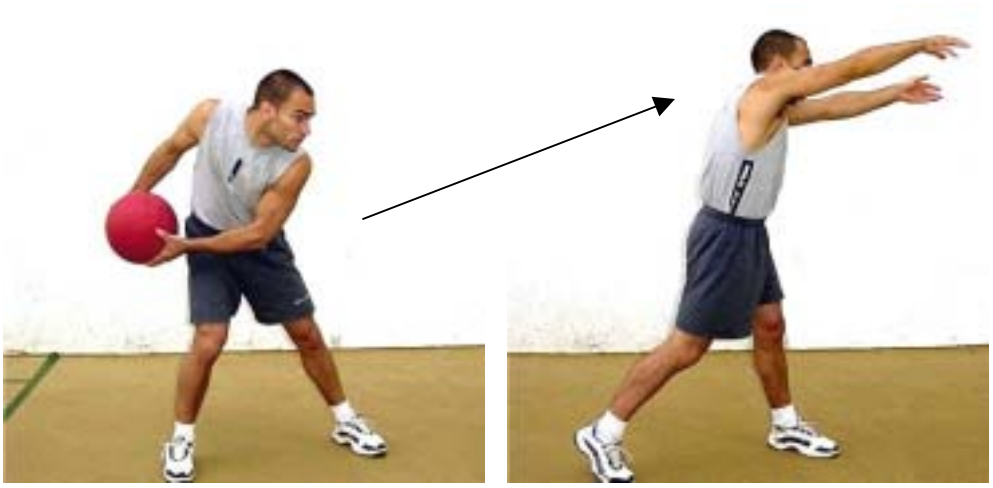
Diagonal Chop (MBE 90) – Begin with left foot in front, ball behind head. Diagonally chop forward with the ball, performing a bounce pass before hitting the wall. Work both sides evenly.

Diagonal Chop continued… These pictures provide a different view of this throw. Notice how I pivot off the back foot. This throw targets many of the muscles used when punching. Be sure to include this exercise in your routine.

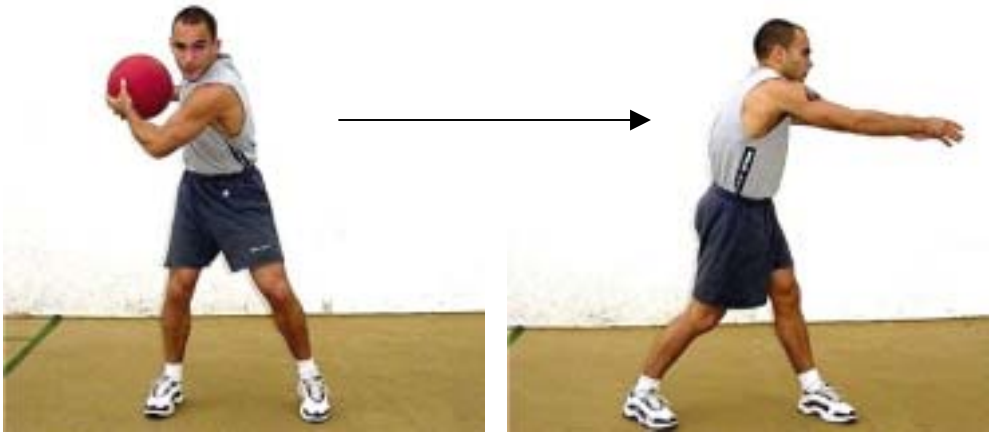


Diagonal Backwards Throw (MBE 91) – Begin with ball held overhead. Rotate and pivot as you throw the ball behind you against the wall. Work this throw to both sides of the body. This throw is excellent for rotational power.

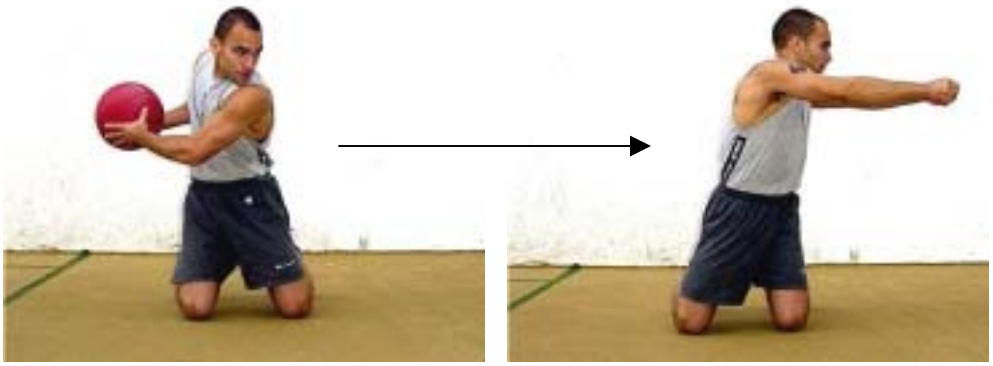
Backwards Angle Throw (MBE 92) – Begin with ball at waist level. Rotate and deliver the ball behind you and overhead. Your arms will travel across your body on a diagonal, upward path until releasing the ball.



Ball Flip (MBE 93) – Begin with ball behind you and to the side. Forcefully rotate with the hips as you throw the ball across your body. This is an excellent exercise to develop power throughout the hips and trunk.



Side Throw (MBE 94) – This throw is similar to the Ball Flip, but the ball is thrown sideways, while the Ball Flip starts below your waist and is thrown upward and to the side. The Side Throw should be thrown sideways along a straight path.



Kneeling Side Throw (MBE 95) – Add some variety by performing a Side Throw from the knees.

Between Legs Throw (MBE 96) – Start with ball held overhead. Bend down and throw the ball between your legs.

Backwards Throw (MBE 97) – Begin with ball at waist level. Bend backwards and forcefully throw the ball behind you.

Backwards Jump Throw (MBE 98) – Begin by squatting with ball between legs. Explode off the ground as you simultaneously throw the ball behind you. This total body exercise is one of the best!

Underhand Jump Throw (MBE 99) – Begin with ball between legs. Thrust upward with the legs as you release the ball with an underhand throw. Throw the ball as high as you can. Notice how this exercise is similar to the Dumbbell Swing (page 106). The major difference is that this exercise does not require deceleration. The medicine ball allows you to explode throughout the ENTIRE movement, all the way through the release of the ball.

Squat Throw (MBE 100) – Lower into a squat position with ball at chest level. Explode upward, off the ground, pushing the ball into the air. Retrieve the ball and continue. This full body exercise is awesome!

Squat Throw Wall Catch (MBE 101) – Stand directly in front of a wall. Begin in a squat position and throw the ball upward against the wall. Catch the ball, squat, and continue with a rapid cadence.

The Squat Throw Wall Catch is very similar to the Squat Throw. The difference is that you throw the ball against the wall and immediately catch it. The tempo for this exercise is fast. The Squat Throw involves a jumping motion and all out effort. Following the Squat Throw, you must then retrieve the ball. The Wall Catch variation is a continuous exercise without breaks for ball retrieval.

Full Body Ball Throw (MBE 102) – Start in a squat position, touch ball to the ground and explode upward into a throw. The release of the ball will resemble an airborne Chest Pass. This exercise will develop total body power.

Chest Pass Pushup (MBE 103) – Begin on knees with ball held at chest. Perform a chest pass and fall into a kneeling pushup. Immediately spring back up with a plyometric pushup, returning to an upright position.

VARIETY, VARIETY, VARIETY…

As you can see, there are plenty of medicine ball throws to choose from. Should you perform all of these exercises in one training session? The answer is NO. Instead, you should incorporate different exercises during different workouts. Most people who work with the medicine ball limit themselves to the Chest Pass and Overhand Throw. There are so many additional exercises to choose. Open your mind to new forms of training and expand your exercise selection.

MEDICINE BALL CONDITIONING

At this point I have illustrated numerous medicine ball exercises for strength and power. You now have an arsenal of exercises to strengthen the entire body.

You can use the medicine ball to strengthen the trunk and core. You can perform strength exercises and plyometic movements.

What about conditioning? As a combat athlete, you will require awesome anaerobic strength and endurance. Combat is explosive and ballistic. Combat is anaerobic. Fortunately, the medicine ball is just what the doctor ordered in terms of intense conditioning.

ANAEROBIC vs. AEROBIC CONDITIONING

Although your complete training program will include aerobic and anaerobic components, please recognize the fact that combat sports are primarily anaerobic. For example, boxing is estimated to be 70-80% anaerobic.

Anaerobic training means to conduct an activity without oxygen. Anaerobic events, such as boxing, wrestling, and grappling, require muscles to contract at maximum intensity for short periods of time. An example would be a combination thrown in boxing or a take down in wrestling. Combat athletes MUST train anaerobically!

Aerobic exercise is classified as low to moderate intensity activities, performed for extended periods of time. Distance running is a perfect example of aerobic exercise.

Unfortunately, many fighters today practice ancient forms of conditioning. Many boxers consider a slow paced jog in the morning as roadwork, which satisfies their conditioning for the day.

Let's get one thing clear. Extensive aerobic running will NOT prepare your body for the rigors it will face inside the ring. Continuous aerobic endurance training will prevent an athlete from maximizing his potential in strength and muscular size. If you run at a slow pace, day after day, you will reduce your maximum power output. Earlier I said that if you want to be explosive, you must train with explosive movements. Excessive slow paced running will detract from these goals. Train to be explosive and powerful. Leave the marathon roadwork sessions for your opponent.

Competition involves explosive movements. You must be able to maintain optimum intensity from beginning to end. If you box, this means throwing the same explosive combinations in the last round that you started with in round one.

If you wrestle, this means that you must maintain your strength and explosiveness match after match, even if you must wrestle 4 or 5 times in one day.

CONDITIONING EXERCISES

Many of the conditioning exercises can be classified as either strength or plyometric movements. Remember that plyometrics emphasize quality not quantity. You should not perform plyometrics to failure. Plyometrics emphasize speed and power. These explosive exercises combine strength and speed to create power essential for sport.

Conditioning and explosive power are unique training objectives. Plyometrics will give you speed and power. Conditioning drills will enable you to use this power throughout your competition. A complete training program should include power training as well as plyometric training.

A perfect example of an exercise that can be used as a plyometric move or conditioning drill is the burpee. Burpees require explosive action in the legs. If you are training solely for plyometric purposes, you will limit the total number of repetitions. If you seek a conditioning benefit, burpees can be performed in high repetition style. You will notice that many of my conditioning drills will include exercises such as burpees. The purpose of these conditioning drills is to improve anaerobic strength and endurance. These drills are intense and extremely effective. Before discussing specific drills, let's first look at some additional exercises that can be included in our conditioning routines.

Woodchoppers (MBE 104) – Begin by squatting down and touching the ball to the ground. Explode upward off the ground, bringing the med ball overhead with outstretched arms. Continue this exercise with a brisk pace.

The Woodchopper is one of the best exercises available. It will strengthen the entire body and develop explosive power. You can include this movement during conditioning routines or perform it alone for plyometric benefits.

Start Throws (MBE 105) – Begin in a four-point stance with hands on the ball. Your weight should be evenly distributed between the upper and lower body. Push forward with your feet as you begin to drive forward. Bring the ball close to your chest before throwing it forward. Run after the ball and repeat.

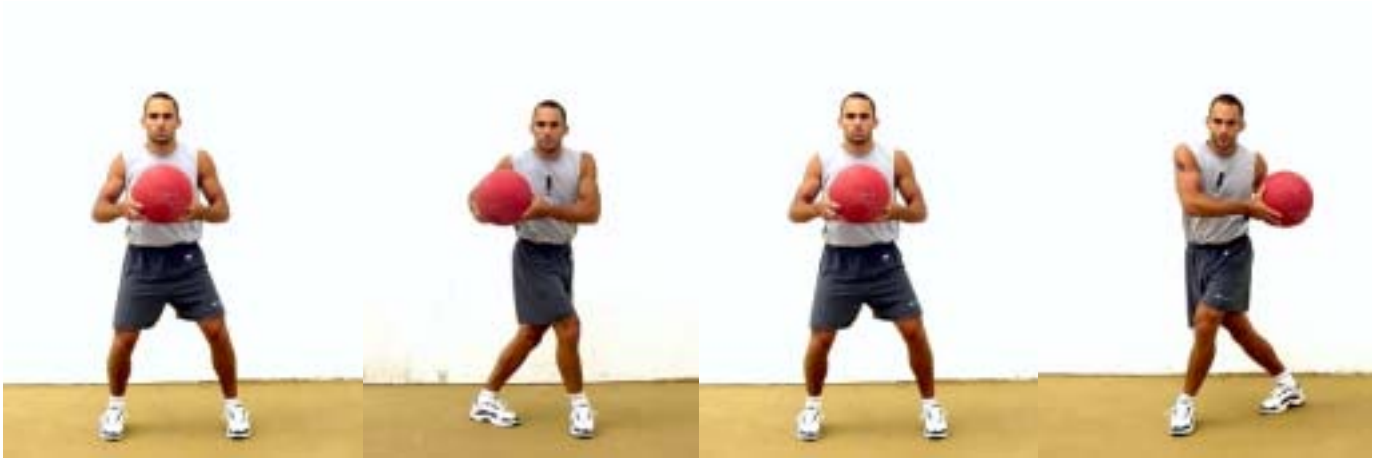
You will need an open field or track to properly perform this movement. Try to work 100 meters down a football field with this movement. Your heart will be pumping after a few intervals of this exercise!

Throw and Run (MBE 106) – The principle of the Start Throw can be applied to other throwing exercises such as the Chest Pass, Overhand Throw, Squat Throw, and Underhand Jump Throw. Simply throw the ball for distance, then sprint and retrieve the ball. As soon as you retrieve the ball, throw it again and continue.

This form of training integrates sprint work with power throwing movements.

Med Ball Carioca (MBE 107) – Stand with feet shoulder width apart. Cross one foot in front of the other. Step laterally with the back foot to return to the beginning stance. Next cross your foot behind the other leg and again step laterally to the start position. Repeat this front and back crossover pattern. As you step, you should rotate the medicine ball to each side. You will move the ball in sync with your feet. You may wish to begin this exercise without the ball and then add the med ball as your coordination improves.

This exercise is excellent for strengthening the hips.



MEDICINE BALL ANIMAL TRAINING

You may be familiar with animal movement exercises such as the Crab Walk or Bear Crawl. These exercises are excellent for strength and endurance. Many wrestlers and grapplers find these exercises particularly effective. The medicine ball can help spice up these traditional movements while cranking up the intensity…

Med Ball Crab Walk (MBE 108) - Get into a position where you are on your hands and feet with your stomach facing the ceiling. Rest a heavy medicine ball on your midsection and walk sideways, frontward, and backward.

This exercise may look silly but it can serve as an AWESOME conditioning drill.

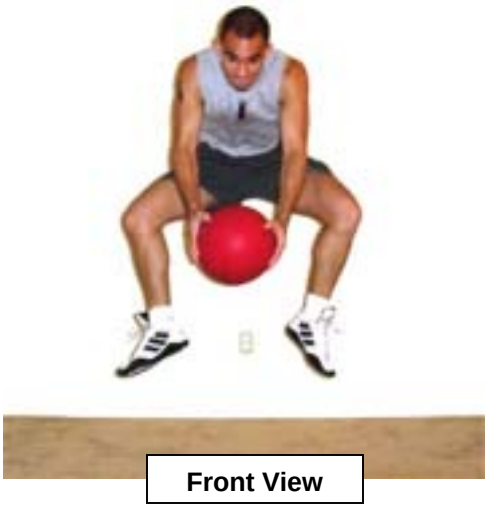
Side View

Front View

Med Ball Duck Walk (MBE 109) Start in a squatting position. Hold the med ball behind your head and “waddle” forward like a duck.

Med Ball Rabbit Hop (MBE 110) - Begin in a squatting position with the ball held behind your head. Hop around like a bunny.

Side View



Front View

Med Ball Frog Jump (MBE 111) - Begin by squatting down with your hands on the ball. Jump forward and land with the ball and your feet at the same time.

Med Ball Monkey Walk (MBE 112) - Walk on your feet with one hand, the other hand holds the medicine ball. Alternate hands as you fatigue. Keep a fast pace like a monkey. This exercise is VERY difficult.

Med Ball Roll Around (MBE 113) – Place your hands on the ball and roll yourself forward, following behind with your legs. This is not an animal movement, but is similar.

You will really feel your core tense up during this exercise.

MINUTE DRILLS – THE ALMIGHTY!

Minute drills are one of the best ways to improve your anaerobic strength and endurance. The purpose of the minute drill is to train at your **maximum** intensity for a designated time period. Minute drills can last 1, 2, 3, or more minutes. Most minute drills last between 2 and 3 minutes and are followed by a 1-minute rest period.

Suppose you are fighting a 4 round bout with 2-minute rounds. A great conditioning exercise would be 5 sets of a 2-minute drill. I choose 5 because it is a good idea to train at least 1 more round than you will be fighting.

Minute drills will include a variety of exercises that are performed nonstop without rest. These drills will push your body to the extreme. Minute drills can be performed inside or outside. There are no excuses to neglect this valuable conditioning exercise. I am sure you remember the importance of variety when

training. Minute drills offer the perfect solution. There are an infinite number of exercises that you can mix and match during the drills.

MINUTE DRILL EXERCISE EXAMPLES

- Woodchoppers
- Med Ball Animal movements
    - Crab
    - Duck
    - Rabbit
    - Frog
    - Monkey
    - Ball Roll Around
- Sprint w/ Med Ball in right arm
- Sprint w/ Med Ball in left arm
- Med Ball Power Overs
- Burpees (each variation)
- Lateral Jumps, Forward Jumps, 180-degree Jumps
- Start Throws
- Throw and Run (Chest Pass, Overhand Throw, Underhand Throw, etc…)
- Med Ball Carioca
- Sprint
- Run Backwards
- Walking Lunge Twist

These are just a few examples. I will provide additional drills in a later chapter. You should be creative with exercise selection. Remember to focus on maximum exertion throughout the entire drill. All exercises should be explosive and fast paced.

A SAMPLE MINUTE DRILL

- Sprint 50 meters with med ball under left arm
- 15 Woodchoppers
- Sprint 50 meters with med ball under right arm (back to starting spot)
- 10 Med Ball Burpees
- Start Throws x 50 meters
- 12 x Med Ball Power Overs
- **Continue this cycle for 2-3 minutes – Repeat 4-6 times**

As you can see, the options are endless. Try to include a variety of exercises. Do not perform the same minute drills during each session.

MED BALL + ROPE

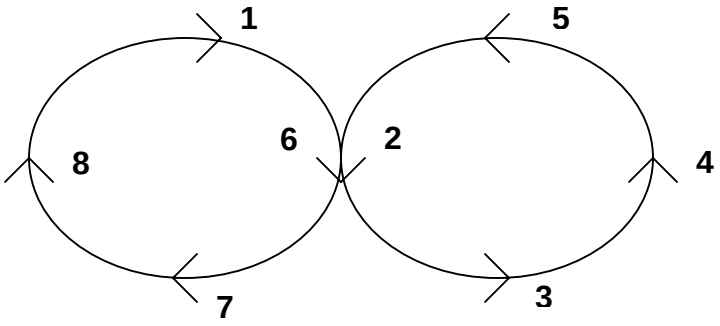
When you attach a medicine ball to a rope, you create a dynamic device that is capable of numerous movements designed to increase rotational power. Earlier I explained how you can create a homemade version of this expensive training apparatus. Whether you decide to purchase the real deal or work with a homemade version, you can be sure to notice the results from this unique training tool. You will quickly develop explosive rotational power. I have labeled these exercises with MBR (med ball + rope) exercise codes.

Rotational Swings (MBR 1)- Swing the ball in a circular motion with your right arm outside of your right leg. Swing the ball frontward for 12 reps, and then repeat backward.

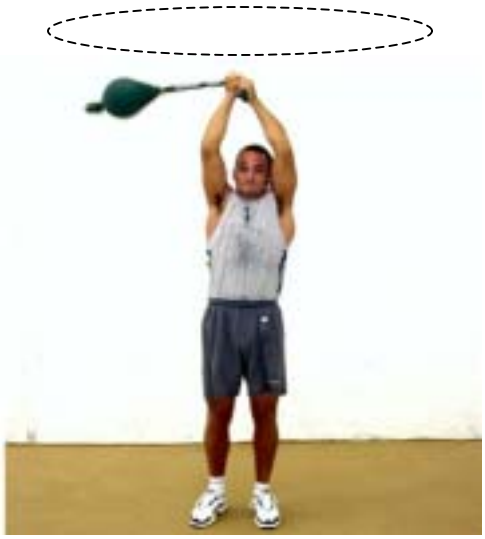
Repeat with left arm. This exercise is excellent for strengthening the rotator cuff.

Circles (MBR 2) – Stand with legs shoulder width apart. Swing the ball in a giant circular motion in front of the body. Arms remain extended throughout. Work this movement in both directions. You can use 1 or 2 hands.

Figure 8's (MBR 3) – Grasp the rope and swing the ball in a figure 8 pattern. You can perform this exercise with 1 or 2 arms. Swing the ball at a rapid pace throughout the movement. This exercise is similar to MBE 51 but this medicine ball device will allow you to achieve much greater speed throughout the movement for more explosive development. The pattern of your movements should resemble the diagram below.



Wall Rotations (MBR 4) – Begin by standing approximately one foot away from a brick or cement wall (or any other durable surface). Your back will face the wall with a slight bend in the knees. Begin to swing the ball back and forth, smashing it against the wall on each side of you. Perform this exercise in an explosive manner. You can also vary the height of your swings. For example, you can perform a diagonal chop by swinging from upper right to lower left. Begin with straight swings and add additional angles and movements as you advance. This exercise will develop awesome rotational power. Be sure to include this in your routine.



Overhead Swing (MBR 5) – Assume a shoulder width stance. Begin swinging the ball overhead in a circular fashion. Keep the ball over your head throughout the swinging motion. You will need to crank up the intensity to prevent the ball from swinging below eye level. Your arms should remain overhead just as mine are in the illustration. Swing for 10 seconds in one direction, take a quick rest, and repeat in the opposite direction. As with other explosive movements, focus on INTENSITY when performing this exercise.

Standing Stomp (MBR 6) – Stand with one foot in front of the other. Smash the ball into the ground. Pivot on the back foot as you deliver the strike. This move strengthens many of the muscles used in punching.

You can perform the Standing Stomp with one repetition at a time. For example, you would strike the ground, reset, and continue for 10-12 repetitions before switching to work your other arm.

Another option is to combine the Standing Stomp with the **Cross Smash Stomp** (MBR 7).

Step 1

Step 2

Step 3

After striking the ground with the Standing Stomp, you will reverse the movement by bringing the ball back across the body with a backhand motion. **Step 1** begins immediately after completing one repetition of the Standing Stomp. You first strike the ground with a Standing Stomp (MBR 6), and then rotate your wrist and begin swinging the ball back to your opposing side. As you swing, you will rotate with your hips. When you reach Step 3, you will regroup and begin with another Standing Stomp. By combining these two exercises, you work the muscles from numerous angles to achieve an optimal affect.

This combination is INTENSE and EFFECTIVE… and RECOMMENDED!

Overhand Smash (MBR 8) – Stand with legs slightly wider than shoulder width. Begin with ball hanging behind head. Smash the ball forward to the ground in front of you. Repeat 10-12 times.

Kneeling Smash (MBR 9) – Begin with the ball behind you as with MBR 8. Smash the ball to the ground in front. As you can see in the illustration, I have smashed the ball to the side. You can smash to the left, center, and right. I prefer to smash to the left and then right. When you smash to your left, you will begin with the ball behind you, on your right side. You will then smash diagonally to the left of your body. Return the ball behind you but this time to your left side. From the left rear position, you will then swing diagonally to your right. Continue this zigzag motion at a fast pace.

Baseball Swing (MBR 10) – Assume a sideways stance next to a wall. Swing the ball as if you were swinging a baseball bat. Rotate your hips and pivot on your back foot as you strike the ball into the wall. Practice this movement from both sides (left-handed swing with right foot closest to the wall, and right handed swing with left foot closest to the wall). This exercise is great for rotational power throughout the hips, trunk, and upper body. Start off with two-handed swings and eventually you can swing with one hand. You can also swing with your lead hand (hand closest to the wall) in a **backhand** fashion. You can swing high, low, or at waist level. Another variation is to first begin with a **360-degree rotational step** before delivering the strike to the wall. You will gain momentum by first stepping in a 360-degree motion. Swing in both directions to work the muscles evenly and greatly enhance your coordination.

Sit-Up Smash (MBR 11) – Sit on the ground with legs out in front. Chop back and forth while leaning slightly back to apply tension to the abs. As you begin chopping, add a sit-up motion with the chops. It may feel awkward at first but you will quickly coordinate yourself to perform this exercise in fluid manner. This exercise is awesome for the core.

SUMMARY

To summarize, I strongly recommend that you include this training device in your routine. With just two days per week, you will notice tremendous improvements in rotational strength throughout your entire body. You can quickly create a homemade device from either a pair of pants, basketball net, or canvas bag. I recommend a canvas bag because the material is rugged enough to hold up to the demands of these explosive exercises. The weight of the ball should range from 7-10 pounds. In the illustrations, I have used a 10-pound ball, which works great for me.

When you train with this device, focus on ALL OUT INTENSITY. These are explosive movements. You should work each exercise for short, explosive bouts. Most exercises are best performed for 10 seconds at a time or 10-12 repetitions. Do not perform high repetitions with these movements. When you can no longer maintain speed and proper technique, you are performing too many repetitions.

DUMBBELL POWER

Thus far, the theme of this book has been on low cost training devices that provide optimal results. The medicine ball is of course the primary training tool for this manual. Dumbbells however provide a perfect compliment to medicine ball training. Dumbbells are inexpensive, easy to store, and effective for a variety of training exercises. You can purchase a few pairs of dumbbells and convert your living room into a power factory.

You can use dumbbells by themselves, together with bodyweight exercises, or as part of a complex training routine. The dumbbell can serve as the strength exercise of the complex routine, while the medicine ball forms the plyometric half of the equation.

I will not claim that dumbbells are superior to barbells. There are certain advantages however that make dumbbells my strength training tool of choice. First and foremost, I can store my dumbbells anywhere, without requiring a separate room for an elaborate weight set. Also, the dumbbell exercises are often easier to learn and develop proper technique. It is difficult to learn various Olympic lifts such as the Power Clean. Dumbbells can be used to replicate these exercises in a less complicated, yet equally beneficial manner.

The exercises that follow will not include common exercises such as the bench press or biceps curl. I have instead selected exercises that are explosive in nature that are designed to improve functional strength and power. I have also included several dumbbell exercises that specifically target the core. These exercises will develop awesome strength throughout the muscles of the core.

Although there is nothing wrong with exercises such as the biceps curl, a combat athlete should also focus on explosive movements such as Dumbbell Swings, Snatches, and Cleans. These exercises involve the entire body. As a combat athlete, your goal should be to maximize power with the most efficient exercises.

Due to the rigorous training demands that your sport requires, you will have minimal time to focus on strength training. Much of your time will be spent working on specific skills or inside the ring sparring. Your emphasis should be on maximum power development in minimal time.

These dumbbell exercises in conjunction with the medicine ball will provide a direct path towards explosive power and speed.

Dumbbell Twist – Twist the dumbbell from left to right. Maintain straight arms and initiate the movement from your hips and core.

Side Press – With legs straight, press your right arm as your left arm touches the floor. Keep your eyes focused on the weight. Work 5-8 reps per side.

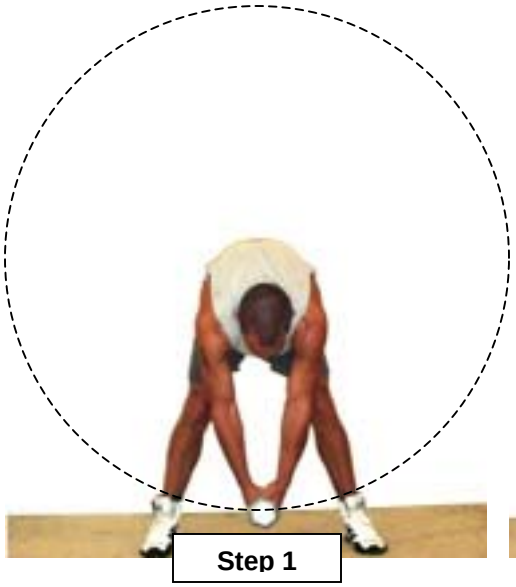
Windmill – Begin with the weight held overhead. Keep the right leg locked as you touch your left hand to the floor. Keep your eyes focused on the dumbbell. Work both sides.

Turkish Get-Up –This exercise is awesome for the core. Ignore the strange looks that you may receive at the gym. Lie on your back with a dumbbell extended overhead. Maintain a straight arm throughout the movement. Stand up without bending your arm. Most people turn to their side to get up on one knee and then proceed to stand. Be sure to keep your arm straight throughout the movement. Repeat with your other hand.

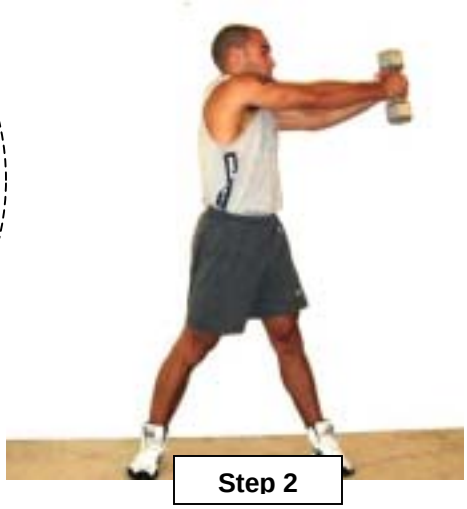
Step 1 Step 2 Step 3

Deadlift Twist – Start with shoulder width stance. Squat down with back flat and grab the dumbbell. Stand up and twist to your opposing side. You will carry the dumbbell throughout an arc until it reaches your side (Step 2). Lower the weight to the floor outside of your foot (Step 3). Now grasp the dumbbell with your other hand and repeat the motion back to the other side. Continue in this back and forth fashion. This exercise is excellent for the core.

Step 1 Step 2 Step 3



Step 1



Step 2

Giant Circles – With knees slightly bent and arms extended, sweep the dumbbell around in a giant circular motion. This exercise is excellent for the core. Work in both directions.

Step 3

Step 4

Keep your eyes focused on the dumbbell throughout this movement.

Earlier I illustrated this exercise with a med ball (MBE 52).

Weighted Toe Touch – Assume a stance with feet slightly wider than shoulder width. Touch right dumbbell to left foot. Continue in an alternating fashion.

Ax Swings - Swing dumbbell across the body as if you were swinging an ax. This is an explosive movement for the shoulders, back, and hips. Perform the ax swing from right to left and left to right.

Saxon Side Bends – With weight overhead, bend to each side. This exercise is very difficult. Start with very light weight. Maintain a firm torso throughout this movement.

Runner's Swing – Swing your arms with dumbbells in hand. Mimic the arm motion of a sprinter. Maintain straight arms and swing the arms back and forth.

Swimmer's Stroke – Simulate the arm action of a swimmer with dumbbells in hand.

T-Pushup – With dumbbells in hand, perform a pushup. As you come up, twist and raise the dumbbell over your shoulder. Alternate between left and right arm. This exercise builds strength and coordination.

Neider Press – Begin with dumbbells close by your chest. Explode outward with the dumbbells until arms are fully extended. This exercise is excellent to develop the upper body muscles used in punching.

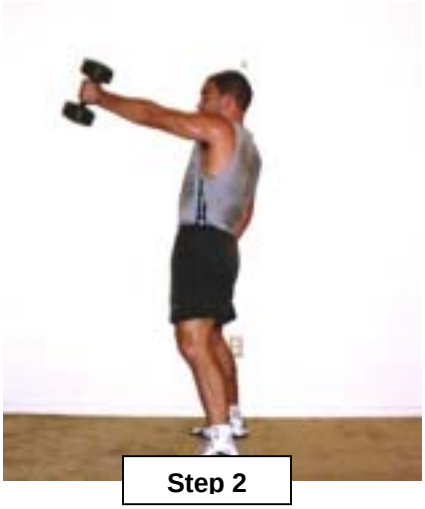
Neider Variation – With this variation, keep your palms facing the floor. You can also perform this exercise with a barbell. Explode outward with this exercise.

Squat Push Press – With dumbbells in hand, squat down towards the floor. At the bottom of this movement, your palms should face inward. Rotate and press as you initiate the upward motion of the squat.

One Legged Squat – With dumbbells in hand, perform a one-legged squat. Your non-working leg will stay back, avoiding contact with the ground. This is a variation to the med ball one-legged squat (MBE 59).

Dumbbell Swing – Bend at the waist with back straight and knees close to parallel. The dumbbell will hang between legs. Swing the dumbbell overhead while standing up. This exercise will condition the entire body. Work both arms.

Step 1



Step 2

Step 3

Dumbbell Snatch – This exercise is similar to the dumbbell swing but instead involves a snatching movement. The weight stays **close** to the body. Snatch up with your hips. Pull up like you are starting a lawn mower.

Swing Jump – Grasp the dumbbell with both hands and perform a dumbbell swing. Explode on the way up. Thrust your feet into the air as you swing the dumbbell. Your feet will leave the ground, as the dumbbell swings.

Over the Shoulder – Hold dumbbell with both hands. Lift up as you would a dumbbell swing, but rotate to one side bringing the dumbbell over one shoulder. Alternate back and forth.

Step 1

Step 2

Step 3

Step 4

Power Clean and Press – Start with dumbbells by your sides. Explode upward as you clean the dumbbells up to your shoulders. You will then squat down a few inches and perform a push press upward with the dumbbells. Return the dumbbells to the starting position.

Hip Swing Press – Begin lying with dumbbell in hand. One arm will remain extended to your side for balance. Your legs will remain straight throughout the movement. Begin to press the dumbbell upward with a corkscrew motion as your legs swing towards the floor. Your legs will approach the floor, without touching. Return to the starting position and continue. After working the right arm, work the left arm while swinging legs in the opposite direction.

Step 1 Step 2 Step 3

Farmer's Walk – The Farmer's Walk is a great finisher to challenge you physically and mentally. Simply grab a heavy pair of dumbbells and begin walking. Time yourself to see how long you can walk with the dumbbells. This exercise is awesome for forearm and grip strength. As you begin to fatigue, your mind will be challenged to continue walking with the heavy dumbbells. You can perform this exercise outside or simply walk around the gym.

A similar variation to the Farmer's Walk is the Wheelbarrow Walk. Simply load your wheelbarrow up with a good amount of weight and go for a walk. This movement becomes more challenging if you can find a nice incline to push the wheelbarrow up.

If you do not have a wheelbarrow accessible, have a partner hop in his car. You get behind the car and push him as he steers the car in neutral. He can ride the brakes if you really want a challenge. Push up an incline if you really want to feel the burn.

SUMMARY

As you can see with this chapter, there are a variety of exercises that you can perform with a pair of dumbbells. Many of these exercises may attract some unusual looks if you train at a commercial gym, but I can assure you that your improvements will not be humorous. The first 9 exercises in this chapter were

excellent core strengthening movements. Weighted resistance is one of the best ways to develop a powerful, functional core. This form of training is very strenuous however, so I recommend that you start slow if these exercises are new to you. Weighted core work is best performed 2-3 days per week. You should not exceed 3 days of weighted core work with the exercises listed in this chapter. Your muscles need time to rest and recover to grow stronger.

The additional exercises in this chapter included full body movements and plyometric lifts such as the Neider Press. These exercises are all excellent for functional power development. Exercises such as the Power Clean and Press, Dumbbell Snatch, Dumbbell Swing, and Squat Press are some of the most effective strength exercises that you can perform. With these movements, you can quickly achieve a full body workout.

If you compete as a combat athlete, you may find yourself strapped for time. The exercises in this chapter will allow you to minimize your time in the weight room, while maximizing your results. Combat is explosive so a considerable portion of your time should be dedicated towards explosive movements.

Combat athletes are in the business of fighting, not bodybuilding. Recognize the difference between these two DISTINCT athletic pursuits. Whether you box, wrestle, or compete in MMA, much of your time will be spent working on skill development. Boxing did not get nicknamed the Sweet Science by accident. These sports require many long hours of practice to develop the necessary skills, reactions, and fluidity of movement.

When you can combine skills with power, you become a dangerous fighter. This is our objective. Focus on functional power development and you will be amazed at your results.

It is your responsibility to integrate skill training, strength training, plyometrics, and conditioning. These are essential ingredients to ensure optimal performance during combat sports. Dumbbell training is one way that you can quickly achieve many of these training objectives.

SANDBAG TRAINING

I hope that you have taken my advice and built your own homemade medicine balls with sand. As I mentioned earlier, you can purchase 50-pound bags of sand for less than $3 at hardware stores such as Home Depot. You may have already gone through your first 50 pounds by creating a few different sized medicine balls such as a 10, 15, and 25 pound ball.

My advice is to purchase another two or three 50-pound bags. This will be the cheapest weight lifting set you can find. Where else can you purchase 100 pounds for less than $6? A few 50-pound bags of sand will be enough to give you a lifetime of ass kicking workouts that leave you soaked in sweat and full of results.

Sandbag training is excellent for developing core strength, functional power, balance, and unparalleled mental and physical toughness.

MAKING YOUR SANDBAG

There are several variations to making your sandbag. I prefer to use a method that allows convenient, mess free weight adjustments. Let's take a look at my homemade sandbag creation process.

Equipment: Zip-lock bags, duct tape, sand, canvas duffle bag
Optional: Canvas laundry bag

1. Fill up your zip-lock bags with sand. Fill them approximately ¾ full. Do not fill the bags 100% or they will feel like mini-rocks. If you keep the bags ¾ full, you will be able to get a better grip on the bags, as the sand will be able to swoosh back and forth.
2. Duct tape the ends of the zip-lock bags. Double the bags and duct tape the ends of each bag for added protection. This may sound like a pain in the ass but this extra step will protect from future spills.
3. After you have enough zip-lock bags filled with sand, place them inside a canvas laundry bag. In the illustration, you can see two zip-lock bags and the canvas bag that contains these mini-bags.
4. Place the canvas laundry bag into a canvas duffle bag. The duffle bag will be the bag that you perform the exercises with. You can place the mini-bags directly into the duffle bag without the laundry bag. I use the double bag method for added protection. You can also use a plastic garbage bag instead of the laundry bag.

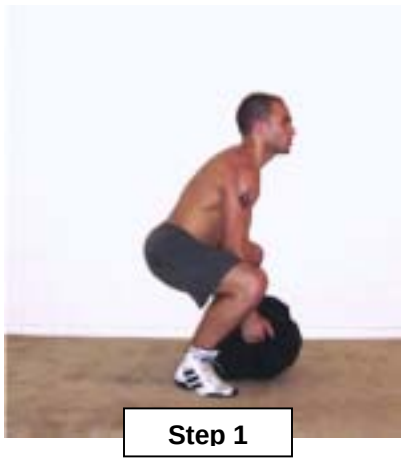
5. Tape down any handles on the duffle bag that will cause a distraction while performing the exercises.

You can vary the weight of the sandbag by adding or removing the mini-sandbags. You will be able to quickly adjust the weight as your strength improves. I try to add another mini-bag of sand to my duffle bag every few weeks.

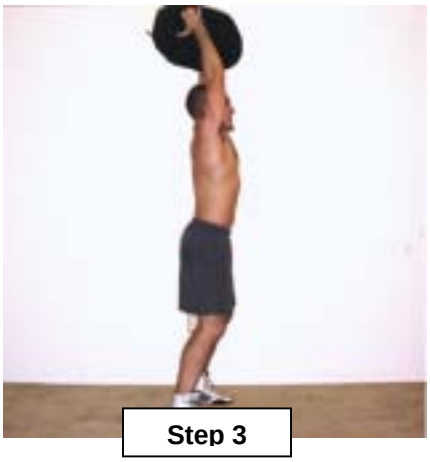
THE EXERCISES

There are countless exercises that you can perform with your sandbag. You will not be able to lift as much weight as you are accustomed to with dumbbells or barbells. The sandbag is very difficult to grab. It will develop awesome grip strength. The sand will also swoosh back and forth which will really work your core and stabilizer muscles. After your first sandbag workout, you will feel sore in muscles that you did not know existed.

Power Clean and Press – One of the best exercises you can perform with the sandbag (or with any weight) is the Power Clean and Press. Bend at the knees and clean the sandbag to your shoulders. Catch the bag in a partial squat position as you complete the clean. From this position (*Step2*), press the bag overhead before returning to the starting position.


Step 1


Step 2

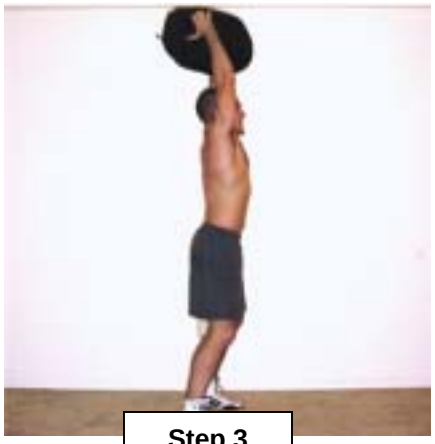

Step 3

Push Press – The Push Press is a great finisher. Start from a partial squat position and thrust the weight upward overhead. Continue until you feel the pain!

Squat Push Press – Perform a front squat with the bag and finish by pressing the bag overhead. This exercise should be conducted in one continuous motion. This is a great strength and conditioning movement.

Step 1

Step 2



Step 3

Bent Over Row – With knees bent and back straight, perform a bent over row with the sandbag. This exercise will strengthen the back while developing an awesome grip.

Sandbag Curls – Grab the bag and perform a biceps curl. You will not be able to curl anywhere near as much weight as you can with a conventional barbell. This exercise will blast the arms.

Overhead Squat – Maintain straight arms with bag overhead. Perform a squat without bending your arms. This exercise is very difficult with the sandbag. It is great for the back and legs.

Deadlift – With knees bent, deadlift the sandbag. The deadlift is great for the back. The sandbag version will also challenge your grip.

Stiff Leg Deadlift – Perform a stiff leg variation of the deadlift to shift more emphasis to the hamstrings.

Sandbag Bear Hug – You have not experienced pain until you have tried the Sandbag Bear Hug. Pick up your sandbag with a bear hug hold. You should use a heavy sandbag for this exercise. Walk around until you cannot *bear* the pain any longer. This is a great finisher to really challenge you physically and mentally. Try to improve your time and distance with each bear hug walk. I like to perform this exercise around a baseball field at the park. If you walk on the street, you may find you and your sandbag stuck on the side of the road. Definitely give this exercise a try. Find a place, you can even walk around the yard or your living room!

Shoulder Run/Walk – Throw your sandbag over your shoulder and go for a walk or jog. You can mix in some walking, jogging, and backwards walking to really work your legs and core muscles. Switch the weight to each shoulder to balance out the muscles that are used in this exercise. This is a great finisher that can be used in conjunction with the bear hug.

You can also drop down into a squat from this position. Another variation is to clean the bag to your shoulder. Clean the bag to your right shoulder, then left, and continue.

Sandbag Dragging – If you have a nice strong strap with your canvas bag, you can drag your bag for a great conditioning exercise. Try to keep a brisk pace as you drag. You can grab the strap and pull frontward, backwards, or to the side. Change hand positions as you fatigue. I recommend that you pull your bag on a dry surface. If you use grass, wait until it has dried to avoid dampening your bag. You are sure to get some strange looks if you bring this exercise to the local park and start dragging away! Just remember, no one will be laughing when you take your newfound strength to the ring to kick someone's ass!

Additional Finishers – Try to walk with the bag held overhead. Another finisher is to walk with the bag from a curl position. Your arms will be burning in no time.

SANDBAG + BACKPACK = HARDCORE FUN!

One of the great benefits of constructing an adjustable sandbag is the ease with which you can add or subtract the weight. You can really mix things up by taking a few of your mini-sandbags and adding them to a backpack. Throw the backpack over your shoulders and you have a great way of increasing the intensity of your bodyweight exercises.

Earlier we discussed the concept of complex training. Complex training integrates strength training with plyometrics. You begin with a resistance movement and conclude the set with a plyometric movement. For those of you who are not interested in weight training, you can replicate complex training by incorporating sandbag lifting or backpack bodyweight training.

Consider the elevated pushup illustrated on the left. Add a weighted backpack to this movement and you have a killer chest, triceps, and shoulder movement. You can incorporate this movement with a medicine ball chest pass to create a complex training set.

Do you want to increase the intensity of your current pull-up and chin-up routine? Throw on a backpack full of sandbags and you can be sure to feel the pain! Sand is inexpensive and

effective. There is no reason to overlook the benefits of this form of training. If you train with bodyweight exercises, why not increase the intensity by adding some additional resistance?

Let's look at a few "backpack friendly" exercises that you can incorporate into your routine…

- Bodyweight Squats
- Lunges
- Pushups (all varieties)
- Pull-ups
- Chin-ups
- Dips
- The Plank

Use your imagination, the options are endless!

SUMMARY

Sandbag training is truly one of the most effective forms of strength training. If you are new to sandbag training, I guarantee that you will be surprised at the intensity of these exercises. The Sandbag Bear Hug and Shoulder Walk are two of the most intense finishers you will ever experience. You can integrate all of these finishers into one Walk of Death. Simply walk with the bag, varying your grip as you fatigue. You can start with the bag in a bear hug, then throw it over one shoulder. Switch shoulders as you fatigue or give the overhead walk a try.

Whichever method you try, you can be sure to fatigue much sooner than expected. This form of training is VERY intense. You will not need to perform these workouts more than once or twice per week. I prefer to train with the sandbag once a week.

The sandbag is definitely a great addition to a complete training program. Your core will develop strength that no dumbbell or barbell could ever replicate. The uneven, swaying motion of the sand cannot be replicated with iron.

I strongly recommend that you take the time to construct an adjustable sandbag. The half hour that it takes will be well worth the time when you begin to experience the dramatic strength gains that you will see after just a few sandbag workouts.

Get out there and start bagging your sand!

TRAINING ROUTINES

This chapter will illustrate many sample routines. I will provide routines for plyometrics, complex training, sandbags, conditioning, core training, and more. I will then discuss how you can put all the pieces together into one complete routine in the chapter entitled **PUTTING IT ALL TOGETHER**.

PLYOMETRICS

Plyometric training is very intense in nature. Plyometrics are a safe method of training, but can lead to injury if used incorrectly. It is important to recognize and respect the intensity and potential dangers of plyometric training. It is better to under train plyometrics then to over train. It is our nature as athletes to jump into the most advanced routines. I caution you against this mistake. Slow and steady wins the race. Do not be in a rush to reach the finish line.

Before beginning a plyometric program, you must first develop an adequate strength base. Plyometrics can place a massive strain on unconditioned muscles, joints, and bones. It is recommended that you prepare yourself for plyometrics with at least 6 weeks of strength training.

When training with plyometrics, it is imperative that you conduct a thorough warm-up to prepare your body for the intense training session. Common warm-ups include jogging and jump rope. You should then warm the specific muscles that will be involved in the training session.

Due to the intensity of the plyometric training, you must also allow adequate rest between sets. Typical rest periods will range from 1-3 minutes between sets. Plyometric workouts also require time for recovery. You should not perform plyometrics on consecutive days. Two to 3 days per week is optimal, with at least 48 hours of rest between sessions. The most common injury associated with plyometric training is the failure to rest and recover between workouts. You should not perform high repetition plyometric exercise.

Remember, the focus of your plyometric routine must be intensity. These sessions emphasize quality, not quantity. You should never train to failure with plyometric exercise.

PROGRAM CONSIDERATIONS

When first beginning your plyometric training, you may be confused at where to find time for this routine. There are a few systems worth consideration…

There are a variety of methods that you can use to include plyometrics in your routine. Suppose you are training for a combat sport such as boxing, grappling, or wrestling. After developing a foundation of strength, you would like to add plyometrics to your routine. One approach involves separating your strength training days from your plyometric days.

Let's look at a few samples:

FULL BODY SPLIT ROUTINE 1

Day 1	Full body strength training
Day 2	Full body plyometrics
Day 3	Rest
Day 4	Full body strength training
Day 5	Full body plyometrics
Day 6	Rest
Day 7	Rest

For this system, you will conduct a full body strength workout on Day 1 (ex. Monday) and Day 4 (ex. Thursday). You will perform a full body plyometric program on Day 2 and Day 5. You would not perform any other forms of resistance training throughout the week. You would however include skill training, core training, and conditioning drills. The term "Rest" only applies to resistance work.

One variation that I have used with success prescribes a full body plyometric workout on Days 1 and 5 (ex. Monday and Friday). A full body strength program is performed on Days 2 and 6 (ex. Wednesday and Saturday).

FULL BODY SPLIT ROUTINE 2

Day 1	Full body plyometrics
Day 2	Rest
Day 3	Full body strength training
Day 4	Rest
Day 5	Full body plyometrics
Day 6	Full body strength training
Day 7	Rest

MIX AND MATCH WEIGHTS WITH PLYOMETRICS

If you prefer to separate your strength training routine into more specific body parts, you can create a routine that integrates lower-body strength training with

upper-body plyometrics, and upper-body strength training with lower body plyometrics.

Day 1	Strength Training **-** Chest – Triceps – Shoulders *Plyometrics - Lower body*
Day 2	Strength Training – Legs *Plyometrics – Upper body*
Day 3	Strength Training – Back and Biceps
Day 4	No resistance work
Day 5	Strength Training **-** Chest – Triceps – Shoulders *Plyometrics - Lower body*
Day 6	Strength Training – Legs *Plyometrics – Upper body*
Day 7	Strength Training – Back and Biceps

WHICH SYSTEM IS BEST?

This is a difficult question to answer since we all have unique training objectives. For combat sports however, I recommend that athletes concentrate their strength training towards full body workouts, two days per week. The **MIX AND MATCH** system illustrated above is a very strenuous program, but not ideal for most combat athletes. A competitive athlete must focus on numerous training objectives. This routine places great emphasis on strength training. A competitive athlete must focus a great portion of his time towards conditioning and skill enhancement. Six days per week of strength training will likely detract from other training initiatives.

12-WEEK PLYOMETRIC PROGRAM

Let's now look at a sample 12-week plyometric program. This program integrates upper and lower body plyometrics into one session. This routine should be performed 2 days per week. You should perform this routine on days that you do not lift weights. This program will gradually increase in intensity throughout the specified time period. It is important that you increase the intensity throughout the 12 weeks to maximize results. Intensity is imperative to maximize effectiveness.

Increasing intensity involves much more than simply adding more repetitions and more sets. Increasing intensity means that you put forth a greater effort during each exercise. For example, if you are performing lateral jumps over an object, you will begin to jump higher throughout the 12-week period. When you throw a medicine ball, you will throw with greater intensity, generating an all out effort. It is important to increase your intensity in this manner throughout the program.

12-WEEK FULL BODY PLYOMETRICS

FULL BODY PLYOMETRICS WEEKS 1-3			
Exercise	**Code**	**Sets**	**Reps**
Overhand Throws	MBE 85	3	10
Ankle Jumps	MBE 66	3	12
Ball Flips*	MBE 93	3	10
Chest Pass	MBE 82	3	10
Lateral Jumps	MBE 68	3	20
Backwards Angle Throw*	MBE 92	3	10
FULL BODY PLYOMETRICS WEEKS 4-6			
Exercise	**Code**	**Sets**	**Reps**
Shot Put Throws*	MBE 83	3	12
Med Ball Burpees	MBE 72	3	12
Diagonal Backwards Throws*	MBE 91	3	8
Squat Throws	MBE 100	3	10
Diagonal Chops*	MBE 90	3	10
Star Jumps	Page 73	3	15
FULL BODY PLYOMETRICS WEEKS 7-9			
Exercise	**Code**	**Sets**	**Reps**
Med Ball Power Overs	MBE 78	3	18
Underhand Jump Throws	MBE 99	4	8
Diagonal Chops*	MBE 90	3	8
Depth Jumps	Page 74	3	8
Overhand Step Throws	MBE 86	4	10
Between Legs Throws	MBE 96	3	10
FULL BODY PLYOMETRICS WEEKS 10-12			
Exercise	**Code**	**Sets**	**Reps**
Underhand Jump Throws	MBE 99	4	8
Med Ball Power Overs	MBE 78	4	14
Box Jump / Depth Jump Combo	Page 74	4	8
Backwards Jump Throws	MBE 98	4	8
Lateral Jumps	MBE 68	4	12
Full Body Throws	MBE 102	4	8

* These exercises should be performed for each side (ex. left and right arm)

IMPORTANT REMINDERS

- Develop an adequate strength base before attempting plyometrics
- Always warm-up prior to plyometric exercise
- Allow adequate rest between sets (1-3 minutes)
- Perform jumping movements on a soft surface such as grass

INDOOR PLYOMETRICS

Due to weather and location, you may not have access to a field or gymnasium for plyometric training. This is no longer an excuse as the following plyometrics programs can be performed indoors. Each program increases in intensity. You can perform each program for 2 or 3 weeks before proceeding to the next level.

INDOOR PLYOMETRICS 1			
Exercise	**Code**	**Sets**	**Reps**
Knee Kicks*	MBE 65	3	12
Med Ball Power Overs	MBE 78	3	12
Lateral Jumps	MBE 68	3	20
Ball Pass	MBE 79	3	12
Ankle Jumps	MBE 66	3	12
Med Ball Burpees	MBE 72	3	12

INDOOR PLYOMETRICS 2			
Exercise	**Code**	**Sets**	**Reps**
Lateral Jumps	MBE 68	3	20
Med Ball Power Overs	MBE 78	3	16
Depth Jumps	Page 74	3	10
One Hand Ball Pass*	MBE 80	3	10
Woodchoppers	MBE 104	3	20
Med Ball Burpees	MBE 72	3	15

INDOOR PLYOMETRICS 3			
Exercise	**Code**	**Sets**	**Reps**
Lateral Jumps	MBE 68	4	12
Med Ball Power Overs	MBE 78	3	20
Box Jumps	Page 74	4	8
Plyometric Pushups	Page 77	3	12
Depth Jumps	Page 74	3	8
Woodchoppers	MBE 104	4	12

* These exercises should be performed for each side (ex. left and right arm)

Each of these exercises can be performed without the need for high ceilings or a wall to rebound the ball. You can perform these exercises in your living room if necessary. Weather is no longer an excuse to skip your explosive power training sessions.

OUTDOOR PLYOMETRICS

There will be situations when you do not have access to a wall to rebound your medicine ball. Perhaps there are no cement walls in your basement or no parks close by. This is no longer an excuse as the following plyometrics programs can be performed without a rebounding wall. Step outside and perform these routines anywhere. Each program increases in intensity. You can perform each program for 2 or 3 weeks before proceeding to the next level.

OUTDOOR PLYOMETRICS 1			
Exercise	**Code**	**Sets**	**Reps**
Lateral Jumps	MBE 68	3	20
Squat Throws	MBE 100	3	10
Slams	MBE 87	3	10
Ankle Jumps	MBE 66	3	12
Med Ball Power Overs	MBE 78	3	12
Woodchoppers	MBE 104	3	10

OUTDOOR PLYOMETRICS 2			
Exercise	**Code**	**Sets**	**Reps**
Knee Tucks	Page 74	3	15
Underhand Jump Throw	MBE 99	3	10
Slams	MBE 87	3	12
Squat Throws	MBE 100	3	10
Med Ball Power Overs	MBE 78	3	16
Woodchoppers	MBE 104	3	12

OUTDOOR PLYOMETRICS 3			
Exercise	**Code**	**Sets**	**Reps**
Med Ball Burpees	MBE 72	3	12
Overhead Shot Put Throw*	MBE 84	4	8
Knee Tucks	Page 74	4	12
Squat Throws	MBE 100	4	8
Woodchoppers	MBE 104	3	10
Underhand Jump Throws	MBE 99	4	8

* These exercises should be performed for each side (ex. left and right arm)

UPPER-BODY PLYOMETRICS

If you prefer to separate your plyometric routines by upper and lower body, these routines should meet your needs. Each program increases in intensity. You can perform each program for 2 or 3 weeks before proceeding to the next level.

UPPER BODY PLYOMETRICS 1			
Exercise	**Code**	**Sets**	**Reps**
Chest Pass	MBE 82	3	10
Overhand Throws	MBE 85	3	10
Slams	MBE 87	3	10
Med Ball Power Overs	MBE 78	3	12
Ball Flips*	MBE 93	3	8

UPPER BODY PLYOMETRICS 2			
Exercise	**Code**	**Sets**	**Reps**
Shot Put Throws*	MBE 83	3	10
Underhand Jump Throws	MBE 99	3	10
Diagonal Chops*	MBE 90	3	8
Med Ball Power Overs	MBE 78	3	16
Overhand Step Throws	MBE 86	3	12

UPPER BODY PLYOMETRICS 3			
Exercise	**Code**	**Sets**	**Reps**
Overhand Step Throws	MBE 86	4	8
Diagonal Backwards Throws	MBE 91	4	10
Underhand Jump Throws	MBE 99	4	8
Slams	MBE 87	4	10
Shot Put Throws*	MBE 83	4	8

* These exercises should be performed for each side (ex. left and right arm)

LOWER-BODY PLYOMETRICS

If you prefer to separate your plyometric routines by upper and lower body, these routines should meet your needs. Each program increases in intensity. You can perform each program for 2 or 3 weeks before proceeding to the next level.

LOWER BODY PLYOMETRICS 1			
Exercise	**Code**	**Sets**	**Reps**
Lateral Jumps	MBE 68	3	20
Knee Kicks*	MBE 65	3	12
Knee Tucks	Page 74	3	12
Ankle Jumps	MBE 66	3	10
Woodchoppers	MBE 104	3	10

LOWER BODY PLYOMETRICS 2			
Exercise	**Code**	**Sets**	**Reps**
Knee Tucks	Page 74	3	12
Depth Jumps	Page 74	3	10
Ankle Jumps	MBE 66	3	12
Lateral Jumps	MBE 68	3	20
Woodchoppers	MBE 104	3	12

LOWER BODY PLYOMETRICS 3			
Exercise	**Code**	**Sets**	**Reps**
Knee Tucks	Page 74	4	10
Depth Jumps	Page 74	4	8
Woodchoppers	MBE 104	3	12
Box Jumps	Page 74	4	8
Med Ball Burpees	MBE 72	3	12

* These exercises should be performed for each side (ex. left and right leg)

COMPLEX TRAINING ROUTINES

Complex training integrates strength training and plyometrics into one routine. Complex training typically consists of a strength exercise followed by a plyometric movement. Complex training is very intense. You must first develop a solid strength foundation and perform a training cycle that includes separate days of plyometric training. For example, you could first perform 6 weeks of plyometric training and then adopt a 6-week complex training program. These routines are very intense.

COMPLEX TRAINING WEEKS 1-3			
Exercise	**Code**	**Sets**	**Reps**
Squats		3	10
Lateral Jumps	MBE 68	3	10
Dumbbell Snatch*	Page 106	3	10
Backwards Throws	MBE 97	3	10
Dumbbell Lunges		3	10
Knee Tucks	Page 74	3	10
Pull-Ups		3	10
Overhand Throw	MBE 85	3	10
Neider Press	Page 104	3	10
Med Ball Power Overs	MBE 78	3	10

COMPLEX TRAINING WEEKS 4-6			
Exercise	**Code**	**Reps**	**Sets**
Squats		3	8
Depth Jumps	Page 74	3	8
Dumbbell Snatch*	Page 106	3	8
Underhand Jump Throws	MBE 99	3	8
Dumbbell Power Clean Press	Page 107	3	8
Slams	MBE 87	3	8
Dumbbell Swings*	Page 106	3	10
Squat Throws	Page 74	3	8
Med Ball Power Overs	MBE 78	3	12
Shot Put Throws*	MBE 83	3	8

* These exercises should be performed for each side (ex. left and right leg)

Be sure to allow CONSIDERABLE rest between each complex set (strength exercise + plyometric movement). As your intensity increases, you may require 3-5 minutes of rest between each complex pair. Your rest period between the strength exercise and plyometric movement should be minimal. The purpose of complex training is to first stimulate the muscles with the strength movement, and then blast the already turned on muscle fibers with a plyometric movement.

COMPLEX TRAINING VARIATION

Below is a complex training variation that does not require weight training equipment. You can perform this complex training program with bodyweight exercise and a backpack loaded with mini-sandbags.

There may be days when you cannot make it to the gym. You can still achieve an intense complex training workout with little or no equipment.

COMPLEX TRAINING WITHOUT "WEIGHTS"			
Exercise	**Code**	**Sets**	**Reps**
Weighted Pull-ups	Page 106	3	10
Slams	MBE 87	3	10
One Legged Squats	MBE 59	3	10
Depth Jumps	Page 74	3	10
Between Chair Pushups (weighted)	Page 115	3	10
Chest Pass	MBE 82	3	10
Weighed Dips		3	10
Overhand Throws	MBE 85	3	10
Handstand Pushups		3	10
Squat Throws	MBE 100	3	10

CORE TRAINING

MED BALL CORE CIRCUIT #1

- Med Ball Knee Hugs (MBE 14) x 25
- One Arm Crunch (MBE 4) x 20 Per Arm
- Russian Twist (MBE 19) x 30
- Knee Raise To Shoulder (MBE 6) x 20
- Med Ball V-Ups (MBE 16) x 20
- Bent Arm Side Bends (MBE 35) x 20
- Med Ball Superman (MBE 43) x 12
- Figure 8's (MBE 51) x 12
- *Perform 3 circuits – 1 minute rest between circuits – no rest between exercises*

MED BALL CORE CIRCUIT #2

- Med Ball V-Ups (MBE 16) x 20
- Knee to Elbow (MBE 15) x 20
- Jackknife (MBE 22) x 20
- Bent Arm Twists (MBE 29) x 20
- One Leg Diagonal Chop (MBE 38) x 12 per side
- Med Ball Knee Hugs (MBE 14) x 25
- Reach and Twist (MBE 46) x 12 per side
- Front Reach (MBE 47) x 12 per side
- Med Ball Superman (MBE 43) x 12
- *Perform 3 circuits – 1 minute rest between circuits – no rest between exercises*

MED BALL CORE CIRCUIT #3

- Seated Twist (MBE 34) x 12 each direction
- Lunge Twist (MBE 62) x 12 each direction
- Med Ball V-Ups (MBE 16) x 20
- Russian Twist (MBE 19) x 30
- Giant Circles (MBE 52) x 12 each direction
- Med Ball Knee Hugs (MBE 14) x 25
- Standing Twist (MBE 32) x 20
- Figure 8's (MBE 51) x 12
- One Arm Plank (MBE 13) to failure – switch arms for each circuit
- *Perform 3 circuits – 1 minute rest between circuits – no rest between exercises*

WEIGHTED CORE WORKOUT #1

Perform 2 sets of each exercise

- Saxon Side Bends x 8 each side
- Dumbbell Twist x 16
- Side Press x 8 each side
- Weighted Toe Touch x 8 each foot

- Finisher - Turkish Get-up x 6 with each hand (only 1 set)

WEIGHTED CORE WORKOUT #2

Perform 2 sets of each exercise

- Deadlift Twist x 12 (6 each side)
- Giant Circles x 8 each direction
- Windmill x 8 each side
- Ax Swings x 10 each side

- Finisher - Turkish Get-up x 6 with each hand (only 1 set)

SUGGESTIONS FOR CORE TRAINING

By adding weight to your core training (either by med ball or dumbbell), you will greatly increase the intensity of the movements. You must perform these movements with caution and care to avoid injury. Start slow if this form of training is new to you. Also, if you have had bad experiences with lower back pain or injuries, you should avoid weighted core work. Always speak to your doctor before beginning a new exercise program.

Weighted core training should be performed 2-3 days per week. You should not perform these workouts on consecutive days.

MED BALL + "ROPE"

The medicine ball + rope attachment (commonly known as the tornado ball) can offer tremendous plyometric and core strengthening workouts. You can use this device to add variety to your core workout or plyometric routine.

Always begin with a complete warm-up before training with this device. Following the warm-up, I like to begin with Rotational Swings and Circles. These two movements warm the rotator cuff muscles before you begin the more intense movements.

WORKOUT #1 – CORE EMPHASIS

CORE EMPHASIS			
Exercise	**Code**	**Sets**	**Reps/Time**
Rotational Swings*	MBR 1	2	10
Circles*	MBR 2	2	10
Figure 8's	MBR 3	3	15
Wall Rotations	MBR 4	3	10-12 seconds
Overhead Swing *	MBR 5	4	10-12 seconds
Sit-Up Smash	MBR 11	3	10

* These exercises should be performed in each direction (ex. left and right)

WORKOUT #2 – POWER EMPHASIS

POWER WORKOUT			
Exercise	**Code**	**Sets**	**Reps/Time**
Rotational Swings*	MBR 1	2	10
Circles*	MBR 2	2	10
Figure 8's	MBR 3	3	15
Standing Stomp + Cross Smash*	MBR 6-7	3	6
Overhand Smash	MBR 8	3	12
Wall Rotations	MBR 4	3	10-12 seconds
Kneeling Smash	MBR 9	3	12
Overhead Swing *	MBR 5	2	10-12 seconds
Baseball Smash*	MBR 10	3	6

* These exercises should be performed in each direction (ex. left and right)

EXPLOSIVE DUMBBELL TRAINING

These dumbbell workouts are designed to target your entire body, quickly and effectively. These workouts can be performed 2-3 times per week. Allow 48 hours between workouts.

Repeat each cycle 3-5 times. Allow 1 minute of rest between exercises. As your strength improves, you can gradually increase the weight and decrease the number of repetitions. For example, instead of performing 3 sets of 12 you can eventually increase the weight towards 80% of your max and perform sets of 6 repetitions.

DUMBBELL CIRCUIT #1

- Dumbbell Swings x 12 each arm
- Dumbbell Snatches x 12 each arm
- Squat Push Press x 10
- Dumbbell Ax Swing x 10 each side
- Neider Press x 12
- Dumbbell Burpees x 10

DUMBBELL CIRCUIT #2

- Power Clean and Press x 12
- Dumbbell Swings x 12 each arm
- T-Pushups x 12 each arm
- Squat Push Press x 10
- Neider Press x 12
- Dumbbell Burpees x 10

DUMBBELL CIRCUIT #3

- Dumbbell Swings x 12 each arm
- Dumbbell Snatches x 12 each arm
- Runner's Swing x 10 each arm
- One Legged Squats (with dumbbells) x 8 each leg
- Hip Swing Press x 10 each arm
- T-Pushups x 12 each arm

DUMBBELL VARIATIONS

A power and conditioning variation that I recommend involves performing a circuit **without resting** between exercises. You will rest 1 minute after the circuit and then repeat for a total of 4 circuits. This form of training is quick but intense. I recommend that you give the following circuits a try.

First, find a dumbbell that you can use for Dumbbell Swings and Dumbbell Snatches. You will be required to perform these two exercises without rest. You will first perform 12 repetitions of Dumbbell Swings with your right arm, and then your left arm. You will then perform 12 Dumbbell Snatches with your left arm, and then your right arm. Choose a weight that makes these 12 repetition sets very strenuous. The purpose of this circuit is to be INTENSE.

DUMBBELL VARIATION #1

- Dumbbell Swings x 12 each arm
- Dumbbell Snatches x 12 each arm
- Burpees x 15
- Medicine Ball Power Overs x 20
- Repeat this circuit 4 times – 1 minute of rest between circuits.

DUMBBELL VARIATION #2

- Dumbbell Power Cleans x 12
- Squat Push Press x 12
- Medicine Ball Power Overs x 20
- Burpees x 15
- Repeat this circuit 4 times – 1 minute of rest between circuits.

As your strength improves, you should add dumbbell resistance to your burpees. These routines will take approximately 10-15 minutes but the results are undeniable. If you are strapped for time, these routines will crank up the intensity in no time at all. If you are looking for more variety, substitute the dumbbell work with **high repetition sandbag lifting**. Adjust your sandbag to a weight that makes 12 repetitions very intense.

SANDBAG VARIATION

- Sandbag Power Clean and Press x 12
- Burpees x 15
- Medicine Ball Power Overs x 20
- Repeat this circuit 4 times – 1 minute of rest between circuits.

This form of training should not be conducted on consecutive days. 2-3 days per week is ideal. Give these routines a try!

A LITTLE BIT OF EVERYTHING

There will be weeks when your schedule is crammed and you do not have time to separate your strength training, plyometrics, and conditioning. During these busy times, you can combine each form of training into one routine. When you perform these integrated routines, always start with the plyometric portion of the program. You must be fresh when performing plyometrics. Give these routines a try…

A LITTLE BIT OF EVERYTHING #1

- Warm-up
- Knee Tucks x 12 repetitions – 2 sets
- Medicine Ball Squat Throws (MBE 100) x 12 – 2 sets
- Jog 800 meters
- 10 x 50 meter wind sprints (sprint 50, jog back, sprint 50, jog back, etc…)
- Dumbbell Swings x 10 – 2 sets
- Dumbbell Snatches x 10 – 2 sets

Finish with a 3-exercise core circuit. Perform each exercise without rest. Rest 1-minute between circuits. Perform 3 circuits.

- Med Ball Knee Hugs (MBE 14) x 25
- Figure 8's (MBE 51) x 12
- Med Ball V-Ups (MBE 16) x 20

A LITTLE BIT OF EVERYTHING #2 (ADVANCED)

- Warm-up
- Depth Jumps x 10 repetitions – 2 sets
- Medicine Ball Underhand Jump Throw (MBE 99) x 12 – 2 sets
- Slams (MBE 87) x 12 – 2 sets
- Jog 800 meters
- 10 x 50 meter wind sprints (sprint 50, jog back, sprint 50, jog back, etc…)
- Dumbbell Swings x 10 – 2 sets (*work each arm separately*)
- Dumbbell Snatches x 10 – 2 sets (*work each arm separately*)

Finish with a 3-exercise core circuit. Perform each exercise without rest. Rest 1-minute between circuits. Perform 3 circuits.

- Med Ball Knee Hugs (MBE 14) x 25
- Figure 8's (MBE 51) x 12
- Med Ball V-Ups (MBE 16) x 20

SANDBAG TRAINING

The sandbag can be used for a variety of training objectives. You can perform an entire strength workout or use the sandbag for conditioning purposes. Sandbags also make a great finisher to any workout. Simply pick up the sandbag and start walking!

The following workouts are best performed at a park or open field. These workouts are **very intense**. I recommend one sandbag workout per week. Do not perform this workout on days before you spar. Rest as much as necessary between each set. I prefer to place my sandbag workout at the end of the week.

TOTAL SANDBAG WORKOUT #1

- Power Clean and Press x 5 reps – Perform 3 sets
- Bent Over Rows x 5 reps – Perform 3 sets
- Sandbag Bear Hug – Walk to failure – Perform 3 sets
- Shoulder the sandbag and squat x 5 reps to each side – Perform 3 sets
- Burpees x 10 reps – Perform 3 sets
- Deadlift x 8 reps – Perform 2 sets
- Shoulder the sandbag and walk to failure – switch shoulders as you fatigue – Perform 3 sets
- Find someone to carry you home

TOTAL SANDBAG WORKOUT #2

- Power Clean and Press - As many times as possible – Perform 4 sets
- Shoulder the sandbag and squat - As many times as possible – Perform 3 sets (alternate sides when shouldering the sandbag)
- Deadlift - As many times as possible
- Sandbag Bear Hug – Walk to failure – Perform 4 sets

SANDBAG CONDITIONING

Move *refers to running as fast as you can. Often you will not be moving very fast so I have used the word "**move**" instead of run.*

- Shoulder the sandbag and "move" 50 meters
- Switch shoulders "move" 50 meters back to starting spot
- Sprint 50 meters – jog back (repeat 5 times – without sandbag)
- Power Clean and Press – As many times as possible
- Lateral Jump over the sandbag 20 times
- Shoulder the sandbag and squat – As many times as possible
- Sandbag Bear Hug – Walk to failure

CONDITIONING DRILLS

2 or 3 MINUTE DRILL

- Sprint 50 meters with med ball under left arm
- 15 Woodchoppers
- Sprint 50 meters with med ball under right arm (back to starting spot)
- 10 Med Ball Burpees
- Start Throws x 50 meters
- 12 x Med Ball Power Overs
- Continue this cycle for 2-3 consecutive minutes
- Repeat 4-6 times – 1 minute rest between cycles

START THROW MANIA (MBE 105)

- Perform a Start Throw and run after the ball
- Pick it up and perform another Start Throw
- Continue this throw and sprint pattern for 2 minutes followed by a 1-minute rest period
- Repeat 4-6 times.

THROW AND RUN

- Select an assortment of medicine ball throws
- Perform one throw, sprint after the ball, perform the next throw, sprint after the ball, and continue
- Continue this throw and run drill for 2 minutes, followed by a 1-minute rest period
- Repeat 4-6 times.

A sample Throw and Run routine is listed below

- Chest Pass
- Overhand Throw
- Squat Throw
- Underhand Jump Throw
- Continue for 2 minutes

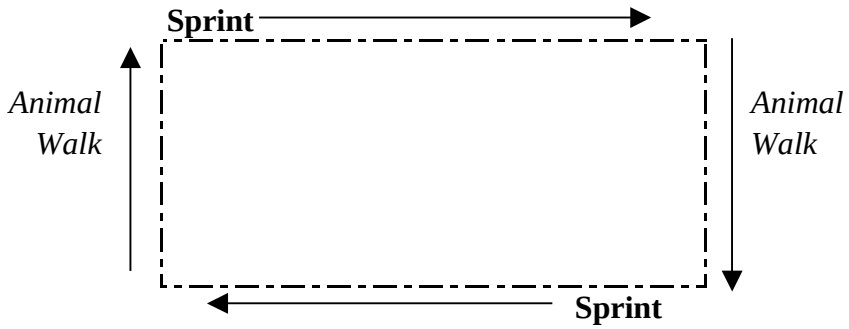
MED BALL ANIMAL CONDITIONING

Another great conditioning drill integrates medicine ball animal movements with sprint work. You will sprint for 50-100 meters and then proceed with 25 meters of animal movements.

Let's look at a sample conditioning routine.

- Sprint 50 meters
- Med Ball Crab Walk x 25 meters
- Sprint 50 meters
- Med Ball Rabbit Hop x 25 meters
- Sprint 50 meters
- Med Ball Frog Jump x 25 meters
- Sprint 50 meters
- Med Ball Duck Walk x 25 meters
- Repeat 4 times

You can perform this drill on any field. I recommend running this drill on a football or soccer field so you can use the markers to determine your distance. You can run these drills in the shape of a rectangle as illustrated below.



BURPEE INTERVALS

Burpees are perhaps the best conditioning exercise of all. With or without additional resistance (dumbbells or a medicine ball), burpees redefine the word INTENSITY!

You can use burpees in place of your interval running to add some variety to your anaerobic conditioning.

- Perform burpees for 30 seconds
- Rest 30 seconds
- Perform burpees for 30 seconds
- Rest 30 seconds
- Continue

You should work with this routine until you can perform 12 minutes of burpee intervals. This session would include **12 x 30 seconds of intervals**. After each 30 second work period, you will follow with a **30 second rest period**. As you begin to improve, you can **replace** the rest period with 30 seconds of shadow

boxing. When this becomes easy, you can begin adding resistance to your burpees, either through dumbbells or a medicine ball.

Below is a sample 4-week interval schedule that you can follow to boost your anaerobic conditioning.

	Monday	Wednesday	Friday
Week 1	7 Intervals	8 Intervals	9 Intervals
Week 2	8 Intervals	9 Intervals	10 Intervals
Week 3	9 Intervals	10 Intervals	11 Intervals
Week 4	10 Intervals	11 Intervals	12 Intervals

If this schedule is too easy, you can add shadow boxing to your rest period and/or add weighted resistance. If you add shadow boxing, your interval workout would be as follows:

- Burpees x 30 seconds
- Shadow boxing x 30 seconds
- Repeat for the desired number of intervals

Burpee intervals are a great break away from interval running on the track. If you are tired of running 400-meter intervals on the track, give this burpee program a try. Always remember the importance of variety.

STRENGTH + CONDITIONING

If you really want to crank up the intensity, you can mix together your strength and conditioning objectives into one brutal routine. Give this routine a try. Perform this cycle 4 times. There is no rest between exercises. Rest 1 minute between each cycle.

- Arms Extended Squat (MBE 56) x 25
- Burpees x 15
- Med Ball Power Overs (MBE 78) x 16
- Lateral Jumps x 20 (over the ball)
- Pick up the ball and sprint 50 meters
- Sprint back to starting position
- Crab Walk with med ball 25 meters
- Duck Walk with med ball 25 meters (back to starting position)
- Repeat 4 cycles – 1 minute of rest between each cycle

With a little creativity and imagination, you can develop your own conditioning drills. Think outside the box. Always look to incorporate variety into your routines.

PUTTING IT ALL TOGETHER

Throughout this training manual, I have illustrated numerous exercises and routines. At this point, you may be experiencing a minor case of information overload. You may be wondering how the heck you will find time to fit these exercises into an already time consuming training program.

This is a common problem among athletes today. There is only so much time in a day, yet so much to do. In this chapter, I will shed light on the often-complex task of creating a weekly training routine.

MY RECIPE FOR SUCCESS THEORY

As an athlete and trainer, I recognize the complexity involved in creating a complete training routine. We must all cope with time constraints, busy work schedules, family responsibilities, and a variety of other demands on our time. There is only so much time in a day, yet so many exercises you wish to perform. The question we must all contend with is how to fit everything into one complete workout schedule.

One of the most convenient and effective methods for determining your weekly training program is by viewing your workout as a **Recipe For Success**. No two athletes are the same. We all possess unique strengths and weaknesses. You may be training for a world championship or simply looking to lose a few pounds. We all have unique training objectives. Due to our individual differences, we must view our workouts on an individual basis. There are no *one-size fits all* approaches to fitness. For this reason, we can all benefit from the Recipe For Success system. We will each create a recipe unique to our needs. I can point you in the right direction, but you may need to make adjustments based on your schedule and unique training goals.

Although I am not known for my cooking prowess, I do appreciate the planning and preparation that is involved in a well-cooked meal. Great chefs are hard to find. A great chef is careful to select the best ingredients. He cooks each meal at a specific temperature for a designated time period.

The same craftsmanship and attention to detail that is utilized during food preparation can be applied to our training schedules. I have taken these concepts and created my Recipe for Success system. When you prepare a meal, you follow a recipe with certain ingredients. Certain meals taste better than others. We have all dined at restaurants where the food was great and others where the food was awful.

The tasty meals are better for a variety of reasons. The quality of their ingredients may be superior. A meal may be cooked too long or not long enough.

Perhaps the chef used too much of a certain ingredient, or perhaps not enough. An extra tablespoon of salt can ruin a meal…

No, this is not a cooking class, but stick with me on this… I promise that it will make sense…

The same concept of meal preparation can be applied to athletic training. A recipe for athletic success requires superior exercise selection. The perfect recipe allows us to maximize our limited training time. Certain recipes prescribe longer rest periods, more or less intensity, more or less repetitions, and so on… There are several training systems and techniques available to each athlete.

Consider plyometric training as an example… At this point, we know that plyometrics are a beneficial method of training. A proper program can improve our speed and power. Plyometrics are one of the better ingredients in our recipe. But be careful, as too much of a certain ingredient will ruin the recipe. If you perform plyometrics on a daily basis, you will cause more harm than good. Plyometrics are intense exercises that stimulate the nervous system. Your body needs adequate time to rest and recover from this form of training. Training with plyometrics on a daily basis would be equivalent to the chef who uses a cup of salt when the recipe only calls for one teaspoon.

A FEW STEPS TO HELP PLAN YOUR WORKOUT

Let's look at a few simple steps that will help you create your training program.

1. One of the most important steps in creating a routine is determining your training goals and objectives. Why are you training? What is your ultimate goal? What do you wish to achieve through training? Are you training to lose weight? To win a regional tournament? To win a national title? Take a minute to answer these questions. Write down your short-term goals as well as your ultimate long-term goal.

2. What is your current level of physical fitness? Are you just beginning an exercise program? Have you been training for a few months? A few years? Do you compete? It is important to gauge your current fitness level. Many of the advanced routines such as *complex training* should not be attempted until you develop a considerable foundation of strength and fitness. If you are a beginner, that is OK, just be cognizant of the fact that it takes time to achieve optimal physical fitness. If it were easy, we would all be champions. Beginners always want to progress faster than their body allows. Do not rush into advanced routines. Slow and steady wins the race. If you rush forward without developing the proper foundation, you are asking for injury. Train hard, but also train smart.

3. Another important step is determining how much time you have to train each day of the week. Do you have 1, 2, or 3 hours each day? Do you

plan to train in the morning and/or night? Write down your available training times on a piece of paper.

4. What are you good at, what areas require improvement? For example, if you are an excellent boxer with great technique but always run out of gas, you will need to improve your anaerobic conditioning. Or perhaps you have excellent stamina but you lack snap on your punches. You may need to focus more on improving speed and power with a plyometric program.

5. Next jot down the different types of training that you wish to include in your program. A few examples include skill training, sparring, strength training, anaerobic conditioning drills, plyometrics, complex training, etc… We will all have a unique list. For example, I am a boxer, so much of my time will be spent inside the ring working on technique, sparring, and improving my skills. Perhaps you play basketball, so your focus may be on improving your vertical jump. We will all have a proprietary recipe for success, tailored to our individual needs as an athlete.

Once you have answered the preceding questions, you can begin to construct your routine. Let's take a look at a sample from John Doe the boxer.

Name: John Doe

Training Goals:
- *Long Term Goal*: Win a world title
- *Short Term Goal* Win regional tournament
- *Training goals*: Improve endurance and power

Current Fitness Level
- Boxing skills are advanced
- Strength is moderate, requires improvement
- New to core training – current program is limited to crunches and sit-ups
- Endurance is moderate, requires improvement

Available Training Times
- Six days per week - 2 hours per day - mornings and evenings available

Areas To Improve
- Overall power and functional strength
- Core strength
- Anaerobic endurance

Types of Training To Include
- Plyometrics (*eventually complex training when ready*)
- Conditioning drills

- Strength training
- Boxing skill training
- Core training

THE NEXT STEP…

At this point, John Doe has put together a rough draft of his training goals and the steps necessary to achieve these goals.

Let's now look at some essential ingredients for a combat athlete. Whether you are a boxer, wrestler, grappler, or martial artist, many of the training objectives and requirements will be the same.

Conditioning drills: Anaerobic conditioning is very important for all combat sports. Combat is a multifaceted contest, which involves many skills and ballistic movements. As a combat athlete you need speed and explosive power. You will also require anaerobic strength endurance to apply this power throughout the event. The conditioning required for combat goes beyond the traditional regimen of long distance roadwork. Conditioning for combat sports must be intense. You must be prepared to work through the fatigue that results from lactic acid build up. Your energy output is anaerobic, without oxygen. The only way to prepare for this rigorous activity is through INTENSE, anaerobic conditioning drills. This form of training should be performed 2 to 4 days per week. Sample conditioning drills have been provided in the Training Routines chapter. Other common conditioning drills include anaerobic interval running. Most interval workouts consist of 400, 600 or 800-meter distances. For example, a common interval workout among boxers is 10 x 400 meters. This workout involves 10 separate 400-meter interval runs. Each run is followed by a 1-minute rest period. Interval running must be intense.

Strength training: Strength training is another important aspect to your success. When two equally skilled athletes compete against each other, the stronger man is usually victorious. It is your responsibility to become the stronger man (or woman). Speed and power are imperative. Strength is a requirement for power training. You must develop a solid strength foundation before training with explosive plyometric drills. As a combat athlete, much of your time will be spent working on technique and sport specific conditioning. Most combat athletes can meet their strength training objectives in 2-3 days per week.

Plyometrics: Plyometrics are an intense form of training that enhances starting speed, acceleration, and power. 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 strength training. We must build a foundation of strength before we can build a

body capable of enduring intense plyometrics training. Plyometric training is best-performed 2-3 days per week.

Core training: Core strength is imperative for optimal performance. Many athletes limit their core training to high repetition crunches and sit-ups. The medicine ball and dumbbell exercises provided in this manual will make crunches feel like Paradise Island. These exercises are intense and effective. This form of core training should be performed 2-3 days per week. On off days, you can work on less intense abdominal movements without weighted resistance.

Skill training: If you train for competition, you must dedicate much of your time towards skill training. If you are a boxer, you must box to improve. If you are a grappler, you must grapple to improve. If you are a wrestler, you must wrestle to improve. Strength, power, and stamina are useless if you lack the skills necessary to perform. A successful athlete must integrate several forms of training into one complete routine. You must deliver your newfound power and speed through your technique. Only through proper skill training can you expect to compete on an advanced level.

VARIETY, VARIETY, VARIETY…

Before I continue any further, I would first like to shed some light on the often-debated topic of bodyweight exercise vs. weight training. I am sure that you know individuals who swear by bodyweight exercise and others who are dedicated to the iron.

Which form of training is superior? There really is no right or wrong answer. Both forms of training provide resistance. Resistance is required to improve strength. Both forms of training can achieve this objective.

Instead of choosing one form of training over another, it is best to integrate a **variety** of training systems into one **complete** program. For example, I prefer to integrate weight training, bodyweight exercise, medicine ball training, sandbag lifting, and a variety of other training devices. Why limit yourself to one form of training when there are so many techniques available?

Variety is imperative. As an athlete, you must view your physical fitness as a never-ending journey. There is no such thing as a perfect workout or perfect exercise. As your body adapts to certain forms of training, you must look for new ways to shock the muscles. The human body is an amazing creation. It is capable of adapting to intense physical stress. You must always seek variety, to target your muscles in newfound ways. It is impossible to provide you with one training program that will last forever. You need to constantly tweak and refine your workout. Do not limit yourself to one form of training. Approach your training with an open mind.

WHAT ABOUT PERIODIZATION?

Periodization is a system where training volume and intensity are modified throughout a designated training period. The goal of periodization is to peak the athlete's performance for competition. By manipulating many training variables throughout a training cycle, the athlete is more likely to achieve peak performance levels, while also reducing the risk of over training and injury.

There are many variations to the traditional model of periodization. The focus of this training manual is not the discussion of each variant of periodization. Instead, let's briefly discuss some important principles that you should consider when designing your training routine.

As mentioned throughout this book, variety is important. When you train, the body reacts to the stimulus that you apply. In time, the body approaches homeostasis, and improvements slow or cease. Consider the weight lifter who always lifts with the same exercises, the same number of repetitions, and the same number of sets. Eventually, his strength gains will come to a crashing halt. He will plateau and no longer improve. The goal of a periodized program is to prevent this staleness. By varying the intensity throughout a training cycle, you are able to continually improve.

Many of the exercises in this manual are plyometric in nature. Plyometrics are very stressful to the body. Complex training is even more stressful. Complex training integrates plyometrics and strength training into one routine. Many of these intense routines should not be performed on a year-round basis. Instead, you should first increase your strength, then introduce plyometrics, and finally integrate complex training. Eventually you will peak during your competition season. After expending your energy during a rigorous competition phase, it is important to rest and recover.

Consider the following… let's assume you wish to integrate plyometrics into your routine. First, you must develop your strength. During this period, you incorporate weight training to **lay the foundation** for the more rigorous plyometric work. Eventually, you will develop the strength that is necessary to safely perform plyometrics. You will then perform **plyometrics and strength training**. For example, you could strength train on Monday and Thursday and conduct plyometrics on Tuesday and Friday. Your body will eventually adapt to this form of training. As you adapt, you must then look to incorporate variety. One option would be a complex training program. During this period, you could **combine** your strength training with plyometrics. You can expect to make significant gains during this period. You will achieve new levels of strength and power.

As a combat athlete, you must train with intensity. There is no exception to this rule. A well-planned program will allow you to direct this intensity in multiple

directions, thus allowing for continuous improvement. You cannot charge full throttle in one direction forever without leading to overuse and over training. By periodizing your routine, you constantly manipulate your training variables to allow for optimum results.

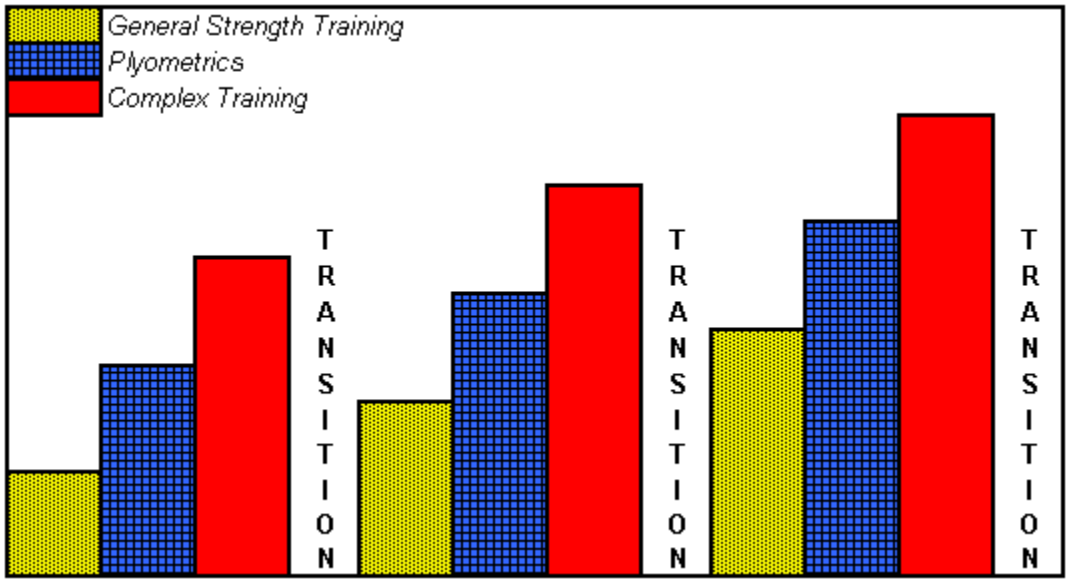
Many athletes see the word periodization and automatically assume,

"Whoa, that stuff is way too complicated. I just want to lift some weights…"

Do not make this mistake. You do not need to understand the details of each style of periodization. There are several books written exclusive to this topic if you are interested. In most situations, you do not require this degree of knowledge on the subject. My hope is that you simply recognize the need to vary your intensity and exercise selection.

Periodization is simply the act of adjusting your routines to continually meet **YOUR** needs. You should look to modify your program every 4-8 weeks to prevent staleness. The volume and intensity of your training should reflect your specific goals. If you are involved in a rigorous season, you may wish to reduce the volume and intensity. You can pick up the high-volume work when more time can be directed towards your workouts.

Consider the simplified graph below. The first column represents your initial strength training phase. During this phase, you lay the foundation for plyometrics. You then begin training plyometrics and strength training on separate days. Finally, in the third column, you integrate both forms of training into a complex routine. Eventually, your body stops responding so you enter a brief transition period. You then return to strength training, only this time you are stronger and begin the cycle with improved strength from the previous cycle.



You can continue training with a similar approach. By varying your training style and intensity, you are able to improve your power during each training cycle. This simplified diagram summarizes the importance of variety in training. Plyometrics are intense. You should not perform these intense exercises on a 52-week schedule. You should instead cycle your intensity to allow for continuous improvements while avoiding over training.

PUTTING THE PIECES TOGETHER

Let's now look at a sample-training week. Please note that this is only a sample. It is impossible to construct one routine that will satisfy the unique needs of the entire athletic population. I encourage you to incorporate variety and think outside the box when training. Anyone who attempts to market a *one-size-fits-all* approach to fitness does not belong in this industry.

TRAINING INGREDIENTS FOR COMBAT ATHLETES:

Conditioning drills	2 or 3 days per week
Strength training*	2 or 3 days per week
Plyometrics*	2 or 3 days per week
Complex Training*	2 days per week
Skill training	4 or 5 days per week
Core training	3 days per week

Notes: These ingredients will not all be included during the same training period. For example, complex training integrates plyometrics and strength training. If you perform complex training, you will not require separate days for plyometics and strength work.

Let's suppose that you have 6 days per week available to train. You have allocated between 1 and 2 hours per day. Sunday will be a rest day. Here are a few samples…

SAMPLE PROGRAM 1

Monday	Strength Training – Conditioning – Skill Training
Tuesday	Plyometrics – Core Training – Skill Training
Wednesday	Conditioning – Skill Training
Thursday	Strength Training – Core Training – Skill Training
Friday	Plyometrics – Skill Training
Saturday	Sandbag Workout

For this program, you will perform strength training and plyometics on separate days. You will also perform a sandbag workout on Saturday. Conditioning takes place on Monday and Wednesday. Weighted core training takes place Tuesday and Thursday. The sandbag workout on Saturday will provide strength, conditioning, and core work all in one. Skill training is allocated 5 days per week.

Skill training can consist of a variety of activities. Examples include shadow boxing, sparring, bag work, etc… This will vary according to your particular sport and training objective (ex. Do you train for recreational purposes or for competition?).

SAMPLE PROGRAM 2

Monday	Plyometrics – Skill Training
Tuesday	Core Training – Conditioning - Skill Training
Wednesday	Strength Training – Skill Training
Thursday	Core Training – Conditioning - Skill Training
Friday	Plyometrics – Skill Training
Saturday	Strength Training – Core Training - Conditioning

This program is slightly different. For this program, you will perform plyometrics on Monday and Friday. Strength training will take place on Wednesday and Saturday. I use this program for many of the fighters that I train. This routine leaves Tuesday and Thursday free from weight training and plyometrics. Tuesday and Thursday are commonly used for sparring days. I prefer my fighters to spar on days when they do not perform intense lifting.

SAMPLE PROGRAM 3

Monday	Core Training – Conditioning – Skill Training
Tuesday	Skill Training
Wednesday	Complex Training – Skill Training
Thursday	Skill Training
Friday	Core Training – Conditioning – Skill Training
Saturday	Complex Training

This program introduces complex training on Wednesday and Saturday. Strength training and plyometrics are combined into one complex routine. This program is similar to Program 2 as it leaves Tuesday and Thursday available for sparring. Conditioning drills are performed on Monday and Friday.

This program should not be attempted until you have developed an adequate foundation of strength training and plyometics training. You can first perform Program 1 or 2 before attempting Program 3 or 4. Complex training is very intense and should not be underestimated.

SAMPLE PROGRAM 4

Monday	Complex Training – Skill Training
Tuesday	Core Training – Conditioning - Skill Training
Wednesday	Skill Training
Thursday	Complex Training – Skill Training
Friday	Core Training – Conditioning - Skill Training
Saturday	Sandbag Workout

This program includes complex training as well as a sandbag workout at the end of the week. Complex training takes place on Monday and Thursday. The sandbag workout is reserved for the end of the week on Saturday. Core training and conditioning take place on Tuesday and Friday. The sandbag will also target these objectives during your Saturday workout.

This is a very intense program. You should not attempt this program before developing a considerable foundation of strength and stamina.

SUMMARY

These are just a few possible training programs. It is much easier to develop a complete training schedule when you write down your available training times along with the exercises/training techniques you wish to include. Once you determine these two steps, you can piece together a complete workout that fits your schedule. It is important to determine your needs, rate the importance of each training type, and allocate the time necessary to fulfill your goals.

FINAL THOUGHTS

- I cannot overemphasize the importance of variety. You should always look to incorporate variety in your complete program.
- As a combat athlete, you must train with intensity. Anaerobic conditioning is critical to your success. You need to train hard if you plan to fight hard.
- Do not limit yourself to your genetics. You can make considerable improvements in speed and power. You should include several cycles of plyometrics and complex training throughout the year.
- Each training day will not be your best. Do not train with the goal of being sore the next day. Plyometrics and complex training focus on quality, not quantity. Train with power and allow for sufficient rest between sets.
- You must train fast, to be fast. Explode through the movements.
- Positive change does not happen overnight. Speed and power improvements take time. Dedicate yourself today and you will gradually improve your performance. If it were easy, everyone would be a champion. Separate yourself from the majority, commit yourself to excellence! Get started TODAY!