IYCA

OLYMPIC LIFT

INSTRUCTOR COURSE

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IYCA INTERNATIONAL YOUTH CONDITIONING ASSOCIATION
The Leaders in Youth Fitness & Athletic Development Education

Olympic Lift Instructor Course

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TABLE OF CONTENTS

1

INTRODUCTION, BACKGROUND, and HISTORY


TRAINING PLA
LBS
5

INTRODUCTION

The Olympic lifts are some of the most explosive and dynamic demonstrations of power in any form of athletic participation. Contrary to common sentiment, athletes at nearly any developmental level can be taught the fundamentals necessary in order to lay the groundwork for the development and refinement of proper Olympic lifting technique. This course represents a proven effective, efficient, and safe means through which to teach developing athletes to perform the Olympic lifts.

Olympic weightlifting, as a sport, has been practiced since the first modern Olympic Games in 1896.[1] After a brief hiatus in 1900, the sport was reinstated in the 1904 Games.[1] Weightlifting events, although varied in specific composition over the years, have since been a part of every Summer Games held since 1920. Originally composed of five weight classes competing with three standard lifts including the press, the snatch, and the clean & jerk, modern competitive Olympic lifters compete in eight and seven weight classes for men and women respectively and standard lifts include the snatch and the clean & jerk.[1] Contemporary training includes lifts such as the clean and its variants (hang clean, power clean, muscle clean, etc.) and the snatch and its variants (muscle snatch, snatch pull, etc.) as well as progression and regression variants of the movements to assist in ensuring appropriate training stimulus throughout the specific training session as well as the annual training plan.

The sport of competitive weightlifting, as referred to in the Olympic program, has been dominated for many years by the Europeans, first

by nations of the Eastern Bloc and more recently by the former members of the Soviet Union. Much of our current knowledge of weightlifting and specific weight training practices has been learned from sport scientists, coaches, and athletes from these nations. However, though the last half-century, the Olympic lifts have gained widespread popularity as a commonly used training modality with application to many sports. This Instructor Course is not designed to coach athletes in the sport of Olympic weightlifting, but instead is designed to assist those that would look to help athletes improve their sport performance through the use of Olympic lifts in developing the necessary pedagogical and coaching skills to ensure that young athletes learn requisite skills as safely, efficiently, and effectively as possible. Furthermore, this resource has been developed to compliment the companion Olympic Lift Instructor Course video resources and vice versa in order to best prepare the coach-practitioner to teach and utilize the Olympic lifts in regular coaching practice.

2

BENEFITS

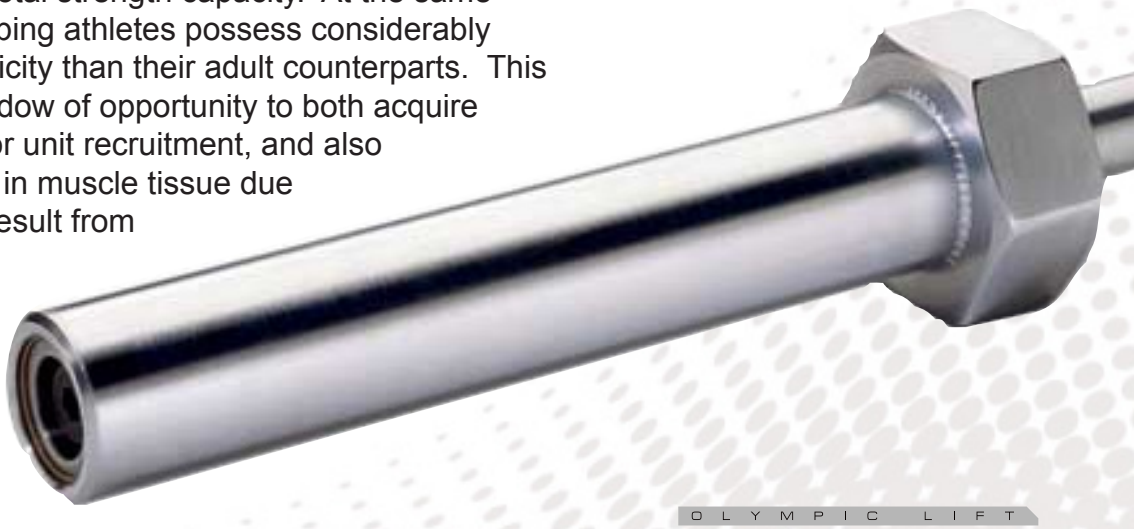
BENEFITS

Hypertrophic Changes & Improved Strength

Any prolonged/serial anaerobic resistance training program will result in an increase in muscle fiber cross sectional area (CSA), which eventually leads to macroscopic muscular hypertrophy.[2] Furthermore, high intensity resistance training such as Olympic lifting techniques possess the added benefit of relying primarily upon high-threshold motor units, which are composed primarily of power-producing Type II muscle fibers. [3] Not only does this improved activation of Type II fibers improve power output capacity, but also further augments hypertrophic changes due to the fact that Type II fibers increase more in response to a given training stimulus than comparable Type I fibers.[4]

The associated hypertrophy of Type II muscle fibers leads to increases in maximal strength similar to (and in some cases superior to) those from traditional power lifting techniques.[5] For example, McBride, et al. (1999) noted that athletes who trained with Olympic lifts were found to have greater maximal force output than power lifters who trained more frequently and with greater relative loads than the Olympic lifting group.[5] Such findings further support the use of Olympic lifts as highly specific but also highly efficient compared to alternative training methods.[6]

For post-pubertal young athletes, hypertrophic changes in response to training grow increasingly likely as a result of the endocrine-based changes associated with the maturation process. Hypertrophy results in increased CSA, ultimately a critical determinant of total strength capacity. At the same time, these same developing athletes possess considerably more motor system plasticity than their adult counterparts. This creates an important window of opportunity to both acquire motor skill, improve motor unit recruitment, and also enjoy structural changes in muscle tissue due to hypertrophy that can result from Olympic lifting.



Improved Motor Control & Rate Coding

The basic functional unit of skeletal muscle, the motor unit, is composed of a motor neuron and all of the muscle fibers to which it is connected. A motor neuron can innervate between as few as 9 and as many as 1900+ individual muscle fibers.[7, 8] Those motor units with fewer muscle fibers are recruited for smaller tasks and prior to larger motor units, while the larger motor units are typically recruited when the body needs to produce greater force.[6-8] Due to the high force/high velocity nature of Olympic lifts, large motor units are recruited sooner and more efficiently than they would otherwise be without Olympic lifting.[6, 8, 9]

Of great importance to athletes is the ability to move in the proper sequence or sequences to complete a given movement. An athlete swinging a bat, jumping, sprinting, or performing a related skill must generate movement from the center of the body outwardly toward the extremities. Similarly, the movements of the Olympic lifts are initiated from the "center" of the body or near the hips.

The location of this power initiation is similar to many other sporting skills. While not representative of these specific skills in the strictest sense, the osteokinematic actions required (triple extension: hip extension, knee extension, and plantarflexion; core stability, etc.) are clearly apparent during performance and of practical importance. As such, training which regularly includes Olympic lifts will result in training demands that better develop motor unit control through repetition and will result in greater overall athletic improvement than more isolative or assistive-based exercises. [6]

Furthermore, high intensity training stimuli such as Olympic lifting result in an overall improvement in rate coding and efficiency within the motor unit.[10] This adaptation results in an increase in the level of neural signals sent to a motor neuron that is already activated. Rate coding adaptations result in increased force output of the muscle without necessitating the activation of additional motor units. Repeated bouts of high force/high velocity Olympic lifting can increase the rate coding of motor units. [7, 8]

By triggering improvements in both motor unit recruitment and rate coding, Olympic lifting techniques elicit neurological accommodation that results in a tremendous positive impact on an athlete's ability to rapidly generate force. As such, an athlete who regularly utilizes Olympic lifts in an athletic development program will typically enjoy dramatic improvements in jumping, sprinting, and change of direction ability, all of which are critical determinants of success in most team sports.

Increased Rate of Force Development (RFD)

The primary reason Olympic lifting has been increasingly utilized as a means of enhancing sport performance is the associated increase in explosive power or rate of force production (RFD). In many athletic endeavors, power generation is one of the most important determinants of success.[11] Movements like sprinting and jumping are highly dependent on an athlete's ability to produce force, but more specifically to produce force at a high rate of speed.[6, 12, 13]

For example, both sprinting and jumping are characterized by brief muscle actions of maximal or near maximal force production in the minimal amount of time possible to generate a high velocity movement. The athlete's ability to successfully perform such movements is determined primarily by his or her ability to generate maximal explosive power at and through the hips.[14] As such, any training technique or modality which can enhance the athlete's ability to generate peak power, especially through the hips, possesses a high capacity for performance enhancement in sporting skills.[15] Simply put, Olympic lifts do just that.[15]

To further illustrate, while there are multiple approaches to explosive power-based training, the clean and the snatch have been shown to elicit higher power output than other forms of resistance training.[16] For example, Haff and colleagues (2001) demonstrated that athletes were able to generate nearly triple the power output when performing either snatches or cleans compared to squats or deadlifts, while those same Olympic lifts resulted in 10 times the power production than the traditional

barbell bench press.[6] Such work clearly illustrates that traditional "power" lifting moves produce only a fraction of the power associated with the Olympic lifts. As such, this and similar work indicates that in order to truly train for power, one would be well advised to include Olympic lifts in an athlete's training program.

Similarly, Hoffman, et al. (2004) compared American football players trained using Olympic lifting movements exclusively to those who trained using traditional non-Olympic resistance training techniques.[17] The Olympic lifting group significantly outperformed the comparison group on measures of vertical jump, 40 yard sprint time, and multiple tests of agility. Researchers concluded that the high force/high velocity movements of the clean and snatch were superior to alternative high force/low velocity movements associated with traditional resistance training.[17]

Without question, the Olympic lifts are beneficial for numerous reasons, including hypertrophic changes & improved strength, improved motor control & rate coding, and an increased rate of force production. Contemporary scientific investigations have clearly demonstrated the effectiveness of such programming and new lines of inquiry appear similarly supportive. By systematically and appropriately applying Olympic lifts and Olympic lifting thechniques, the coach-practitioner can expect to significantly improve athletic performance in most team sports through meaningful improvements in overall power production.

3

CONTROVERSY and CONCERNS


TRAINING PLATE
5
LBS

CONTROVERSY and CONCERNS

Safety

Olympic lifting is not without concerns and controversy among coaches, athletes, and parents. Chief among these is the safety of doing the Olympic lifts. Injuries are a concern in all athletics and activities and weightlifting is no different. It is commonly held and has been suggested by many coaches that the most common areas of concern regarding Olympic lifting are the shoulder, knee and low back.[18]

First, the shoulder is commonly injured in many sports, and etiological data seem to indicate that competitive weightlifters are injured at a similar rate to their peers participating in other athletic activities.[19] Due to the relatively high level of mobility at the glenohumeral joint, appropriate stabilization is critical to preventing shoulder injuries. A program of scapular stabilization and proper coaching in the overhead positions should help to alleviate these concerns. Athletes that participate in overhead throwing motions should be particularly careful and are generally discouraged from taking the bar to the extremes of motion (i.e. overhead); however, pulling motions and the racking position in the clean are acceptable.

Next, another area of injury concern is the knee. Although the knee is commonly injured in many sporting activities, weightlifting results in relatively few acute knee injuries.[20-22] Instead, chronic overuse injuries such as patellar tendinitis and generalized anterior knee pain appear to be most prevalent.[20] Contrary to the acute mechanisms that cause most traumatic knee injuries, Olympic lifting involves movement through a controlled range of motion with known or anticipated forces. As such, the athlete is likely better able to anticipate movement before it occurs and the attenuate those forces that might otherwise lead to injury by stabilizing the joint through the recruitment of the dynamic stabilizers—namely the muscles that

cross the joint – to provide added protection.

Lastly, Olympic lifting involves production of high levels of force and the musculature of the core is involved throughout the lift as stabilizers and prime movers as well as forceful spinal extension.[20] This has led some to suggest that Olympic lifting likely results in a high rate of lumbar spine injuries, most notably spondylolysis and spodylolisthesis. Characterized by a stress fracture to the pars interarticularis of the vertebrae and a resultant anterior slippage of the vertebrae respectively, spondylolysis and spondylolisthesis occur more frequently in sports that involve repetitive forceful spinal extension such as gymnastics, diving, and American football.[23] However, data regarding Olympic weightlifting remains equivocal at best.

Some vocal opponents to the practice of incorporating Olympic lifting as a part of a sport preparation strength and conditioning program have emerged on the grounds of the perceived high risk of injury to the spine. Such individuals have decried the technique as dangerous and unnecessary.[24-26] However, relatively recent empirical studies from the mid-to late nineties have not supported such positions.

At the same time, earlier investigations that pointed to a potential increase in injury risk have been strongly questioned on methodological grounds as well as fundamental changes in competitive Olympic lifting (namely the removal of the overhead press) that have reulted in decreased spinal loading and a resultant lower risk of injury.[27] For example, Calhoon and Fry (1999) examined the injury rates of Olympic weightlifters over a six year period and discovered that participants were no more likely to suffer injuries to the lumbar spine than athletes in other sports including American football, track and field, and gymnastics.[20] Short-term intervention studies such as those conducted by Hoffman, et al. (2004) and Chanell, et al. (2008) have also failed to support the notion that Olympic lifting represents an increased risk of injury.[17, 28]

To the contrary, it could be argued that Olympic lifting might potentially result in the development of additional core strength that protects -- rather than exposes-- an athlete to lumbar spine injury. While it is estimated that between 3-7%

of all athletes and non-athletes alike suffer from spondylolysis, Calhoon and Fry (1999) did not observe a single case of spondylolysis during the six year duration of their investigation.[20, 29] Proper instruction of Olympic lifts should result in the development of movement patterns that prevent athletes from ever reaching positions of extreme flexion or extension of the spine, which are the common mechanisms of back injury. This, coupled with the potential for increased performance capacity, is likely the reason why so many strength coaches working with elite athletes incorporate such techniques into their training, with an overwhelming majority of strength & conditioning professionals in the National Hockey League (100%), National Basketball Association (95%), and the National Football League all reporting use of Olympic lifting techniques somewhere within their programming.[30-32]

Prior to initiating any resistance training program, athletes should go through a thorough preparatory program to ensure appropriate mobility of the thoracic spine and stability through the core and lumbar spine. Such an approach can ensure the establishment of a sound foundation upon which to base subsequent progressions. However, what is clear is that under the guidance of a competent professional, resistance training of any sort, including Olympic lifting, does not lead to increased risk of injury.[33, 34] Instead, as indicated by the American Academy of Pediactrics Council on Sports Medicine and Fitness, developing and adolescent athletes who undergo strength training in a supervised environment with competent professionals serving to instruct technique are actually at lower risk for injury than either those individuals who participate in organized sport or those engaged in general recess play at school.[21, 22, 35]

Time vs. Effect

Some coaches who choose to not use Olympic lifting in their programs cite a lack of teaching time and the availability of other less technique-intensive alternatives to increase both power and speed. Such professionals employ different

strategies for their training programs; however, typically a traditional program of power movements is used exclusively or a combination of traditional power movements for force production and sprinting and plyometric training for speed generation. Most often, the reasoning behind such program selection is a perceived lack of return on the time necessary to properly teach Olympic lifts.

As discussed previously, much of the success of many athletes is dependent in no small part upon the ability to produce movements with high force at high velocities.[15] Particularly given the high level of motor plasticity and high capacity for acquiring new motor skills present in most adolescent athletes, it would seem logical to consider the time necessary to progressively teach and introduce Olympic lifting techniques as appropriate. Athletes in a well designed program administered by a qualified and skilled coach can quite literally learn to effectively and safely perform Olympic lift movements in a matter of days.

With a logical teaching progression, the time invested to teach these lifts is minimal when compared to the tremendous results gained from implementation of the lifts. At the same time, the increasing likelihood that the developing athlete will be required to perform such technical lifts in the future should he or she progress on to higher levels of participation (i.e. high school, college, professional, etc.) would seem to point to the importance of learning the movement pattern when motor acquisition is at its peak and slowly refining skills rather than attempting to learn them for the first time much later in the developmental process. Coaches who opt against the short-term time investment required to teach such skills effectively miss out on the tremendous potential long-term benefits and athletic improvements associated with learning the Olympic lift movement patterns sooner rather than later.

When to Start

The first introduction to using the Olympic lifts for most athletes typically occurs early in the transformation period, at age 14 or greater. This introduction is most often associated with the athlete's first experience in their high school weight room. This is an appropriate time to begin using Olympic lift teaching progressions to train athletes; however, athletes younger than 14 can begin resistance training with the Olympic lifts provided the lifts are always performed under the watchful eye of a skilled and experienced coach and loading is kept to a minimum during the initial learning process.[33, 36, 37] While, as stated previously, supervision and coaching are always important when young athletes are engaged in any resistance training program, such is even more accurate when those athletes are attempting to develop new and highly technical skills such as the Olympic lifts.[33, 36, 37]

The idea to begin teaching Olympic lifts prior to the age of 14 remains somewhat controversial; however, it is not unprecedented in the literature. For example, in the former Soviet Union, athletes were typically selected for training in competitive Olympic lifting at age 12 and began formal training at age 13-14.[38] Under this system, properly prepared athletes consistently demonstrated the greatest increases in strength and explosiveness during the critical period from ages 14-17. This would suggest that early exposure to requisite motor skills could lead to enhanced development later. More specifically, athletes can be introduced to the Olympic lifting teaching progressions as early as age 11 or 12, with introduction at this early stage focused on technique mastery with minimal loading (< 20 kg). If an athlete is introduced to training using Olympic lifting at this early stage and appropriate movement skills are developed, training from ages 14-17 can be increasingly focused on improvements in strength and explosiveness.

4

PROGRESSIONS OVER TIME

PROGRESSIONS OVER TIME

Prior to onset of training, athletes from both ages 10-13 and 14+ should undergo a thorough assessment to determine their readiness for training with the Olympic lifts. Of primary importance is determination of the individual athlete's ability to reach the positions necessary to safely complete the lift. At minimum, these pre-training considerations should include:

Ankle Mobility

Assessing and improving upon ankle mobility will ultimately allow an athlete to reach the correct starting position from the floor as well as be able to achieve the correct position while overhead or in with a bar racked at their shoulders.

Hip Mobility

Athletes must have a great degree of mobility in the hips to achieve a safe and effective starting position on the floor. Athletes with restrictions at the hips will likely compensate with accessory motion from the lumbar spine and increase the risk of lumbar injury.

Core Stability

The dynamic nature of the movements and the large range of motion encountered at multiple joints within the kinetic chains during the performance of the lifts require significant core control to maintain a stable spine.

Thoracic Spine Mobility

To receive the bar in the correct racked position or overhead requires a great degree of mobility in the thoracic spine. Thoracic spine extension allows the athlete to achieve correct positions from the start, as well.

Any Athlete lacking adequate thoracic spine extension will find it difficult to achieve the correct positions.

Scapular Stability

Scapular stability is critical to glenohumeral stability during the performance of most resistance exercises, and such is particularly true during the performance of loaded overhead movements. However, scapular stability is also important during the pulling portions of the movements. During this phase, the bar must be tight to the body and much of this control comes from the peri-scapular stabilizer muscles.

Wrist Flexibility

The flexibility of an athlete's wrists is often the factor that limits their completion of the lifts to the greatest degree once loading is involved. Preparing athletes for this and determining the necessity for wrist flexibility is an important part of helping the athlete succeed.

5

ESSENTIAL SKILLS SETS


TRAINING

ESSENTIAL SKILLS SETS

Ages 10-13

The focus early in this period of time is preparing the movement patterns necessary for current and subsequent success while also preparing the athlete for the explosive nature of Olympic lifts. Two very simple movement patterns which are considered essential foundational skills to acquire include the Romanian deadlift (RDL) progression and the squat progression.

RDL Progressions

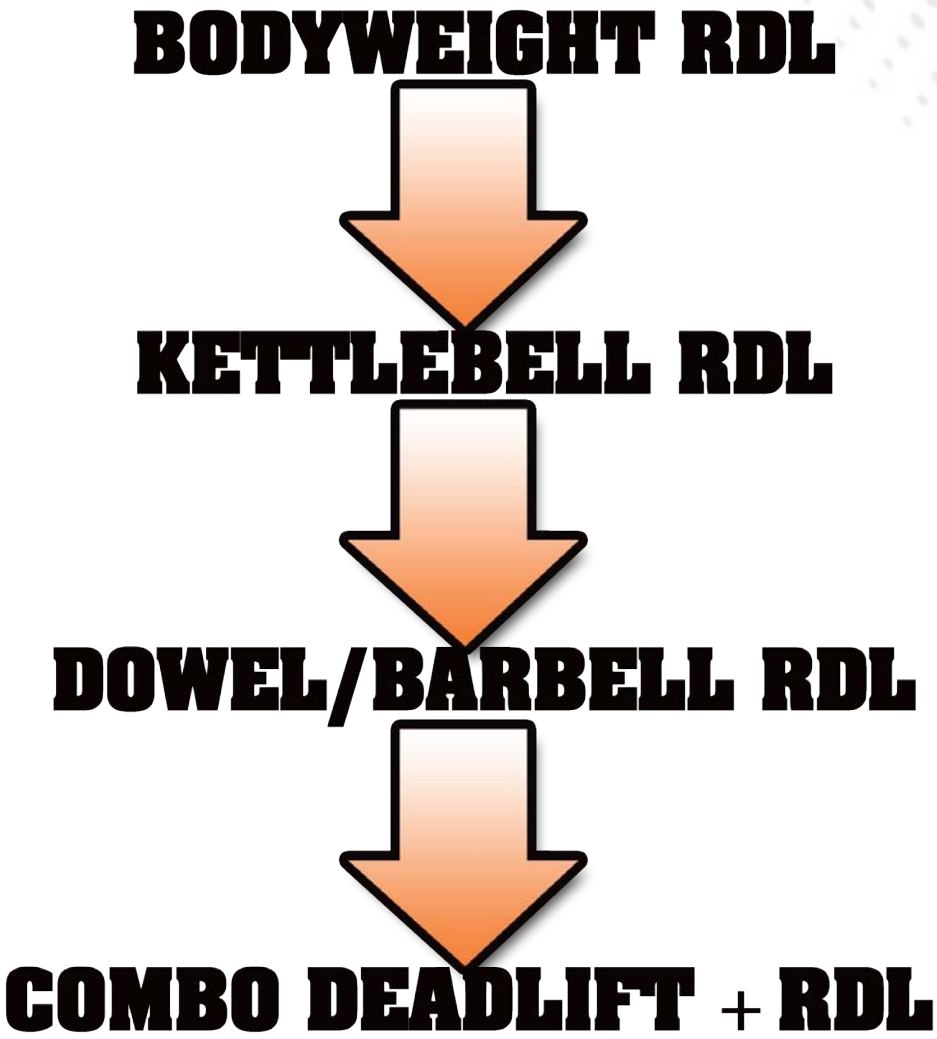
Romanian deadlifts and the hip hinge pattern necessary during exercise execution are the primary mechanism through which an athlete generates explosive force when the bar is above the knee. Establishing this pattern early in training will allow the athlete to have an easily referenced starting point.

To prepare the athlete for the RDL, it is typically simplest to begin with a bodyweight variation. Athletes should learn to effectively hinge at the hips. Athletes should also learn to slide the palms down the thighs while pushing the hips back (sometimes to a fixed object).

The athlete can then proceed to the light loading of a kettlebell RDL. Using the kettlebell for loading will introduce the athlete to the feel of a load in the hands. At this early stage it is critical to coach the athlete to keep the kettlebell close to the body throughout the movement.

Next, the athlete can use an unweighted dowel or barbell to load the movement; however, loading should again be light. The key with all of these movements is the *quality* of the movement **not** the *quantity* of weight. Maintaining control of the bar as it descends is important, and eccentric control should also be emphasized. Additionally, there should be no space between the bar and the body throughout the movement.

Lastly, in preparation for the Olympic lifts, a combination DL + RDL can work well in preparing the athlete to lift the bar from the floor. The kettlebell will begin nearly at the athlete's heels and will require excellent positioning from the ground to move into the RDL.



RDL Progressions

Squat Progressions

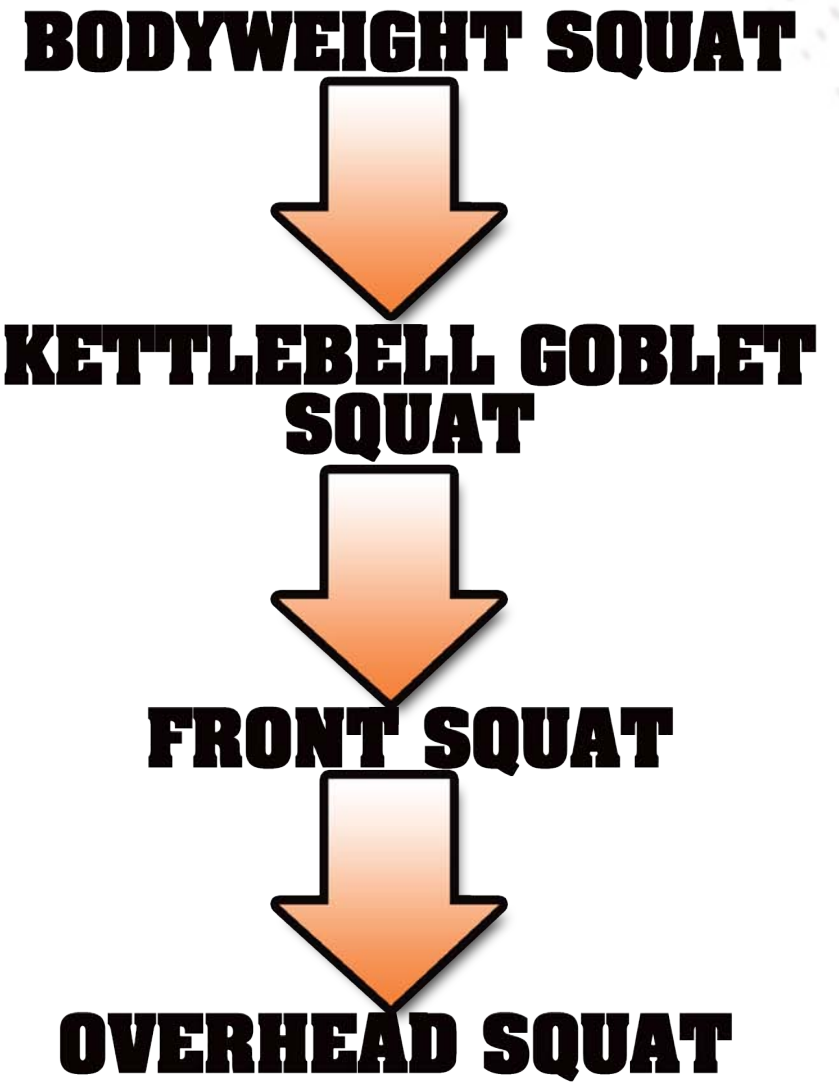
Much like RDL progressions, early squat training should be focused on developing proper squat technique through use of bodyweight exercises. It is almost always advisable to ensure proper form before adding any external load. The squat establishes the movements necessary to catch the bar in both an overhead and racked position.

The primary means by which to progress the squat is through varying loading patterns. First, a medicine ball front squat would be considered an initial step after bodyweight skills. Holding a medicine ball at the shoulders is relatively simple and not as intimidating to the young athlete, unlike other implements might seem initially. It is also quite difficult for the athlete to become overloaded. At this stage, the athletes should focus on correct foot positioning and initiation of the movement.

Next, the primary phase of loading in which the athlete should spend most of the time in preparation for Olympic lifting is the kettlebell goblet squat. When the kettlebell is held at shoulder height and away from the body, the athlete is forced to activate the core to a greater degree than with previous variants. Additionally, the athlete can easily remove the load should it become too challenging.

Next, the athletes should be progressed to a traditional front squat. Like the RDL progression, this may be performed with a dowel or a standard barbell. This movement should feel quite similar to the goblet squat to the athlete and this familiarity should result in a relatively quick mastery of this stage. Again, loading should be conservative and movement quality should be the primary focus.

Lastly, once the athlete has demonstrated control and mastery in the front squat, the final step in the progression is the overhead squat. The overhead squat requires the greatest degree of mobility and stability to complete and are challenging even for some accomplished lifters. While the athlete is in the overhead position insure that the athlete has the dowel or bar directly over the ears and the upper body should be close to vertical during the descent.



Squat Progressions

Plyometrics

Plyometrics teach the athlete to apply force to the ground in an attempt to move explosively. Preparing for the Olympic lifts using plyometrics is an effective way to teach the athlete about the explosion of the pull above the knee. When using plyometrics, the athlete should try to initiate the counter movement portion of the jump through a hip hinge and complete the jumps using an explosive extension of the hips.

Starting with stationary plyometric drills allows the athlete to focus more on the overall quality of the movement. In all plyometric movements, the focus should be on hip extension. Furthermore, it is important to limit exercise selection of movements in which the explosive hip extension is immediately followed by deep knee flexion (tuck jumps, etc.), as this will encourage the athlete to inhibit the hip extension for the sake of successfully completing the subsequent knee flexion.

Ages 14+

As with all progressions, it is essential for the young athlete to demonstrate mastery on preceding steps prior to progressing to more advanced skills. As such, athletes ages 14+ should initiate practice on the following Olympic lift skill progressions only after demonstrating proficiency on the essential skills set for 10-13 year old athletes as previously described. Additionally, programs for athletes ages 14+ should include introduction to other lifts such as the back squat, as well.

Back Squat

The back squat is important for older athletes to use in order to gain additional lower body strength. Although not as similar to the Olympic lifts as the front squat or overhead squat, the back squat is still highly beneficial to the more mature athlete seeking to improve power.

Teaching Progression

To best teach the Olympic lifts, a systemized progression of teaching methods must be used. For any athlete, it is important to first learn foundational movements such as the RDL, squat, and plyometric drills in order to ensure adequate physically preparation before learning the Olympic lift movements.

To begin, all movements begin from the hang position. Training from the hang position allows for early success by the athlete, as this position is most often far more comfortable compared to starting from the floor. Athletes have experience moving explosively from this position from the use of plyometrics and sports participation, and tapping into that experience to generate force can assist in easing the learning process. From the hang position, the athlete is better able to utilize the stretch shortening cycle, critical to performance in athletic endeavors like jumping, and therefore be better able to create power.[28] The teaching progression for both the hang clean and the hang snatch involves a four step process, including start position, jump pull, high pull, and catch.

Start Position: Level 1

The athlete should begin by holding a barbell with a double overhand/pronated grip of the appropriate width (shoulder width or slightly wider for the clean, almost 2x shoulder width for the snatch) in a full standing position. From this position, the athlete should move the bar down the anterior thighs in the same manner as when performing a RDL. The athlete should pause above with the bar at a level just above their knees. The chest should be in front of the bar and feet flat on the ground.

To move the bar back to the standing position, the athlete should initiate the movement by driving the hips forward. The athlete should remain with the feet flat on the floor and return to the standing position.

Start Position: Level 1

Jump Pull: Level 2

Later in teaching this movement will be referred to as a "hang clean pull" from above the knee; however, early in training it is best to relate to prior experiences in order to cultivate comfort and a feeling of familiarity even if the movement is new. As such, at this point in training it is consider best to refer to the movement as a "jump pull," or a "jump with the bar."

The athlete begins in standing position and moves into a start position just above the knee in the same manner as Level 1. The athlete should be instructed to then initiate the pull and jump as if in an unloaded state. The athlete should be cued to remain on a "flat foot" as long as possible. It is common that the athlete tend to shift bodyweight towards the toes; however, such motion will result in the bar concurrently migrating away from the body, undermining the level of carryover to the next step in the progression.

In the course of a normal jumping motion, the athlete will most often modify the start position from one of near full extension into progressively greater knee flexion. This is an acceptable and normal part of the movement experimentation process; however, the athlete should not move the knees forward to initiate the movement from above the knees. Instead, movement should be triggered by the hips with knee flexion following after.

The athlete should leave the ground and keep the arms extended (active inhibition), thereby ensuring that the bar remains near the body. As the athlete demonstrates increasing proficiency, it is acceptable to slightly progress this level from within by cueing the athlete to begin to use the upper body. The simple command to "punch the traps to the ears" can be used to trigger initiation of the shrug in synchronicity with the jump.

Jump Pull: Level 2

High Pull: Level 3

Next, in order to continue to progress the movement skill, the athlete will engage the upper body to a greater degree in this phase. In Level 2, the athlete utilized an active inhibition of the movement of the upper body; however, in this stage the athlete will allow the upper body to work naturally, slightly influencing the path of the bar and maintaining control.

It is important to note that the athlete should not actively pull the bar up with their arms. Instead, the arms should be used primarily as a guide to put the bar in the correct path. Once the pull is completed using the hips, the upward momentum of the bar will make it continue to travel upwards. Using this momentum, the athlete then guides the elbows up and out to keep the bar close to the body. It is also important that the athlete keep the elbows up rather than allowing posterior migration. If the elbows are allowed to move backward, the athlete will subsequently tend to increase the space between the body and bar, ultimately leading to difficulty in performing the final step of the progression.

High Pull: Level 3

Level 4

All previous steps up to Level 4 are similar for both the clean and the snatch lifts; however, the final stage of the movement differs. As a result, at this point in the teaching process, it is necessary to differentiate the finishing positions of both the clean and snatch. The clean is caught anterior to the body at shoulder height, while the snatch is caught overhead and must be cued differently in order to achieve this position.

The Catch: Clean Level 4

Previous steps in the teaching progression were developed to add just one additional element to the preceding movement. For example, the addition of an explosive element such as a jump or the addition of the upper body as in the high pull. However, in the final stage of learning, the athlete will be asked to add two elements simultaneously. Overall, the catch can be thought of as the "final pull" of the Olympic lifts, a point at which the athlete "pulls" the body under the bar. For some athletes, this may be difficult to conceptualize. As such, it may be necessary to further divide this stage into two component parts ("elbows around" and "sit").

At the completion of the high pull, the bar is typically at chest level or higher and the elbows are up and out. In order to receive the bar in the clean, the athlete must actively drive the elbows around the bar. If the high pull is executed well, this task should prove quite easy.

At the same time the athlete is driving the elbows around the bar, the lower body is engaged in the movement by "sitting" under the bar. Reception of the bar should occur at the point at which the bar no longer has upward momentum and feels "weightless," and the athlete simply must learn to feel this point through light load repetition. During the sitting portion of the skill, the athlete's feet should move outward slightly (accomplished through slight hip external rotation) as the athlete quickly transitions from a jump width stance in the concentric phase of movement into a lower and wider athletic stance during the eccentric phase.

The Punch and Sit: Snatch Level 4

Similar to Level 4 of the clean, the athlete will be asked to add two new elements simultaneously in order to complete Level 4 of the snatch. In this case, the overall movement is characterized by pulling "under the bar" prior to initiating the "punch" and "sit."

The athlete should finish the high pull with the elbows up and out. At the point where the bar feels weightless, the athlete should then punch forcefully upward, engaging the upper body to complete the movement. Concurrently, the athlete should reset the feet to a slightly wider, more stable position.

The active overhead punch should coincide with a sitting motion in the lower extremities and trunk to receive the bar at the same height. When performing the snatch, it is important to synchronize the landing of the feet precisely with the moment of the overhead elbow lockout.

Left: The Catch: Clean Level 4

Right: The Punch and Sit: Snatch Level 4

Olympic Lift Variations

The primary addition to the programs of the athlete aged 14+ are variations of the Olympic lifts aimed at increasing technical proficiency and increasing power. These lift variations most often involve modifications to the athlete's start or finish position of the standard lift. Some common variations include:

- Hang clean from mid-thigh
- Hang clean from below the knee
- Power clean from floor
- Hang clean pull from above the knee
- Hang clean pull from below the knee
- Clean pull from the floor
- Hang clean from blocks above the knee
- Hang clean from blocks mid-thigh
- Hang clean + front squat
- Power clean + front squat
- Hang snatch from mid-thigh
- Hang snatch from below the knee
- Power snatch
- Hang snatch pull from mid-thigh
- Hang snatch pull from above the knee
- Snatch pull
- Hang snatch from blocks
- Hang snatch + overhead squat
- Power snatch + overhead squat

APPLICATION: 10-13 SAMPLE PROGRAMMING

6

Sample Program: Olympic Lift Preparation Phase 1 (Ages 10-13)

Day 1

PreRoutine

Soft-Tissue Mobilization: Foam Roller/Ball

Location	Frequency	Reps	Timing
IT bands	Daily	30”-1’	Pre-workout
Quadriceps	Daily	30”-1’	Pre-workout
Hip flexors	Daily	30”-1’	Pre-workout
Lats	Daily	30”-1’	Pre-workout
Glutes	Daily	30”-1’	Pre-workout
Thoracic spine	Daily	30”-1’	Pre-workout

Dynamic Warm-Up/Mobility Exercises

Exercise	Comments
Heel to butt pull back w/ overhead reach (1 x 20 yards)	Iliopsoas & rectus femoris stretch.
Cradle walk (1 x 20 yards)	Pull with hands over shin.
Spiderman lunge (1 x 20 yards)	Pull chest up as hand touches ground.
Reverse lunge	

Activation/Acute Corrective Exercises

Glute bridge	2-3 x 10
Prone ITY’s	2-3 x 10 ea

Explosive/Power Work

Exercise	Tempo	1	2	3	4	Comments	Rest
In-place jump	*Exp*	2x5	3x5	3x5	3x5	*Land firmly on flat feet, prepare by pushing back hips. EXPLODE!*	90-120”

Strength Training

Exercise	Tempo	1	2	3	4	Comments	Rest
Bodyweight RDL	*201*	2x10	3x10	3x8-10	3x8	*Chest up, back flat throughout. Finish with the glutes. Slide hands down legs to achieve correct positioning.*	60-90”
Bodyweight split squat	*201*	2x10	3x10	3x8-10	3x8	*90-90 position. Upright posture.*	60-90”
Plank	*201*	2x20	3x20	3x30	3x30	*All reps measured in seconds.*	60-90”
Push up	*201*	2x10	3x10	3x8-10	3x8	*Change angle if too difficult to finish.*	60-90”
Scramble to balance	*201*	2x10	3x10	3x8-10	3x8	*Work on position on one leg. Tripod foot position.*	60-90”

Post-Workout Stretching/Corrective Exercises

Exercise	Sets/Reps
3-way band stretching	1-2 x 30”

Sample Program: Olympic Lift Preparation Phase 1 (Ages 10-13)

Day 2

PreRoutine

Soft-Tissue Mobilization: Foam Roller/Ball

Location	Frequency	Reps	Timing
IT bands	Daily	30”-1’	Pre-workout
Quadriceps	Daily	30”-1’	Pre-workout
Hip flexors	Daily	30”-1’	Pre-workout
Lats	Daily	30”-1’	Pre-workout
Glutes	Daily	30”-1’	Pre-workout
Thoracic spine	Daily	30”-1’	Pre-workout

Dynamic Warm-Up/Mobility Exercises

Exercise	Comments
Heel to butt pull back w/ overhead reach (1 x 20 yards)	Iliopsoas & rectus femoris stretch.
Cradle walk (1 x 20 yards)	Pull with hands over shin.
Spiderman lunge (1 x 20 yards)	Pull chest up as hand touches ground.
Reverse lunge	

Activation/Acute Corrective Exercises

Glute bridge	2-3 x 10
Prone ITY’s	2-3 x 10 ea

Explosive/Power Work

Exercise	Tempo	1	2	3	4	Comments	Rest
Hurdle jump with landing stick	*Exp*	2x6	3x6	3x6	3x6	*Push hips back. EXPLODE! Stick landing.*	90-120”

Strength Training

Exercise	Tempo	1	2	3	4	Comments	Rest
Bodyweight squat	*201*	2x10	3x10	3x8-10	3x8	*Chest up, back flat throughout. Finish with the glutes. Slide hands down legs to achieve correct positioning.*	60-90”
Bodyweight reverse lunge	*201*	2x10	3x10	3x8-10	3x8	*Drive through the heel of front foot to stand up. Upright posture.*	60-90”
Birddog	*201*	2x20	3x20	3x30	3x30	*Hold position for indicated time (in seconds).*	
Inverted row	*201*	2x10	3x10	3x8-10	3x10	*Change angle if too difficult to finish. Retract scapulae to initiate movement.*	60-90”
Box step-up	*201*	2x8	3x8	3x8	3x8	*Work on position on one leg. Whole foot on box 12”-14” tall.*	60-90”

Post-Workout Stretching/Corrective Exercises

Exercise	Sets/Reps
3-way band stretching	1-2 x 30”

Sample Program: Olympic Lift Preparation Phase 2 (Ages 10-13)

Day 1

PreRoutine

Soft-Tissue Mobilization: Foam Roller/Ball

Location	Frequency	Reps	Timing
IT bands	Daily	30”-1’	Pre-workout
Quadriceps	Daily	30”-1’	Pre-workout
Hip flexors	Daily	30”-1’	Pre-workout
Lats	Daily	30”-1’	Pre-workout
Glutes	Daily	30”-1’	Pre-workout
Thoracic spine	Daily	30”-1’	Pre-workout

Dynamic Warm-Up/Mobility Exercises

Exercise	Comments
Heel to butt pull back w/ overhead reach (1 x 20 yards)	Iliopsoas & rectus femoris stretch.
Cradle walk (1 x 20 yards)	Pull with hands over shin.
Spiderman lunge (1 x 20 yards)	Pull chest up as hand touches ground.
Reverse lunge	

Activation/Acute Corrective Exercises

Glute bridge	2-3 x 10
Prone ITY’s	2-3 x 10 ea

Explosive/Power Work

Exercise	Tempo	1	2	3	4	Comments	Rest
Box jump	*Exp*	2x5	3x5	3x5	3x5	*Land firmly on flat feet, prepare by pushing back hips. EXPLODE!*	90-120”

Strength Training

Exercise	Tempo	1	2	3	4	Comments	Rest
Kettlebell RDL	*201*	2x10	3x10	3x8-10	3x8	*Chest up, back flat throughout. Finish with the glutes. Keep kettlebell close to body.*	60-90”
Dumbbell split squat	*201*	2x10	3x10	3x8-10	3x8	*90-90 position. Upright posture.*	60-90”
Plank	*201*	2x20	3x20	3x30	3x30	*All reps in seconds*	60-90”
Push up	*201*	2x10	3x10	3x8-10	3x8	*Change angle if too difficult to finish.*	60-90”
Bodyweight single leg RDL	*201*	2x10	3x10	3x8-10	3x8	*Work on position on one leg. Work on hip hinge.*	60-90”

Post-Workout Stretching/Corrective Exercises

Exercise	Sets/Reps
3-way band stretching	1-2 x 30”

Sample Program: Olympic Lift Preparation Phase 2 (Ages 10-13)

Day 2

PreRoutine

Soft-Tissue Mobilization: Foam Roller/Ball

Location	Frequency	Reps	Timing
IT bands	Daily	30”-1’	Pre-workout
Quadriceps	Daily	30”-1’	Pre-workout
Hip flexors	Daily	30”-1’	Pre-workout
Lats	Daily	30”-1’	Pre-workout
Glutes	Daily	30”-1’	Pre-workout
Thoracic spine	Daily	30”-1’	Pre-workout

Dynamic Warm-Up/Mobility Exercises

Exercise	Comments
Heel to butt pull back w/ overhead reach (1 x 20 yards)	Iliopsoas & rectus femoris stretch.
Cradle walk (1 x 20 yards)	Pull with hands ove shin.
Spiderman lunge (1 x 20 yards)	Pull chest up as hand touches ground.
Reverse lunge	

Activation/Acute Corrective Exercises

Glute bridge	2-3 x 10
Prone ITY’s	2-3 x 10 ea

Explosive/Power Work

Exercise	Tempo	1	2	3	4	Comments	Rest
Pogo jump	*Exp*	2x6	3x6	3x6	3x6	*Push hips back. EXPLODE! React on landing.*	90-120”

Strength Training

Exercise	Tempo	1	2	3	4	Comments	Rest
Medball front squat	*201*	2x10	3x10	3x8-10	3x8	*Chest up, back flat through-out. Keep medball at shoulder level. Slide hands down legs to achieve correct positioning.*	60-90”
Dumbbell reverse lunge	*201*	2x10	3x10	3x8-10	3x8	*Drive through the heel of front foot to stand up. Upright posture.*	60-90”
Birddog	*201*	2x20	3x20	3x30	3x30	*Hold position for indicated time (in seconds).*	
Inverted row	*201*	2x10	3x10	3x8-10	3x10	*Change angle if too difficult to finish. Retract scapulae to initiate movement.*	60-90”
Box step-up + overhead press	*201*	2x8	3x8	3x8	3x8	*Work on position on one leg. Whole foot on box 12”-14” tall.*	60-90”

Post-Workout Stretching/Corrective Exercises

Exercise	Sets/Reps
3-way band stretching	1-2 x 30”

Sample Program: Olympic Lift Preparation Phase 3 (Ages 10-13)

Day 1

PreRoutine

Soft-Tissue Mobilization: Foam Roller/Ball

Location	Frequency	Reps	Timing
IT bands	Daily	30”-1’	Pre-workout
Quadriceps	Daily	30”-1’	Pre-workout
Hip flexors	Daily	30”-1’	Pre-workout
Lats	Daily	30”-1’	Pre-workout
Glutes	Daily	30”-1’	Pre-workout
Thoracic spine	Daily	30”-1’	Pre-workout

Dynamic Warm-Up/Mobility Exercises

Heel to butt pull back w/ overhead reach (1 x 20 yards)	Iliopsoas & rectus femoris stretch.
Cradle walk (1 x 20 yards)	Pull with hands over shin.
Spiderman lunge (1 x 20 yards)	Pull chest up as hand touches ground.
Reverse lunge	

Activation/Acute Corrective Exercises

Glute bridge	2-3 x 10
Prone ITY’s	2-3 x 10 ea

Explosive/Power Work

Exercise	Tempo	1	2	3	4	Comments	Rest
Repeating hurdle jump	*Exp*	2x5	3x5	3x5	3x5	*Land firmly on flat feet, prepare by pushing back hips. EXPLODE!*	90-120”
Kettlebell swing	*Exp*	2 x tech.	3x8	3x8	3x8	*Introduce technique on day 1. Explosive extension of the hips.*	90-120”

Speed and Agility Training

Exercise	Sets/reps	Comments
Prone sprint	2-3x 10 yards	*Get up on verbal cue, drive hard on initial steps.*

Strength Training

Exercise	Tempo	1	2	3	4	Comments	Rest
Kettlebell RDL	*201*	2x8	3x8	3x8-10	3x8	*Chest up, back flat throughout. Finish with the glutes. Keep kettlebell close to body.*	60-90”
Dumbbell split squat	*201*	2x10	3x10	3x8-10	3x8	*90-90 position. Upright posture.*	60-90”
Side plank	*201*	2x20	3x20	3x30	3x30	*Each side. Reps in seconds.*	60-90”
Medball chest pass	*201*	2x10	3x10	3x8-10	3x8	*Drive ball explosively into wall.*	60-90”
Kettlebell single leg RDL	*201*	2x5 ea	3x5 ea	3x8 ea	3x10 ea	*Work on position on one leg. Work on hip hinge.*	60-90”

Post-Workout Stretching/Corrective Exercises	
Exercise	**Sets/Reps**
3-way band stretching	1-2 x 30”

Sample Program: Olympic Lift Preparation Phase 3 (Ages 10-13)

Day 2

PreRoutine							
Soft-Tissue Mobilization: Foam Roller/Ball							
Location	**Frequency**	**Reps**	**Timing**				
IT bands	Daily	30”-1’	Pre-workout				
Quadriceps	Daily	30”-1’	Pre-workout				
Hip flexors	Daily	30”-1’	Pre-workout				
Lats	Daily	30”-1’	Pre-workout				
Glutes	Daily	30”-1’	Pre-workout				
Thoracic spine	Daily	30”-1’	Pre-workout				
Dynamic Warm-Up/Mobility Exercises							
Heel to butt pull back w/ overhead reach (1 x 20 yards)						Iliopsoas & rectus femoris stretch..	
Cradle walk (1 x 20 yards)						Pull with hands over shin.	
Spiderman lunge (1 x 20 yards)						Pull chest up as hand touches ground.	
Reverse lunge							
Activation/Acute Corrective Exercises							
Glute bridge						2-3 x 10	
Prone ITY’s						2-3 x 10 ea	
Explosive/Power Work							
Exercise	**Tempo**	**1**	**2**	**3**	**4**	**Comments**	**Rest**
Pogo jump	*Exp*	2x6	3x6	3x6	3x6	*Push hips back. EXPLODE! React on landing.*	90-120”
Squat jump	*Exp*	2x6	3x6	3x6	3x6	*Focus on the squat, explode UP and land in good position.*	90”
Speed and Agility Training							
Exercise	**Sets/reps**					**Comments**	
Standing 10 yard sprint	3-4 x 10 yards					*Start from comfortable position; go on verbal command.*	

Strength Training							
Exercise	**Tempo**	**1**	**2**	**3**	**4**	**Comments**	**Rest**
Kettlebell goblet squat	*201*	2x8	3x8	3x8-10	3x8	*Chest up, back flat throughout. Keep kettlebell up. Keep core tight.*	60-90”
Walking lunge	*201*	2x10	3x10	3x8-10	3x8	*Drive through the heel of front foot to stand up. Upright posture.*	60-90”
Birddog	*201*	2x20	3x20	3x30	3x30	*Hold position for indicated time (in seconds).*	
Inverted row	*201*	2x10	3x10	3x8-10	3x10	*Change angle if too difficult to finish. Retract scapulae to initiate movement.*	60-90”

Post-Workout Stretching/Corrective Exercises	
Exercise	**Sets/Reps**
3-way band stretching	1-2 x 30”

Sample Program: Olympic Lift Preparation Phase 4 (Ages 10-13)

Day 1

PreRoutine			
Soft-Tissue Mobilization: Foam Roller/Ball			
Location	**Frequency**	**Reps**	**Timing**
IT bands	Daily	30”-1’	Pre-workout
Quadriceps	Daily	30”-1’	Pre-workout
Hip flexors	Daily	30”-1’	Pre-workout
Lats	Daily	30”-1’	Pre-workout
Glutes	Daily	30”-1’	Pre-workout
Thoracic spine	Daily	30”-1’	Pre-workout

Dynamic Warm-Up/Mobility Exercises	
Heel to butt pull back w/ overhead reach (1 x 20 yards)	Iliopsoas & rectus femoris stretch.
Cradle walk (1 x 20 yards)	Pull with hands over shin.
Spiderman lunge (1 x 20 yards)	Pull chest up as hand touches ground.
Reverse lunge	

Activation/Acute Corrective Exercises	
Glute bridge	2-3 x 10
Prone ITY’s	2-3 x 10 ea

Explosive/Power Work							
Exercise	**Tempo**	**1**	**2**	**3**	**4**	**Comments**	**Rest**
Repeating hurdle jump	*Exp*	2x5	3x5	3x5	3x5	*Land firmly on flat feet, prepare by pushing back hips. EXPLODE!*	90-120”
Hang clean level 1-2	*Exp*	Lev 1	Lev 1/2	Lev 2	Lev 2	*Introduce technique daily. Explosive extension of the hips.*	90-120”

Speed and Agility Training		
Exercise	**Sets/reps**	**Comments**
Prone sprint	2-3x 10 yards	*Get up on verbal cue, drive hard on initial steps.*

Strength Training							
Exercise	**Tempo**	**1**	**2**	**3**	**4**	**Comments**	**Rest**
Kettlebell RDL	*201*	2x8	3x8	3x8-10	3x8	*Chest up, back flat throughout. Finish with the glutes. Keep kettlebell close to body.*	60-90”
Kettlebell goblet split squat	*201*	2x10	3x10	3x8-10	3x8	*90-90 position. Upright posture.*	60-90”
Side plank	*201*	2x20	3x20	3x30	3x30	*Each side. Reps in seconds.*	60-90”
T-push ups	*201*	2x6 ea	3x6 ea	3x6 ea	3x6 ea	*Drive ball explosively into wall.*	60-90”

Post-Workout Stretching/Corrective Exercises	
Exercise	**Sets/reps**
3-way band stretching	1-2 x 30”

Sample Program: Olympic Lift Preparation Phase 4 (Ages 10-13)

Day 2

PreRoutine			
Soft-Tissue Mobilization: Foam Roller/Ball			
Location	**Frequency**	**Reps**	**Timing**
IT bands	Daily	30”-1’	Pre-workout
Quadriceps	Daily	30”-1’	Pre-workout
Hip flexors	Daily	30”-1’	Pre-workout
Lats	Daily	30”-1’	Pre-workout
Glutes	Daily	30”-1’	Pre-workout
Thoracic spine	Daily	30”-1’	Pre-workout

Dynamic Warm-Up/Mobility Exercises	
Heel to butt pull back w/ overhead reach (1 x 20 yards)	Iliopsoas & rectus femoris stretch.
Cradle walk (1 x 20 yards)	Pull with hands over shin.
Spiderman lunge (1 x 20 yards)	Pull chest up as hand touches ground.
Reverse lunge	

Activation/Acute Corrective Exercises	
Glute bridge	2-3 x 10
Prone ITY’s	2-3 x 10 ea

Explosive/Power Work

Exercise	Tempo	1	2	3	4	Comments	Rest
Pogo jump	*Exp*	2x6	3x6	3x6	3x6	*Push hips back. EXPLODE! React on landing.*	90-120”
Squat jump	*Exp*	2x6	3x6	3x6	3x6	*Focus on the squat, explode UP and land in good position.*	90”
Hang snatch level 1-2	*Exp*	Lev 1	Lev 1/2	Lev 2	Lev 2	*Introduce technique points daily.*	

Speed and Agility Training

Exercise	Sets/reps	Comments
Standing 10 yard sprint	3-4 x 10 yards	*Start from comfortable position; go on verbal command.*

Strength Training

Exercise	Tempo	1	2	3	4	Comments	Rest
Front squat	*201*	2x8	3x8	3x8-10	3x8	*Chest up, back flat throughout. Keep elbows up and core tight*	60-90”
Alternating split jump	*201*	2x10	3x10	3x8-10	3x10	*Drive through the heel of the front foot to stand up. Upright posture.*	60-90”
Birddog	*201*	2x20	3x20	3x30	3x30	*Hold position for indicated time (in seconds).*	60-90”
Inverted row	*201*	2x8	3x8	3x8-10	3x8	*Change angle if difficult to finish. Retract scapulae to initiate movement.*	60-90”

Post-Workout Stretching/Corrective Exercises

Exercise	Sets/reps
3-way band stretching	1-2 x 30”

Sample Program: Olympic Lift Preparation Phase 5 (Ages 10-13)

Day 1

PreRoutine

Soft-Tissue Mobilization: Foam Roller/Ball

Location	Frequency	Reps	Timing
IT bands	Daily	30”-1’	Pre-workout
Quadriceps	Daily	30”-1’	Pre-workout
Hip flexors	Daily	30”-1’	Pre-workout
Lats	Daily	30”-1’	Pre-workout
Glutes	Daily	30”-1’	Pre-workout
Thoracic spine	Daily	30”-1’	Pre-workout

Dynamic Warm-Up/Mobility Exercises	
Heel to butt pull back w/ overhead reach (1 x 20 yards)	Iliopsoas & rectus femoris stretch.
Cradle walk (1 x 20 yards)	Pull with hands over shin.
Spiderman lunge (1 x 20 yards)	Pull chest up as hand touches ground.
Reverse lunge	

Activation/Acute Corrective Exercises	
Glute bridge	2-3 x 10
Prone ITY's	2-3 x 10 ea

Explosive/Power Work

Exercise	Tempo	1	2	3	4	Comments	Rest
Repeating hurdle jump	*Exp*	2x5	3x5	3x5	3x5	*Land firmly on flat feet, prepare by pushing back hips. EXPLODE!*	90-120"
Hang clean level 3-4	*Exp*	Lev 3	Lev 3	Lev 3/4	Lev 4	*Explosive extension of the hips.*	90-120"

Speed and Agility Training

Exercise	Sets/reps	Comments
Prone sprint	2-3x10 yards	

Strength Training

Exercise	Tempo	1	2	3	4	Comments	Rest
Barbell RDL	*201*	2x8	3x8	3x8-10	3x8	*Chest up, back flat throughout. Keep barbell close to the body.*	60-90"
Kettlebell goblet split squat	*201*	2x10	3x10	3x8-10	3x10	*90-90 position with upright posture.*	60-90"
Side plank	*201*	2x20	3x20	3x30	3x30	*Hold position for indicated time (in seconds). Each side.*	60-90"
T push-ups	*201*	2x6 ea	3x6 ea	3x6 ea	3x6 ea		60-90"

Post-Workout Stretching/Corrective Exercises

Exercise	Sets/reps
3-way band stretching	1-2 x 30"

Sample Program: Olympic Lift Preparation Phase 5 (Ages 10-13)

Day 2

PreRoutine

Soft-Tissue Mobilization: Foam Roller/Ball

Location	Frequency	Reps	Timing
IT bands	Daily	30”-1’	Pre-workout
Quadriceps	Daily	30”-1’	Pre-workout
Hip flexors	Daily	30”-1’	Pre-workout
Lats	Daily	30”-1’	Pre-workout
Glutes	Daily	30”-1’	Pre-workout
Thoracic spine	Daily	30”-1’	Pre-workout

Dynamic Warm-Up/Mobility Exercises

Heel to butt pull back w/ overhead reach (1 x 20 yards)	Iliopsoas & rectus femoris stretch.
Cradle walk (1 x 20 yards)	Pull with hands over shin.
Spiderman lunge (1 x 20 yards)	Pull chest up as hand touches ground.
Reverse lunge	

Activation/Acute Corrective Exercises

Glute bridge	2-3 x 10
Prone ITY’s	2-3 x 10 ea

Explosive/Power Work

Exercise	Tempo	1	2	3	4	Comments	Rest
Pogo jump	*Exp*	2x6	3x6	3x6	3x6	*Push hips back & explode. React on landing.*	90-120”
Squat jump	*Exp*	2x5	3x5	3x5	3x5	*Focus on the squat, explode upward, then land in good position.*	90”
Hang snatch level 3-4	*Exp*	3x8 Lev 3	3x8 Lev 3	3x8 Lev 3/4	3x8 Lev 4	*Introduce technique points daily. Elbows out!*	90”

Speed and Agility Training

Exercise	Sets/reps	Comments
Standing 10 yard sprint	3-4 x 10 yards	*Get up on verbal cue, drive hard on initial steps.*

Strength Training

Exercise	Tempo	1	2	3	4	Comments	Rest
Overhead squat with dowel	*201*	2x8	3x8	3x8-10	3x8	*Chest up, back flat throughout. Dowel directly over ears. Keep core tight.*	60-90”
Alternating split jump	*201*	2x10	3x10	3x8-10	3x8	*Drive through the heel of the front foot to stand up. Upright posture.*	60-90”
Birddog	*201*	2x20	3x20	3x20	3x30	*Hold position for time indicated.*	
Inverted row	*201*	2x8	3x8	3x8-10	3x8	*Change angle if too difficult. Retract scapulae to begin.*	60-90”

Post-Workout Stretching/Corrective Exercises	
Exercise	**Sets/Reps**
3-way band stretching	1-2 x 30”

7

APPLICATION: 14+ SAMPLE PROGRAMMING

Sample Program: Olympic Lift Preparation Phase 1 (Ages 14+)

Day 1

PreRoutine

Soft-Tissue Mobilization: Foam Roller/Ball

Location	Frequency	Reps	Timing
IT bands	Daily	30”-1’	Pre-workout
Quadriceps	Daily	30”-1’	Pre-workout
Hip flexors	Daily	30”-1’	Pre-workout
Lats	Daily	30”-1’	Pre-workout
Glutes	Daily	30”-1’	Pre-workout
Thoracic spine	Daily	30”-1’	Pre-workout

Dynamic Warm-Up/Mobility Exercises

Heel to butt pull back w/ overhead reach (1 x 20 yards)	Iliopsoas & rectus femoris stretch.
Cradle walk (1 x 20 yards)	Pull with hands over shin.
Spiderman lunge (1 x 20 yards)	Pull chest up as hand touches ground.
Reverse lunge	

Activation/Acute Corrective Exercises

Glute bridge	2-3 x 10
Prone ITY’s	2-3 x 10 ea

Explosive/Power Work

Exercise	Tempo	1	2	3	4	Comments	Rest
Box jump	*Exp*	2x5	3x5	3x5	3x5	*Land firmly on flat feet, prepare by pushing back hips. EXPLODE!*	90-120”
Hang clean level 1-2	*Exp*	3x8 Lev 1	3x8 Lev 1-2	3x8 Lev 2	3x8 Lev 2	*Proper positioning during each level.*	90-120”

Strength Training

Exercise	Tempo	1	2	3	4	Comments	Rest
Kettlebell RDL	*201*	2x10	3x10	3x8-10	3x8	*Chest up, back flat throughout. Regress as needed.*	60-90”
Bodyweight split squat	*201*	2x10	3x10	3x8-10	3x8	*90-90 position. Upright posture.*	60-90”
Plank	*201*	2x20	3x20	3x30	3x30	*Reps measured in seconds.*	60-90”
Push up	*201*	2x10	3x10	3x8-10	3x8	*Change angle if too difficult to finish.*	60-90”
Half kneeling cable lift	*201*	2x10	3x10	3x8-10	3x8	*Work on position on one leg. 90/90 position.*	60-90”

Post-Workout Stretching/Corrective Exercises

Exercise	Sets/Reps
3-way band stretching	1-2 x 30”

Sample Program: Olympic Lift Preparation Phase 1 (Ages 14+)

Day 2

PreRoutine

Soft-Tissue Mobilization: Foam Roller/Ball

Location	Frequency	Reps	Timing
IT bands	Daily	30”-1’	Pre-workout
Quadriceps	Daily	30”-1’	Pre-workout
Hip flexors	Daily	30”-1’	Pre-workout
Lats	Daily	30”-1’	Pre-workout
Glutes	Daily	30”-1’	Pre-workout
Thoracic spine	Daily	30”-1’	Pre-workout

Dynamic Warm-Up/Mobility Exercises

Heel to butt pull back w/ overhead reach (1 x 20 yards)	Iliopsoas & rectus femoris stretch.
Cradle walk (1 x 20 yards)	Pull with hands over shin.
Spiderman lunge (1 x 20 yards)	Pull chest up as hand touches ground.
Reverse lunge	

Activation/Acute Corrective Exercises

Glute bridge	2-3 x 10
Prone ITY’s	2-3 x 10 ea

Explosive/Power Work

Exercise	Tempo	1	2	3	4	Comments	Rest
Hurdle jump with landing stick	*Exp*	2x6	3x6	3x6	3x6	*Push hips back. EXPLODE! Stick landing.*	90-120”
Hang snatch level 1-2	*Exp*	3x8 Lev 1	3x8 Lev 1-2	3x8 Lev 2	3x8 Lev 2	*Good starting position; reinforce teaching points daily.*	90-120”

Strength Training

Exercise	Tempo	1	2	3	4	Comments	Rest
Kettlebell goblet squat	*201*	2x10	3x10	3x8-10	3x8	*Chest up, back flat throughout. Finish with the glutes. Regress as needed.*	60-90”
Bodyweight/kettlebell single leg RDL	*201*	2x10	3x10	3x8-10	3x8	*Tripod foot position. Work on hip hinge.*	60-90”
Birddog	*201*	2x20	3x20	3x30	3x30	*Hold position for indicated time (in seconds).*	
Inverted row	*201*	2x10	3x10	3x8-10	3x10	*Change angle if too difficult to finish. Retract scapulae to initiate movement.*	60-90”
Kettlebell farmer’s carry (single sided)	*201*	2x20	3x20	3x20	3x20	*All distances in yards. Shoulders down & tight. Set the core.*	60-90”

Post-Workout Stretching/Corrective Exercises

Exercise	Sets/Reps
3-way band stretching	1-2 x 30”

Sample Program: Olympic Lift Preparation Phase 2 (Ages 14+)

Day 1

PreRoutine

Soft-Tissue Mobilization: Foam Roller/Ball

Location	Frequency	Reps	Timing
IT bands	Daily	30"-1'	Pre-workout
Quadriceps	Daily	30"-1'	Pre-workout
Hip flexors	Daily	30"-1'	Pre-workout
Lats	Daily	30"-1'	Pre-workout
Glutes	Daily	30"-1'	Pre-workout
Thoracic spine	Daily	30"-1'	Pre-workout

Dynamic Warm-Up/Mobility Exercises

Heel to butt pull back w/ overhead reach (1 x 20 yards)	Iliopsoas & rectus femoris stretch.
Cradle walk (1 x 20 yards)	Pull with hands over shin.
Spiderman lunge (1 x 20 yards)	Pull chest up as hand touches ground.
Reverse lunge	

Activation/Acute Corrective Exercises

Glute bridge	2-3 x 10
Prone ITY's	2-3 x 10 ea

Explosive/Power Work

Exercise	Tempo	1	2	3	4	Comments	Rest
Box jump	*Exp*	2x5	3x5	3x5	3x5	*Land firmly on flat feet, prepare by pushing back hips. EXPLODE!*	90-120"
Hang clean level 3-4	*Exp*	3x8 Lev 3	3x8 Lev 3	3x8 Lev 4	3x5 Lev 5	*Reinforce technique points daily. Elbows out on L3; sit back on L4.*	90-120"

Strength Training

Exercise	Tempo	1	2	3	4	Comments	Rest
Barbell RDL	*201*	2x8	3x8	3x8	3x8	*Chest up, back flat throughout. Finish with the glutes.*	60-90"
Dumbbell split squat	*201*	2x10	3x10	3x8-10	3x10	*90-90 position. Upright posture.*	60-90"
Plank	*201*	2x30	3x30	3x35	3x35	*Use dowel to get three points of contact and keep good posture.*	60-90"
Dumbbel bench press	*201*	2x10	3x10	3x8-10	3x8	*Change angle if too difficult to finish.*	60-90"
Half kneeling cable lift	*201*	2x10 ea	3x10 ea	3x10 ea	3x10 ea	*Maintain good 90/90 position.*	60-90"

Post-Workout Stretching/Corrective Exercises

Exercise	Sets/Reps
3-way band stretching	1-2 x 30"

Sample Program: Olympic Lift Preparation Phase 2 (Ages 14+)

Day 2

PreRoutine

Soft-Tissue Mobilization: Foam Roller/Ball

Location	Frequency	Reps	Timing
IT bands	Daily	30”-1’	Pre-workout
Quadriceps	Daily	30”-1’	Pre-workout
Hip flexors	Daily	30”-1’	Pre-workout
Lats	Daily	30”-1’	Pre-workout
Glutes	Daily	30”-1’	Pre-workout
Thoracic spine	Daily	30”-1’	Pre-workout

Dynamic Warm-Up/Mobility Exercises

Heel to butt pull back w/ overhead reach (1 x 20 yards)	Iliopsoas & rectus femoris stretch.
Cradle walk (1 x 20 yards)	Pull with hands over shin.
Spiderman lunge (1 x 20 yards)	Pull chest up as hand touches ground.
Reverse lunge	

Activation/Acute Corrective Exercises

Glute bridge	2-3 x 10
Prone ITY’s	2-3 x 10 ea

Explosive/Power Work

Exercise	Tempo	1	2	3	4	Comments	Rest
Pogo jump	*Exp*	2x6	3x6	3x6	3x6	*Push hips back. EXPLODE! React on landing.*	90-120”
Hang snatch level 3-4	*Exp*	3x8	3x8	3x8	3x5	*Strong overhead position on catch.*	90-120”

Strength Training

Exercise	Tempo	1	2	3	4	Comments	Rest
Barbell front squat	*201*	2x10	3x10	3x8-10	3x8	*Chest up, back flat throughout.*	60-90”
Kettlebell single leg RDL	*201*	2x8	3x8	3x8	3x8	*Flat foot and flat back. Full hip extension.*	60-90”
Birddog	*201*	2x20	3x20	3x30	3x30	*Hold position for indicated time (in seconds).*	
Inverted row	*201*	2x10	3x10	3x8-10	3x10	*Change angle if too difficult to finish. Retract scapulae to initiate movement.*	60-90”
Kettlebell waiter’s walk	*201*	2x20	3x20	3x20	3x20	*All reps in yards. Scapula fully depressed when weight overhead. Set the core.*	60-90”

Post-Workout Stretching/Corrective Exercises

Exercise	Sets/Reps
3-way band stretching	1-2 x 30”

Sample Program: Olympic Lift Preparation Phase 3 (Ages 14+)

Day 1

PreRoutine

Soft-Tissue Mobilization: Foam Roller/Ball

Location	Frequency	Reps	Timing
IT bands	Daily	30”-1’	Pre-workout
Quadriceps	Daily	30”-1’	Pre-workout
Hip flexors	Daily	30”-1’	Pre-workout
Lats	Daily	30”-1’	Pre-workout
Glutes	Daily	30”-1’	Pre-workout
Thoracic spine	Daily	30”-1’	Pre-workout

Dynamic Warm-Up/Mobility Exercises

Heel to butt pull back w/ overhead reach (1 x 20 yards)	Iliopsoas & rectus femoris stretch.
Cradle walk (1 x 20 yards)	Pull with hands over shin.
Spiderman lunge (1 x 20 yards)	Pull chest up as hand touches ground.
Reverse lunge	

Activation/Acute Corrective Exercises

Single leg glute bridge	2-3 x 10
Weighted ITY’s	2-3 x 10 ea

Explosive/Power Work

Exercise	Tempo	1	2	3	4	Comments	Rest
Distance jump	*Exp*	2x6	3x6	3x6	3x6	*Land firmly on flat feet, prepare by pushing back hips. EXPLODE!*	90-120”
Hang clean from above the knee	*Exp*	3x5	3x5	3x5	3x5	*Pause at start position. Explosive extension of the hips.*	As needed

Strength Training

Exercise	Tempo	1	2	3	4	Comments	Rest
Barbell RDL	*201*	2x6	3x6	3x6	3x6	*Chest up, back flat throughout. Finish with the glutes.*	60-90”
Dumbbell rear foot elevated split squat	*201*	2x8	3x10	3x8-10	3x10	*Drive through flat front foot. Each leg.*	60-90”
Feet elevated plank	*201*	2x30	3x30	3x35	3x35	*Use dowel to get three points of contact. Reps in seconds.*	60-90”
Dumbbell bench press	*201*	2x6	3x6	3x6	3x6	*Regress as needed.*	60-90”
Half-kneeling cable lift	*201*	2x8 ea	3x8 ea	3x8 ea	3x8 ea	*Good 90/90 position*	60-90”

Post-Workout Stretching/Corrective Exercises

Exercise	Sets/reps
3-way band stretching	1-2 x 30”

Sample Program: Olympic Lift Preparation Phase 3 (Ages 14+)

Day 2

PreRoutine

Soft-Tissue Mobilization: Foam Roller/Ball

Location	Frequency	Reps	Timing
IT bands	Daily	30”-1’	Pre-workout
Quadriceps	Daily	30”-1’	Pre-workout
Hip flexors	Daily	30”-1’	Pre-workout
Lats	Daily	30”-1’	Pre-workout
Glutes	Daily	30”-1’	Pre-workout
Thoracic spine	Daily	30”-1’	Pre-workout

Dynamic Warm-Up/Mobility Exercises

Heel to butt pull back w/ overhead reach (1 x 20 yards)	Iliopsoas & rectus femoris stretch..
Cradle walk (1 x 20 yards)	Pull with hands over shin.
Spiderman lunge (1 x 20 yards)	Pull chest up as hand touches ground.
Reverse lunge	

Activation/Acute Corrective Exercises

Single leg glute bridge	2-3 x 10
Weighted ITY’s	2-3 x 10 ea

Explosive/Power Work

Exercise	Tempo	1	2	3	4	Comments	Rest
Pogo jump	*Exp*	2x6	3x6	3x6	3x6	*Push hips back. EXPLODE! React on landing.*	90-120”
Hang snatch from above the knee	*Exp*	3x5	3x5	3x5	3x5	*Stong overhead position on the catch. Hips back to receive the bar.*	As needed

Strength Training

Exercise	Tempo	1	2	3	4	Comments	Rest
Barbell front squat	*201*	2x6	3x6	3x6	3x6	*Chest up, back flat throughout.*	60-90”
Kettlebell single leg RDL	*201*	2x6 ea	3x6 ea	3x6 ea	3x6 ea	*Flat foot and flat back. Full hip extension.*	60-90”
Birddog	*201*	2x5	3x5	3x5	3x5	*Each arm & leg. Hold for 5-8”*	60-90”
Inverted row	*201*	2x10	3x10	3x8-10	3x10	*Change angle as needed. Retract scapulae to initiate movement.*	60-90”
Kettlebell waiter’s walk	*201*	2x30	3x30	3x30	3x30	*All reps in yards. Fully depress scapula when weight over-head. Set the core.*	

Post-Workout Stretching/Corrective Exercises

Exercise	Sets/reps
3-way band stretching	1-2 x 30”

Sample Program: Olympic Lift Preparation Phase 4 (Ages 14+)

Day 1

PreRoutine

Soft-Tissue Mobilization: Foam Roller/Ball

Location	Frequency	Reps	Timing
IT bands	Daily	30"-1'	Pre-workout
Quadriceps	Daily	30"-1'	Pre-workout
Hip flexors	Daily	30"-1'	Pre-workout
Lats	Daily	30"-1'	Pre-workout
Glutes	Daily	30"-1'	Pre-workout
Thoracic spine	Daily	30"-1'	Pre-workout

Dynamic Warm-Up/Mobility Exercises

Heel to butt pull back w/ overhead reach (1 x 20 yards)	Iliopsoas & rectus femoris stretch.
Cradle walk (1 x 20 yards)	Pull with hands over shin.
Spiderman lunge (1 x 20 yards)	Pull chest up as hand touches ground.
Reverse lunge	

Activation/Acute Corrective Exercises

Single leg glute bridge	2-3 x 10
Weighted ITY's	2-3 x 10 ea

Explosive/Power Work

Exercise	Tempo	1	2	3	4	Comments	Rest
Reactive hurdle jump	*Exp*	2x6	3x6	3x6	3x6	*Land firmly on flat feet, prepare by pushing back hips. EXPLODE!*	90-120"
Hang clean from mid-thigh	*Exp*	3x5 tech	3x5	3x5	3x5	*Pause at start position. Explode & extend hips. Work on start position day 1.*	As needed
Hang clean pull from above the knee	*Exp*	3x3	3x3	3x3	3x3	*@ 110% of same rep full lifts. Arms straight.*	As needed

Strength Training

Exercise	Tempo	1	2	3	4	Comments	Rest
Dumbbell rear foot elevated split squat	*201*	2x8	3x8	3x8	3x8	*Drive through flat front foot. Each leg.*	60-90"
Feet elevated plank	*201*	2x30	3x30	3x35	3x35	*All reps in seconds. Use dowel to ensure 3 points of contact.*	60-90"
Dumbbell overhead press	*201*	2x6	3x6	3x6	3x6	*Regress as needed.*	60-90"
Half Turkish get-up + bridge	*201*	2x10 ea	3x10 ea	3x10 ea	3x10 ea	*Good positions at each point. Pack shoulder. Eyes on KB.*	60-90"

Post-Workout Stretching/Corrective Exercises

Exercise	Sets/Reps
3-way band stretching	1-2 x 30"

Sample Program: Olympic Lift Preparation Phase 4 (Ages 14+)

Day 2

PreRoutine

Soft-Tissue Mobilization: Foam Roller/Ball

Location	Frequency	Reps	Timing
IT bands	Daily	30”-1’	Pre-workout
Quadriceps	Daily	30”-1’	Pre-workout
Hip flexors	Daily	30”-1’	Pre-workout
Lats	Daily	30”-1’	Pre-workout
Glutes	Daily	30”-1’	Pre-workout
Thoracic spine	Daily	30”-1’	Pre-workout

Dynamic Warm-Up/Mobility Exercises

Heel to butt pull back w/ overhead reach (1 x 20 yards)	Iliopsoas & rectus femoris stretch.
Cradle walk (1 x 20 yards)	Pull with hands over shin.
Spiderman lunge (1 x 20 yards)	Pull chest up as hand touches ground.
Reverse lunge	

Activation/Acute Corrective Exercises

Single leg glute bridge	2-3 x 10
Weighted ITY’s	2-3 x 10 ea

Explosive/Power Work

Exercise	Tempo	1	2	3	4	Comments	Rest
Distance jump	*Exp*	2x6	3x6	3x6	3x6	*Push hips back. Explode then react on landing.*	90-120”
Hang snatch from mid-thigh	*Exp*	3x5	3x5	3x5	3x5	*Strong overhead position on catch. Hips back to receive the bar.*	As needed
Snatch balance	*Exp*	3x4	3x4	3x4	3x4	*Change directions quickly to get bar overhead.*	As needed

Strength Training

Exercise	Tempo	1	2	3	4	Comments	Rest
Barbell front squat	*201*	2x3	3x3	3x3, 3, 2	3x3, 2, 2	*Chest up, back flat throughout. Elbows around.*	60-90”
Birddog	*201*	2x5	3x5	3x5	3x5	*Each arm/leg. Hold position for 5-8 seconds.*	60-90”
Pull ups	*201*	2x6	3x6	3x6	3x6	*Use assistance as needed. Retract scapulae to initiate movement.*	60-90”
Standing cable lift	*201*	2x8 ea	3x8 ea	3x8 ea	3x8 ea	*Pull then push. Set the core.*	60-90”

Post-Workout Stretching/Corrective Exercises

Exercise	Sets/Reps
3-way band stretching	1-2 x 30”

Sample Program: Olympic Lift Preparation Phase 5 (Ages 14+)

Day 1

PreRoutine

Soft-Tissue Mobilization: Foam Roller/Ball

Location	Frequency	Reps	Timing
IT bands	Daily	30"-1'	Pre-workout
Quadriceps	Daily	30"-1'	Pre-workout
Hip flexors	Daily	30"-1'	Pre-workout
Lats	Daily	30"-1'	Pre-workout
Glutes	Daily	30"-1'	Pre-workout
Thoracic spine	Daily	30"-1'	Pre-workout

Dynamic Warm-Up/Mobility Exercises

Heel to butt pull back w/ overhead reach (1 x 20 yards)	Iliopsoas & rectus femoris stretch.
Cradle walk (1 x 20 yards)	Pull with hands over shin.
Spiderman lunge (1 x 20 yards)	Pull chest up as hand touches ground.
Reverse lunge	

Activation/Acute Corrective Exercises

Single leg glute bridge	2-3 x 10
Weighted ITY's	2-3 x 10 ea

Explosive/Power Work

Exercise	Tempo	1	2	3	4	Comments	Rest
Jump squat	*Exp*	2x6	3x6	3x6	3x6	*Land firmly on flat feet, prepare by pushing back hips. EXPLODE!*	90-120"
Power clean from mid-thigh	*Exp*	3x3	3x3	3x3	3x3	*Pause at start position. Explode & extend hips. Work on start position day 1.*	As needed
Hang clean pull from below the knee	*Exp*	3x3	3x3	3x3	3x3	*@ 110% of same rep full lifts. Arms straight.*	As needed

Strength Training

Exercise	Tempo	1	2	3	4	Comments	Rest
Split squat	*201*	2x6 ea	3x6 ea	3x6 ea	3x6 ea	*Drive through flat front foot. Each leg.*	60-90"
Feet elevated plank	*201*	2x30	3x30	3x35	3x35	*All reps in seconds. Use dowel to ensure 3 points of contact.*	60-90"
Dumbbell push press	*201*	2x5	3x5	3x5	3x5	*Quick change of direction.*	60-90"
Half Turkish get-up + bridge	*201*	2x10 ea	3x10 ea	3x10 ea	3x10 ea	*Good positions at each point. Pack shoulder. Eyes on KB.*	60-90"

Post-Workout Stretching/Corrective Exercises

Exercise	Sets/Reps
3-way band stretching	1-2 x 30"

Sample Program: Olympic Lift Preparation Phase 5 (Ages 14+)

Day 2

PreRoutine

Soft-Tissue Mobilization: Foam Roller/Ball

Location	Frequency	Reps	Timing
IT bands	Daily	30”-1’	Pre-workout
Quadriceps	Daily	30”-1’	Pre-workout
Hip flexors	Daily	30”-1’	Pre-workout
Lats	Daily	30”-1’	Pre-workout
Glutes	Daily	30”-1’	Pre-workout
Thoracic spine	Daily	30”-1’	Pre-workout

Dynamic Warm-Up/Mobility Exercises

Heel to butt pull back w/ overhead reach (1 x 20 yards)	Iliopsoas & rectus femoris stretch.
Cradle walk (1 x 20 yards)	Pull with hands over shin.
Spiderman lunge (1 x 20 yards)	Pull chest up as hand touches ground.
Reverse lunge	

Activation/Acute Corrective Exercises

Single leg glute bridge	2-3 x 10
Weighted ITY’s	2-3 x 10 ea

Explosive/Power Work

Exercise	Tempo	1	2	3	4	Comments	Rest
Distance jump	*Exp*	2x6	3x6	3x6	3x6	*Push hips back. Explode then react on landing.*	90-120”
Hang snatch from mid-thigh	*Exp*	3x3	3x3	3x3	3x3	*Strong overhead position on catch. Hips back to receive the bar.*	As needed
Power jerk	*Exp*	3x4	3x4	3x4	3x4	*Feet land in good power position.*	As needed

Strength Training

Exercise	Tempo	1	2	3	4	Comments	Rest
Back squat	*201*	2x5	3x5	3x5	3x5	*Chest up, back flat throughout. Elbows around.*	60-90”
Birddog	*201*	2x8	3x8	3x8	3x8	*Each arm/leg. Hold position for 5-8 seconds.*	60-90”
Pull ups	*201*	2x5	3x5	3x5	3x5	*Use assistance as needed. Retract scapulae to initiate movement.*	60-90”
Standing cable lift	*201*	2x8 ea	3x8 ea	3x8 ea	3x8 ea	*Pull then push. Set the core.*	60-90”

Post-Workout Stretching/Corrective Exercises

Exercise	Sets/Reps
3-way band stretching	1-2 x 30”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AUTHOR BIOGRAPHIES

WIL FLEMING

Wil Fleming is the Owner of Force Fitness and Performance and Athletic Revolution Bloomington, in Bloomington, Indiana. Force Fitness opened just over two years ago and is already one of the most successfultraining facilities in the Midwest. With business partner Ryan Ketchum, Wil has established the business as one of the most sought-after facilities in the region, serving nearly 400 fitness and performance clients. In just 24 months, Fleming has been instrumental in helping 15 athletes earn Division I scholarships and 35 others earn collegiate athletic scholarships at other levels of participation.

In addition to being a business owner, Wil wrote the the Speed and Agility chapter in the recently released IYCA *Essentials of High School Strength and Conditioning* text along with other noted performance experts Eric Cressey, Mike Robertson, Toby Brooks, and Pat Rigsby. He also authored and filmed the Core Lifts program intended to help Athletic Revolution franchisees lean and refine their coaching technique regarding fundamental weight lifting skills.

Prior to being a business owner, Fleming was an Olympic Trials participant, an all-American athlete, and the school record holder at Indiana University as a hammer thrower. Wil was a resident athlete at the Olympic Training Center in Colorado Springs for Olympic weightlifting after winning a Jr. National Championship in the same sport.

TOBY BROOKS

Toby Brooks currently serves as the Director of Research and Education for the International Youth Conditioning Association.

The Golconda, Illinois native completed his undergraduate studies in Athletic Training and was named one of the Top 25 Graduating Seniors at Southern Illinois University Carbondale (SIUC) in 1998. He then accepted a graduate assistant athletic trainer position at the University of Arizona. At the U of A, he completed both his Master's and Doctoral degrees in Physical Education while working with the Wildcat women's gymnastics, football, and baseball programs.

Dr. Brooks has worked as a certified athletic trainer and/or strength coach with numerous professional, collegiate, and high school athletics programs, including the Oakland Raiders, USA Baseball, the University of Texas El Paso, Liberty University, the Florida Firecats, Shawnee Community College, the Southern Illinois Miners, and seven high schools across three states. He has also has published multiple books, articles, and studies and is a regular presenter at national and international conferences.

Dr. Brooks currently serves as an Assistant Professor in the Master of Athletic Training Program at Texas Tech University Health Sciences Center in Lubbock, Texas. Toby is also co-founder and creative director for NiTROhype Creative (nitrohype.com), a graphic design firm specializing in web and print-based media production primarily for athletic, fitness, and motorsports-based businesses.

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