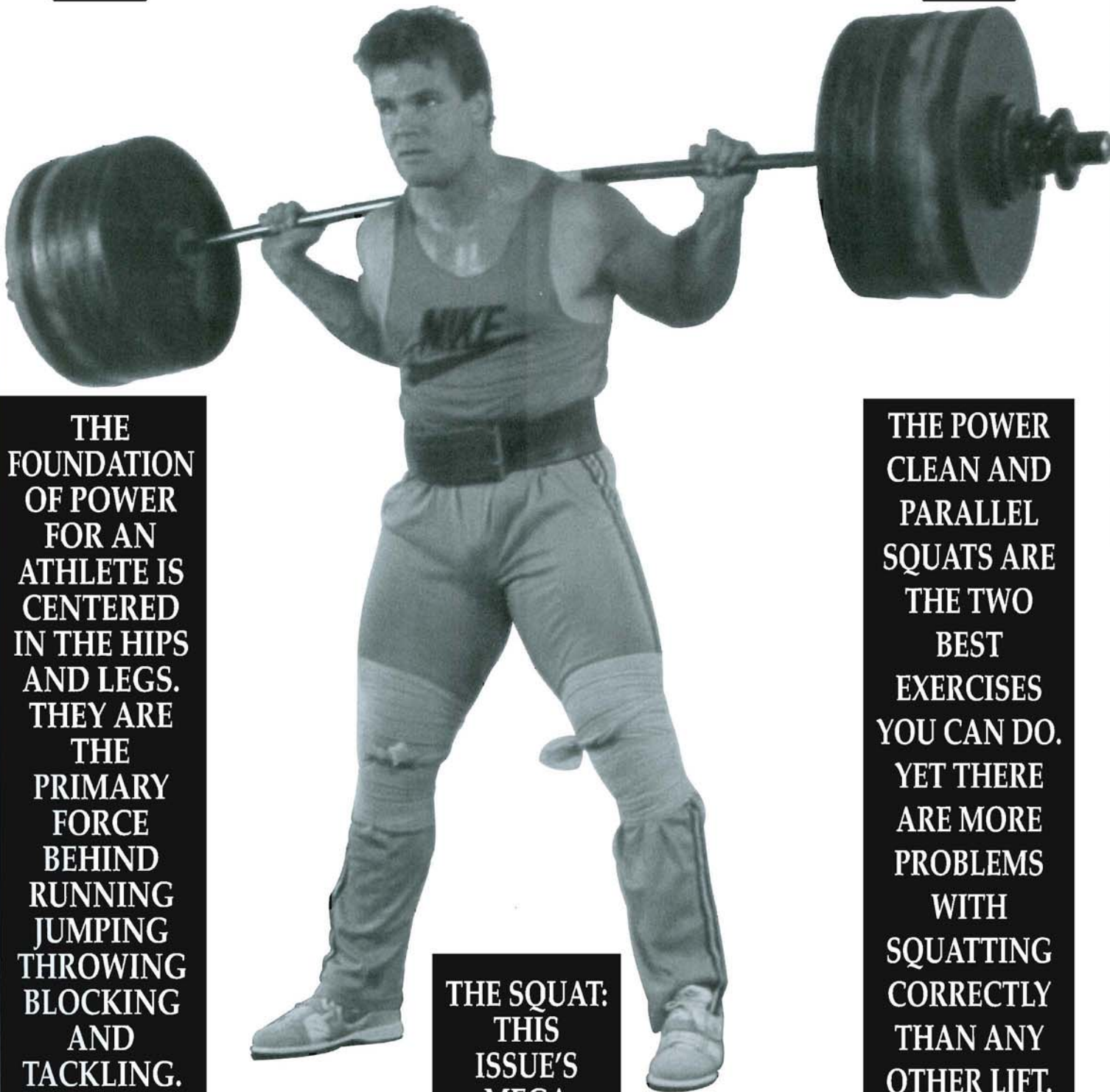


**BIGGER
FASTER
STRONGER**

THE KING OF EXERCISES

**THE
PARALLEL
SQUAT**

By Dr. Greg Shepard



THE FOUNDATION OF POWER FOR AN ATHLETE IS CENTERED IN THE HIPS AND LEGS. THEY ARE THE PRIMARY FORCE BEHIND RUNNING JUMPING THROWING BLOCKING AND TACKLING.

THE POWER CLEAN AND PARALLEL SQUATS ARE THE TWO BEST EXERCISES YOU CAN DO. YET THERE ARE MORE PROBLEMS WITH SQUATTING CORRECTLY THAN ANY OTHER LIFT.

**THE SQUAT:
THIS
ISSUE'S
MEGA
THEME
PAGES 29,36-
37,45,48-50,65**

By Dr. Greg Shepard

I PROMISE YOU: A WINNING EDGE

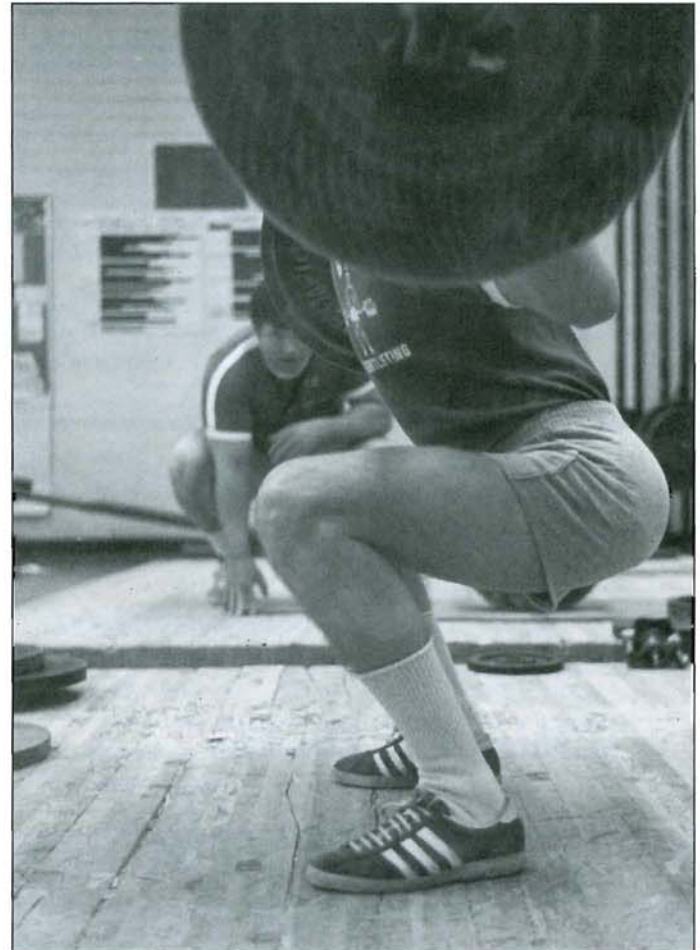
The Parallel Squat is the king of all exercises for an athlete. If an athlete were to do nothing but Parallel Squats, he would have a good program; not great, but good. Leave them out, minimize them or do them incorrectly and it doesn't matter what else is done – what machines are used or what system is used: You simply will not have a good program!

Parallel Squats are the basis and foundation of great speed with great size. A 6-4 athlete who weights 265 and who has good athletic ability can run a 4.6 forty, if an excellent Parallel Squat program is used. If machines or something else is done, this same athlete would be lucky to run a 5.0 forty. I cannot overemphasize the importance of squatting parallel and performing this exercise correctly. Parallel Squats for an athlete are absolutely critical.

Since the majority of high school football programs do Squats, you might well ask about the winning edge of "The Secret" that was promised. Don't worry! You can make a quantum leap over your opponents by Parallel Squatting correctly. First of all, many high school programs have their athletes Squat high or way too high. In an eight team conference, probably four to five schools will Squat high. Second, the other two or three schools will have serious technique or spotting problems.

It is absolutely imperative to understand the importance of depth on Squats. All known standards are based on a Parallel or slightly below parallel depth. The High School All-American Standard is 500 lbs. The All-State Standard is 400 lbs. These standards were designed by BFS to help the athlete and coach understand when something unique has been achieved. It takes a special athlete and a special understanding of how to do Squats to reach those levels. If an athlete Squats a foot high or three inches high with 500 pounds, it is meaningless. Not a whole lot is really happening and great benefits will be missed.

Squatting high will only strengthen the quadriceps, the muscles in the front part of the upper leg. Not until the thighs are parallel or slightly below parallel will the hamstrings be positively affected. As this depth is attained, the hamstrings and the quadriceps will be strengthened in a coordinated manner. It is also critical to understand that running speed improvement of any athlete is directly correlated with hamstring development. To improve speed, the hamstrings have got to be made stronger. Squatting to the proper depth will give you a big edge over most opponents.



A Perfect Parallel Squat

TECHNIQUE SECRETS

The best way to get all athletes, beginning and veteran lifters, in a perfect Squatting position is to have them sit in an ordinary chair. This is a vital secret because everyone, even the most difficult, can easily experience a perfect rock-solid Squatting position. Now, you are going to concentrate on six important technique secrets: Athletic stance, spread the chest, lock-in lower back, toes pointed slightly out, eyes focused straight ahead and sit tall.

A. Athletic Stance: There are three basic Squatting stances: Bodybuilding, Powerlifting and Athletic. Bodybuilders generally use a very narrow stance often with the toes straight ahead and sometimes with a board placed underneath the heels. This method is used to attain certain bodybuilding objectives of thigh development. Many powerlifters will use a very wide stance with the toes flared out. Some powerlifters

Continued on page 36

By Dr. Greg Shepard

Continued From Page 26

will use a narrow stance but will point the toes outward quite a lot. Some powerlifters will use whatever stance will allow them to Squat the most weight but when I see a very side stance with the toes pointed out excessively, I refer to that as a powerlifting stance.

Whenever I read about Squatting stances from strength coaches or attend a seminar on the subject, invariably the experts will always say "Assume about a shoulder-width stance." This is meant to be an athletic stance but is there a better way? Yes! This is part of you winning edge. Part of "The Secret".

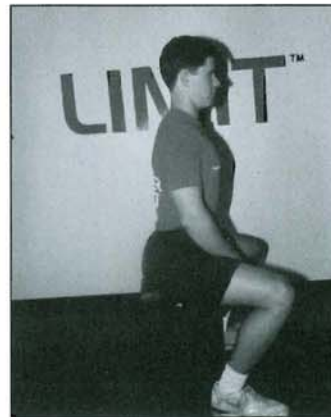
Tell your football players to get in a linebacker stance. Tell basketball players to get in a rebounding stance and baseball players to look like a shortstop. Volleyball and tennis players should be in their ready position. At clinics, we get into a bodybuilder's Squatting stance and ask "Does this look like a linebacker?" The kids say, "No. Get your feet wider?" We then get into a wide powerlifting stance with the toes flared way out and ask, "How about this. Does this look like a football, basketball or baseball player?" Everyone laughs. Then we get into an athletic stance and it's amazing. You can't tell what sport we are in. You see the "ready position for all mainstream high school sports is essentially the same.

Now, groove and build your power and strength from this athletic stance. As athletes and coaches spot each other, they should be making sure lifters look like an athlete at all times with their stance. This is a far superior perspective than saying "about shoulder width." Our way also sends a message that we are athletes and that when the same high school athlete makes a transition from football to basketball to baseball his Squatting stance will remain the same.

Now, sit in a chair and place the feet in a perfect athletic stance.

B. Spread the Chest: This is a most fantastic coaching secret which I accidentally discovered while doing a BFS Clinic. I was frustrated because several boys could not lock-in their lower back. I blurted out, "Spread the chest!" To my amazement, the lower back immediately went from poor to great. I now say "spread the chest!" to athletes when they dead lift or clean. Once the athlete experiences the lower back locking into place as he spreads his chest while sitting in a chair, he can usually have the same experience without the chair. Sitting in the chair just makes it a whole lot easier.

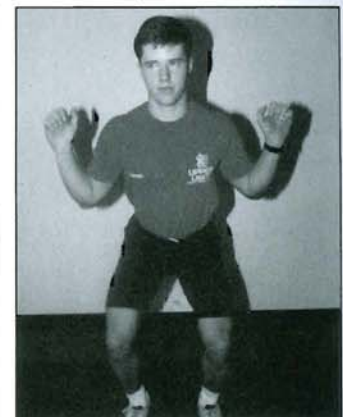
Several years later, I noticed that some strength coaches were saying "get a big chest." It is the same principle but "spread the chest" seems to be a superior coaching term.



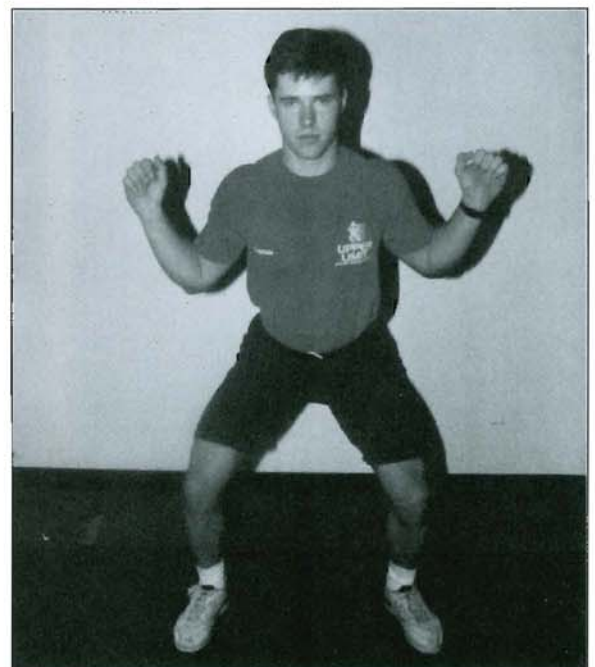
A. Athletic Stance B. Spread The Chest C. Lock-In Lower Back D. Toes Pointed Slightly Out E. Eyes Focused Straight Ahead F. Sit Tall



Stance Used By Some Powerlifters



Body building Stance



Athletic Stance

C. Lock-in the Lower Back: Spreading the chest and locking in the lower back go hand-in hand. However, you must visualize and coach both. The lower back must swoop way in, into a deep concave position.

A coach may want to pull back on the lifter's shoulder and push in on the lower back as shown in figure 5. The athlete in that photo has at best only a fair position while in figure 6 he now has a good to great position. There is still room for improvement. So, what do you say? "Spread the chest, lock-in the lower back." I will probably say this 100 times each workout session with groups of athletes. It is a key phrase that spotters should also be using frequently. Athletes need constant reminders. That's a secret unto itself.

D. Toes Pointed Slightly Out: This technique secret is fairly well known but it's still the cause of many mistakes for athletes. Most athletes will point their toes out naturally because it aids in balance. However, many times the athlete will point the toes out too far. No problem. All you do is go back to the athletic stance formula. Ask the question, "Do you look like a linebacker, shortstop or basketball player?" Remember, you must groove your power from an exact athletic stance and this, of course, must include the toes only being pointed slightly out.

E. Eyes Focused Straight Ahead: How many times have you heard, "Look up-Look up!" I diplomatically tell athletes and coaches this means to look up straight ahead with eyes focused on a point. Would you sprint looking up at the sky? Would you block or tackle looking up at the sky? Obviously not! You should sprint, block or tackle looking straight ahead. You Squat the same way. You also want to focus your eyes on a point. Do not take your eyes off this point which should be straight ahead. If your eyes move, your head moves. If your head moves, your body moves. If your body, head and eyes move, your Squat technique will be adversely affected. Not only will you lift less weight, you will do it less safely.

When an athlete looks up at the ceiling while beginning the Squatting movement at the top position, everything might seem comfortable and right. However, at the bottom position is when things go bad. It is virtually impossible to look at the same point on the ceiling at the bottom position. Therefore, the eyes move, the head moves and the body moves out of position.

Don't look down at the ground as this can be as dangerous as tackling a ball carrier with your head down. Don't look up and don't look down but stare intensely straight ahead and fix your eyes on a single point completely and totally throughout the entire lift. It is one of the great secrets that will give you a big edge on your opponents.

F. Sit Tall: Every athlete wants to always attempt to Squat with the feeling of sitting tall. You do not want to bend over with the head down and hips high. Many athletes will naturally sit tall and keep a beautiful upright position throughout the entire Squat. However, many other athletes will have a very difficult time trying to keep upright. This has to do primarily with trunk length versus leg length. Secondly, the legs could be weak and lower back stronger and the athlete compensates by bending over while Squatting.

The solution may never fully be realized but that's perfectly all right. Many great Squatters lean over. However, they attempt to sit tall and their eyes fix in on a point with the chest spread and the lower back locked in correctly. Always **ATTEMPT TO SIT TALL** while Squatting. This is a key coaching point and you should remind your athletes constantly throughout the Squatting movement to sit tall.

Now, sit tall in a chair. Get your feet in an athletic stance with the toes pointed out slightly. Focus your eyes on a point straight ahead and spread the chest and lock-in the lower back. If you can do that, congratulations! you are now ready to experience the low power position.

THE LOW POWER POSITION

Many coaches have remarked after our BFS Clinics that it's amazing how we get young athletes to Squat perfectly in just a minute or two even with no previous Squatting experience. The trick is to get each athlete into a perfect low power position as illustrated on page 45. We recommend that even experienced athletes feel this position before each set. I still do even though I've been Squatting for over 25 years.

If an athlete cannot assume a perfect low-power position, he is most certainly doomed to failure. A coach must be able to recognize any and all errors. He must also be able to correct these errors before his athlete can be successful. Let's analyze the photos on page 45 and find the major errors.

In figure 2 (pg. 45) there are five major problems. First, the heels are not firmly planted on the floor. Sometimes athletes are told to put a board underneath the heels to help on balance. This is wrong. Get your athletes in a perfect low power position. The second problem is the knees. They are way forward in relation to the toes. Not only is this poor Squatting technique, it places unnecessary pressure on the knee joints. To help correct the first two problems, simply have the athlete get his feet closer to the Squatting Stand, which is the third problem in the photo. The next two problems are the lower back not being locked-in tight and the upper body leaning forward. To correct the lower back, tell your athlete to spread his chest. To correct the upper body lean, say "sit tall". The Coach

By Dr. Greg Shepard

Continued From Page 37

may physically push in on the lower back and place the palm of his hand on the athlete's chest and gently pull back. The coach can also physically pull the knees back in helping his athlete get into a perfect low power position.

Figure 3 reveals the same problems except now the athlete's feet are flat and the heels are firmly planted on the floor. The knees are better but this athlete doesn't need to Squat quite that low. In figure 4, we find the feet are close to the Squatting stand and the knees are back which is good but this athlete has three major problems: First, Squatting too low, second the lower back is not locked-in; and third, the upper body has too much forward lean.

Figure 1 shows the perfect low power position. The athlete has his feet close to the Squatting stand. His feet and heels are firmly planted on the floor. His knees are back and not extended past the toes. The athlete is at a perfect parallel position. His eyes are focused on a point which helps the lower back and upper body position. If you said one of the major problems in figure 2 and 3 was the head position I wouldn't argue. Notice the difference in the chin position, of figure 2 and figure 6. The athlete pictured is my son, Matt, while he was in the 8th grade. At this time, he weighed 125 and Parallel Squatted 225 pounds.

Continued on page 48

BE PERFECT: SIT TALL, SPREAD THE CHEST, LOCK-IN THE LOWER BACK, EYES STRAIGHT, ATHLETIC STANCE.

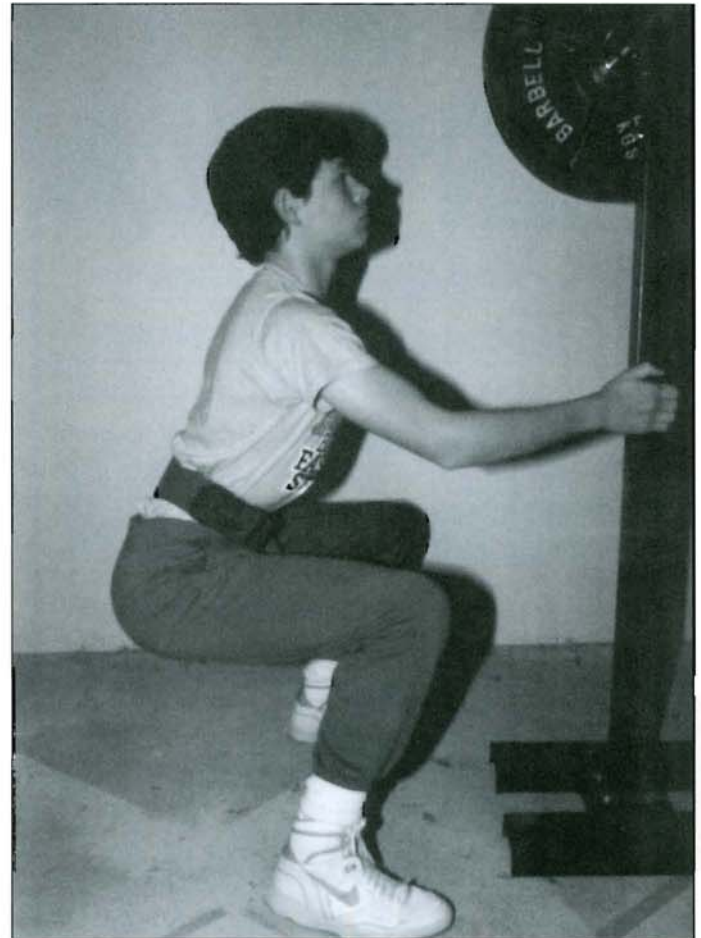


Figure 1: Perfect Low Power Position. This athlete will have no problem Parallel Squatting.



Figure 2: Find Five Major Problems



Figure 3: Find Four Major Problems



Figure 4: Find Three Major Problems



Figure 5: A Coach Must Be Able To Recognize Problems, Then Correct Them

By Dr. Greg Shepard

Continued From Page 45

A. Grip: There are two technique guidelines to consider when establishing a proper grip on the Squat. First is thumb position. Should you have your thumb around the bar or in back of the bar as illustrated in figure 7? About 60% of powerlifters have the thumb in back while 40% of powerlifters prefer their thumbs around the bar. Obviously both styles are acceptable, but I prefer to coach my athletes with their thumbs in back of the bar. Sometimes athletes will have a problem in keeping the bar on the shoulders.

Sometimes the bar will actually slip off the shoulders and slip down the back. The bar seems to be more secure with the thumbs in back; but if an athlete, after trying both styles, really prefers to have his thumbs around, I don't object.

The second grip guideline to consider is the width of the athlete's grip. This is another one of those secrets which can give you an edge. At clinics, I ask everyone to pretend they have a bar on their shoulders and to get a "very narrow grip." Then, I ask everyone to sit tall, spread their chest and lock-in their lower back. Next, they are asked to take a wide grip and lock-in their lower backs. Now I ask, "Which grip makes it easier to lock-in the lower back?" It's unanimous! It's the wide grip.

Make sure you use the lines which are grooved into most Olympic bars about ten inches from the inside collars. Use these lines as reference points. An athlete might put his first finger on each line with his thumb behind the bar. Now, he is properly balanced with a wide grip and has some assurance that the bar will remain secure on his shoulders.

B. Bar Position: A very common mistake for athletes who Squat is placing the bar too high on the shoulders. In fact, many athletes place the bar right on the neck. This hurts, so they'll use a barbell pad. For most athletes, this also affects proper balance for heavy Squatting. The vast majority of athletes will Squat more and Squat more effectively with more comfort when the bar is placed lower on the shoulders as shown in figure 7. Only a very, very small percentage of athletes will be able to Squat more effectively with a high bar placement and this is because of structural differences in bone length and tendon-muscle attachments.

Some powerlifters will place the bar extremely low on the shoulders. Sometimes the bar may be as much as four inches from the top of the shoulders, which is against the rules. For some lifters, this may give a slight anatomical advantage or the advantage may be experienced because of

a heavy, tight lifting suit or even lack of flexibility. Whatever the reason, extreme low bar placement Squatting will detract from overall leg development which is obviously bad for an athlete.

Most athletes will be able to find a natural groove on the shoulders when they come under the bar in a proper position. "Don't put the bar on your neck; put it on your shoulders. Find a groove." In almost every case, if you say these technique cues, athletes will be able to have excellent bar placement during their Squat.

C. Taking the Bar off the Rack: I've seen high school athletes get all psyched to Squat and get their shoulders 2-3 inches under the bar. Then with an explosive movement, jam their shoulders against the bar. Well, jamming your shoulders against a steel bar from the 2-3 inch space will cause the athlete to bruise his neck or shoulders. Besides hurting, it is unlikely the athlete will have the bar placed on his shoulders correctly.

On the other end of the spectrum, I've seen athletes wimp a bar off the rack. Many times this athlete will not be in a good solid Squatting position as he backs up to a ready stance.

A far superior way is to come under the bar in a great solid proper power position, making sure everything is correct. Get the bar in the groove on your shoulders. Look straight ahead. Spread the chest. Get in your athletic stance. Now, this next technique point is most critical. Get your athletic stance directly under the bar. Many athletes will stand a foot back and lean forward. This is asking for trouble, especially with heavy weight. Now you're ready. Put some pressure on the bar and make sure everything feels right. If it does, blast off! This explosive movement will not bruise the shoulders because you've already put some pressure on the bar. The advantage you have now is that your position is great and because of the explosive movement, the bar feels light. You are confident.

The bar is now off the rack and the athlete is firmly under the weight. At this point, take a short step back with each foot, and assume an athletic stance. You are ready to Squat. In the case of some Squat Racks, the athlete may have to take several steps backward to clear himself to Squat. Some Step-Squat Racks and Peg-Squat Racks have a spotting tier which is too high for Parallel Squats, thus requiring a long walk back for position. Obviously, anything more than a short step back with each foot is a disadvantage.

By Dr. Greg Shepard

Continued From Previous Page

Powerlifters must break parallel. Therefore, the marble would have to roll towards the athlete's hip. Some football and/or strength coaches want their athletes to break parallel. I have no objection to this whatsoever. To get the proper leg development, the athlete must go to at least parallel.

Some coaches don't use the top of the thigh, but use the bottom of the thigh as their Parallel Squatting reference point. This creates problems as many athletes will end up Squatting 2-3 inches higher than if using the top of the thigh as the parallel point. These athletes would lose hamstring and glute development plus, standards become meaningless.

E. The Safety Squat or Beeper: Can be a useful tool in helping athletes and coaches understand the meaning of parallel. Many times an athlete will argue with a teammate or coach on the question of being parallel. With the Safety Squat, there is no argument.

The Safety Squat works on a mercury switch and when the device is held at a parallel position, it will beep. The athlete simply wraps the velcro straps around his thigh at midpoint making sure the Safety Squat is placed exactly on top of the thigh.

F. The Upward Drive: You should continue holding your breath when beginning the upward drive from the parallel position. You should picture your hips attached to a giant rubber band. As you go down to parallel, you stretch the rubber band to the limit. The instant the hips hit parallel, you release the rubber band. Your hips pop upward while you maintain perfect technique.

About halfway up, you pass through the "sticking point" which is the point when the Squat becomes easier. When you reach this point, you should breathe out. Sometimes, lifters on a heavy Squat will let out a yell as they expel the air in their lungs. This is perfectly acceptable and probably helps with the overall psych of the lift.

Sometimes with a heavy lift the hips will come up alright but the athlete will lean over. To correct this position, you may try two techniques. First, scoot the hips forward and try to get the hips underneath the bar. Obviously, you should again reemphasize our previous technique guidelines for the chest and lower back. The second technique guideline which works extremely well with many athletes is to think elbows forward. When a lifter presses his elbows forward

during a Squat, he will tend to have an upright torso with a big chest and a locked-in lower back. The hips will also follow the elbows.

The eyes should remain fixed on the same point throughout the entire upward drive. When the lift and set is completed, take short, controlled steps back to the rack. Always keep in a solid position as you rack the bar.

G. Controlled Psych or Frenzied Psych? I've seen some powerlifters, when attempting an all-time max, work themselves into a screaming psychotic frenzy. They invariably miss and sometimes get hurt. The Parallel Squat is a tricky lift. Technique and correct position means everything. Every technique guideline must be executed to perfection when attempting a new max. You must be psyched but it must be a controlled psych. Your mind must be clear and mentally preparing and thinking of correct positioning throughout the entire lift.

KNEES AND SQUATS

Performing Squats going down under complete control to only a parallel position will cause positive changes to take place. First, the leg muscles will become stronger and bigger, especially the quadriceps and hamstrings. Second, the tendons will become thicker and stronger. Third, the knee ligaments will also become thicker and stronger. Fourth, the entire articular capsule of the knee will become thicker. Fifth, the bones of the legs will become stronger and slightly bigger due to increased capillarization. Sixth, the cartilage of the knee will become more resistant to injury (according to Dr. Mel Hayashi). Dr. Hayashi, a sports medicine orthopedic specialist, has been a chief resident at the Mayo Clinic and was the Chief Orthopedic Surgeon in the 1984 Olympic Games. I believe the above positive effects of Squats are why athletes who do Squats correctly have a far less incidence of knee injuries than those athletes who do not Squat at all. This is especially true in football.

In conclusion, we are firmly and resolutely convinced that performing Squats correctly is like taking out an insurance policy against injury, especially knee injuries.



This College Athlete Needs A Wider Grip And His Knees Are Too Far Forward. The Athlete On The Left Is PERFECT.

Knees In: A coach should make sure that the athlete's knees are NOT out of perpendicular or vertical alignment. A most common problem with athletes is the knees coming in or together while Squatting. This puts a lot of pressure on the medial collateral ligament. It is also a very weak Squatting position and much power is lost when the knees come together. Mark Eaton, our 7-4 Jazz Center has this problem. *COACHING POINT: When this happens I yell "Knees!"* This is the athlete's cue to force his knees back out to a straight position. When the athlete responds, then power immediately returns and pressure on the inside ligaments is released. I would recommend all athletes be taught this important principle. Athletes should act as coaches, judges and spotters on the Squat anyway and this coaching point should be just part of their training.

Knees Out: Squatting with the knees out causes unwanted pressure on the lateral or outside knee ligaments. *COACHING POINT: When the knees are out, I think "Stance" and usually widening the stance is the proper correction.*

Knees Forward: The knees, at times, may be extended forward way over the knees. This is also incorrect and puts the athlete in a weak position. *COACHING POINT: Go back to the BFS warm-up position. Squat down to the parallel position without the bar, holding onto the Squat rack for balance. From this point, a coach can work with the athlete correcting the Squat position. (Chest should be upright, lower back "locked" in a concave position, head level, feet flat in an athletic stance with the lower legs and knees in perpendicular and vertical alignment.) And athlete must first "feel" the correct position before he can Squat correctly.*

SPOTTING TECHNIQUES

Correct spotting techniques are critical to Squatting correctly. a coach has the responsibility of teaching spotting correctly and demanding strict adherence to these spotting techniques. Three spotters should be used to insure success in Squatting correctly. A back spotter and two side spotters are used. The functions of the three spotters are threefold. First, the spotters should act as coaches and give correct technique cues. Second, they should act as judges on proper depth and technique problems. Third, they should be great teammates and offer constant encouragement. Spotters should pull the best from their training partner.

Your competition will not spot this way. This is part of "the secret" that will give you the winner's edge.

GET AN ADDITIONAL EDGE

- I. Total Program Book: Page 10
- II. Upper Limit Poster Page 67
- III. Squat Video: Inside Cover

CALL 1-800-628-9737