

Fact or Fiction? **Back Squat Controversy**

By Tom Cross 1994 NSCA College Coach of the Year

Many strong thoughts and emotions are often involved with the squat exercise. As I have watched what many call the 'squat' over the years, that is understandable. I'm reminded of a quote by Meg Ritchie in the 1994 Summer BFS Journal, "Greg, there are no dangerous lifts, only dangerous coaches and you can quote me on that." Much of what happens involves little technique, poor technique or no technique. Often, weight alone is the dominant factor which certainly can lead to some bad experiences from the squat.

From the other side of the coin, we all 'squat' many times each day as we sit in a chair and then arise again. The squat is not an unusual movement to the human body. A great deal of research has been done in the last half of this century. The overwhelming majority of the literature points to the benefits. Many of the fears, however, arose in the early 1960's when one researcher found full squats were a factor in stretching the knee ligaments. No other research since that time has substantiated those findings. In fact, subsequent research has indicated the squatting movement promotes strength in the total knee joint structure.

Often, coaches, trainees, and the medical community recommend 'partial' squats. Some pre-existing conditions may dictate this adjustment. Research states, however, that exercises using more complete range of motion at the knee joint may increase rather than decrease the stability of the joint. Likewise, recent findings show that squatting places less stress on the

anterior cruciate ligament (ACL) than do knee extensions. Keeping the knee above the ankle is a big factor in reducing shear forces at the knee joint. Bouncing out at the bottom also increases the shear forces at the knee.

I would conclude that good squat technique is likely to produce good results, and bad squat technique is likely to produce bad results. Also, the exercise prescription has a huge effect upon outcome. The squat does increase leg strength. A full year of heavy squats will likely have a positive effect upon vertical jump. Volume, intensity, tonnage must be varied in a cyclic manner and used as a part of the training puzzle, fitting the pieces together to meet the needs of the athlete. There must be a long range plan, and the squat is the most important exercise in the strength base. The coach shall be most successful by applying scientific training principles in an artistic manner. The squat is the means to an end. The end should be somewhere beyond the school record board.

TECHNIQUE CHECKLIST FOR MAXIMUM SAFETY AND RESULTS

START

1. High bar position, in the meat of the trapezius and across the deltoids
2. Feet position, shoulder width or slightly wider with toes out slightly
3. Head position, straight ahead, chin tucked in, eyes up
4. Chest position, expanded and lifted with shoulder blades pulled together
5. Torso position, tall and erect held

straight and tight throughout the movement

DESCENT

1. First, bend back at the hip joint to 'sit back' position and feel most of the weight toward the heels.
2. Next, now bend at the knees keeping hips back, weight on heels, and torso erect.
3. Keep knees over ankles, weight on the heels and continue until tops of thighs are parallel to the floor.
4. This is a slow and controlled movement requiring 2-3 seconds

ASCENT

1. Be in complete control as the change of direction is made; do not bounce out or bottom out.
2. Lift the chest first and keep the weight on the heels and the hips into the bar.
3. Keep the knees above the ankles.
4. Accelerate and drive the bar up using legs and hands into the bar using a smooth controlled movement.
5. The torso must remain straight, tight, and erect to keep the hips under the bar.

RACK

1. Short steps back into rack placing on side of bar in position first.

BREATHING

1. Inhale as BIG as possible before descent; hold during the lowering and beginning of the ascent.
2. Exhale after the midpoint of the ascent.
3. During high intensity reps, it may be necessary to use more than one breath per rep.

Master these techniques. Anything almost right is wrong. You will reap great benefits from your squat exercise.....□



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weak, Bruton was still strong. With under five minutes to go in the game, the Panthers were ahead 21-14. Their rivals, York High School, rallied in the last seconds making the score 21-20, but these men, who had paid the price, were not going to lose. With full determination, senior lineman Darius Parker exploded through and stopped the conversion cold. The win and now a post sea-

son invitation belonged to Bruton. It also marked the first win against York since 1986.

Other accomplishments by these Panthers were first in the district in Team Rushing Yardage, the first multi-win season since 1989, first winning record since 1985, first season with 5 All-District Players, over 2,500 yards total offense, two defensive shut-outs, two running backs with over 900 yards rushing each, over 500 yards passing and the

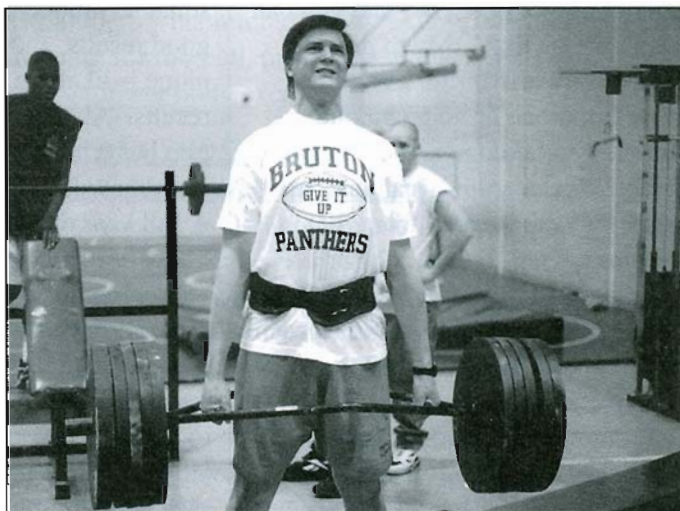
first ever Bay Rivers Coach of the Year Award for Bruton, given to Coach Kyle Neve.

And now it starts all over. From the back gym can be heard the clanging of plates and the shouts of triumph as next years Panthers get serious about Football 1995.

P.S. Each year more coaches become interested at Bruton and we have started to do some good work with our women athletes.....□



*Coach Kyle Neve & Keenan Haywood
Doing Reps with 225 lbs.*



*Grant Clarke 6-4 220 lb JR.
Doing 2 Trap Bar Reps at 505 lbs.*

STEROIDS: MORE SCARY STUFF

The new estimate of steroid use among high school students is 2 - 4%. The following study is the most incredible, scary situation in sports history: 25% of high school kids who use steroids **SHARE THEIR NEEDLES**.

In the age of A.I.D.S., you wonder how anyone could be so stupid. According to the study, the kids feel invulnerable and besides "we are doing it for health and fitness reasons."

Bigger Faster Stronger is dedicated to helping all athletes succeed without the use of steroids. Tens of thousands of athletes have made it big without the use of steroids. Please, if you need help, let somebody know. It's been proven that it's not worth the risk.