

CLEANING UP THE SQUAT

"Now, you may have heard from some sissy wearing spandex that the box squat is dangerous. When someone talks about the dangers of box squatting, it's apparent they simply don't know how to perform the lift correctly." Dave Tate

Barbell back squats are perhaps the best exercise for all around strength and size development. Like the deadlift, the back squat builds you from the ground up. Take a tip from the old timers who did nothing but squats, deadlifts, and overhead presses: these three lifts alone will make you a rampaging beast!

Unfortunately, the back squat is often met with bad press. Lifters complain of sore knees, bad backs, kinked necks, and even sore shoulders. I know a lot about this, as I am one of them. You read that right: I have blamed squats for my bad knees.

You see, I am one hardheaded son of a bitch. I like to do things MY WAY and when my way doesn't pan out, I still do it MY WAY. Since I was 12 years old, I have always squatted high bar close stance Olympic style. The form was ingrained in my head and, I thought, it was the best way to squat for my leverages. Yes, I got stronger as the years rolled by. I never had any pain in my knees, or anywhere else. Granted, I only added at best 20-pounds a year to the lift, but I was still gaining. As I got older, I started to notice some pain in my left knee right where the patellar tendon attaches. I ignored it and kept training. As long as I warmed up and stretched, then used a light wrap, the pain was bearable. This went on for a few years. When the summer months would come and I would venture out into the fresh air for a bike ride or slow jog, the knee pain would intensify enough to make me stop squatting for a week or two.

The pain got worse, and the wraps got tighter. One day, while doing an easy 5 with 400, the pain was enough to stop me. I spent the next few days stumbling around, trying to walk on it. It hurt for nearly two straight weeks before it started feeling well enough to lift on it again. The decision had to be made: stop squatting, or change your form because that tendon is going to tear. It might tear tomorrow, it might tear next week, but either way, it is too painful to ignore.

Back to basics. A setback is crushing to the strength athlete. It tears at you mentally. Even worse than a setback is to realize that you have to make changes that will drastically reduce the amount of weight you can lift, in hopes that in the long run it will lengthen your career and add weight to your total. That is a tough pill to swallow. The ego needs to be compressed and placed into a box. And, if you can beat that little voice in the back of your head, then you can succeed. I am going to show you how.

Squat Form

It all starts with your form. As a close stance high bar squatter, I was placing a lot of undue stress on my knees from allowing them to come forward.

2/27/2005
9:26 PM



My high bar squat. From this angle, it is hard to see the knee drift.

Many people can handle this type of squatting without any knee trouble. Heck, look at all the successful Olympic lifters! If you can squat this way without pain, then by all means continue. However, if you are powerlifting it makes no sense to squat this way. By continuing to squat with this form, you are limiting the amount of weight you can move. How many successful squatters have used this form? I can think of 2 right of hand: Kirk Karwoski and Robert Wagner. How many successful squatters use a wide stance? I cant even count them all-but I will show a few as the article goes on.

This type of squatting uses the quads as the primary mover. That is great if your goal is to have big quads! If you want a big total though, you need to incorporate them muscles of the hips, glutes, hamstrings, and low back. Lets face it-the hips are a powerful ally in the squat war. Squatting this close does not take advantage of them.

Cleaning up the squat

The knee pain had signaled a time for change. I have experienced with my form in the past, but the huge drop in weight moved always made me go back to the close stance. The new pain, however, forced me to take another look at my past.

My first stop was www.elitefts.com where the big boys play. Dave Tate and Co. are some bad muthas when it comes to totaling big. They are the epitome of WIDE squatting. Elite Fitness has some of the very best articles on the net covering all aspects of strength. What I find to be particularly useful for my bruised ego are the squatting articles. I read and re-read them about 20 times. Each time I read them, I took a little more information and put it to work for me. I also tweaked some things along the way.

So what is good squat form? I think Quest Nutrition sponsors the greatest collection squat technicians in the WORLD. While scouring the net for squat pictures, I happened

upon www.quest-nutrition.com. These guys are perfect squatters. As a matter of fact- that must be a criteria for getting Quest to sponsor you!



Not sure exactly who this is, but his form is impeccable. Straight back, wide stance, deep as hell, and a ton of weight.



Wade Hooper. Wade has won the IPF World's, USAPL Nationals, and has a WPO title belt. Wade has done it all in IPF legal gear to boot. Wade knows SQUAT! Take a look at his feet-they are pointing almost completely forward.



Another man that needs no introduction, this is Mike Mastrean. A 198-pound Superman. Mike shows us perfect, ass-to-the-basement form each and every time he steps onto the platform. Mike has even been to my place of work for powerlifting meets.

As you can see, these fellas squat WIDE, but they don't squat super wide. This is the happy medium that allows one to sink to USAPL depths and lift WPO weights. This, IMO, is the perfect squat stance.

Now that we know what it looks like, it is time to break it down into a step-by-step set of movements. You will need to practice it again and again. You will need to re-learn everything you know. And, if you are like me, you will need to take a few steps back in order to make a giant leap forward.

Part 1-Setting up to get down

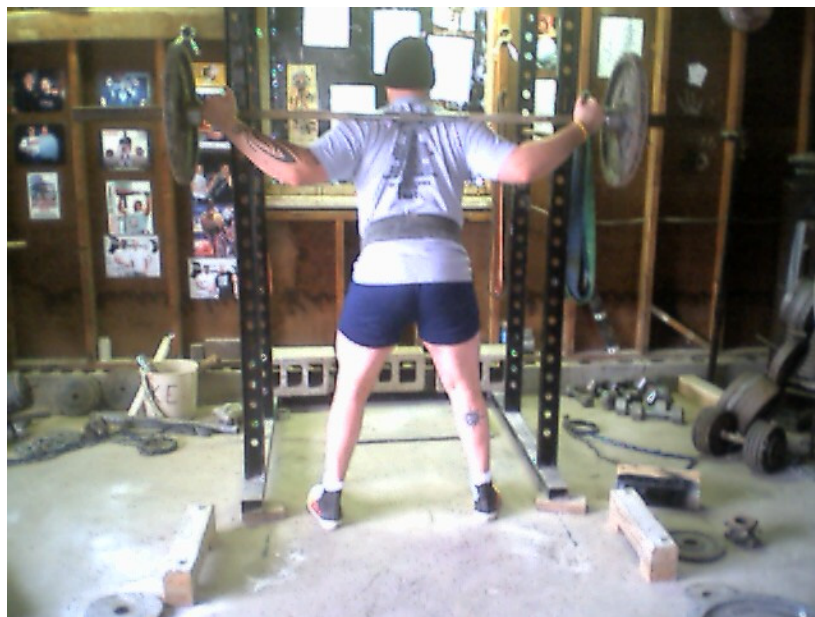
(Authors Warning: You are about to see pictures of squat form. In order to emphasize proper form, I will have to wear my "John MacEnroe" shorts. If you have a weak stomach you may need a barf bag or some Pepto. You have been warned.)

First thing is first. Get under the damn bar! Get a bar position that is comfortable to you- most likely that will be somewhere between a high bar and a very low bar position. I tend to set mine just a tad lower than my traps. There is a little groove there that allows the bar to sit nicely.



My bar position. Sorry for the blurry picture!

After you get the bar set where you like it, it is time to position your hands. For people having trouble with their shoulders and biceps during a squat, I suggest you get used to having them out by the collars. This allows me to push against the collars and keep my upper back tight as seen in the above photo. I also eliminated the upper body compression by taking out my grip. With my bad shoulder, this has made squatting not as painful.



Set-up. Arching out and stepping back.

Once you are set under the bar, drive your head back into it, take a breath, and **arch** the bar out of the pins.

2/27/2005
9:26 PM



Sliding into position. Back is still tight, breath is held. This is a 2-3 step movement at best.

Don't play around on the platform. Step back and set-up. The longer you fidget on the platform, the more it zaps your core strength. Practice the set-up until it becomes second nature and you don't even need to look down for it.

Even while standing in the set-up, you should be driving out on your knees, which will cause tremendous pressure in your hips. You should also be spreading the floor apart with your feet and pushing out on the sides of your shoes, as seen above. Also, the back remains in a tight arch position. **DO NOT** get loose!

Once you are set-up, you are ready to start your descent into the hole. Take another deep breath of air into the belly and push it hard into your belt. Unlock the hips and sit **BACK** with the weight, keeping the back **TIGHT**. Again, you should be spreading the floor and pushing the knees out. Your weight should be more towards your heels as you lower.



Head up, hips back, knees out, spread the floor. Notice closely the belly full of air!



Side view of the same thing. Hips shooting back as I descend into the hole.

At this point there is a lot to concentrate on. Back is staying tight as you drive the knees out and spread the floor hard with the feet. Head is driven into the bar. Continue to sit back as far as you can before you unlock the knees to hit depth. You are still holding your breath. Get loose here, and you might as well kiss your squat good bye!

Continue to control yourself down into the hole. As you approach depth, you should feel like a compressed spring. Even with a light weight, I feel tremendous pressure building throughout my body.

2/27/2005
9:26 PM



In the hole and thinking one thing: EXPLODE BABY!

This is the bottom position. In order to get whites, I would need to go an inch or so lower. However, even with 225, I cannot reach depth. It takes a good 300 or more RAW to get my depth with this wide stance.

Study the form from the ground up. Feet are positioned well and you can tell I am pushing out on the sides of my feet and spreading the floor. Knees are opened and driving out. Belly is full of air and pushed into my belt (yes, there is a belt in there!). Back is tight and arched. Head is up and driving back into the bar. Eyes are to the sky. I am in the launch position awaiting the take off!

Let's look at a quick comparison of me and Hooper:



NOT BAD!

From here, it all gets simple. Drive into the bar, blast out on the knees, spread the floor, and feel the hips, hams, and glutes drive you to lockout.

If you have a video camera-great. Use it to work on your form. If you don't have a camera, get a competent and brutally honest spotter. They will help to dial in your form as you are actually squatting.



Driving to lockout. Reverse the descent, stay tight, and jam the gears!

As you can see, it is pretty damn simple. However, there are a number of things that can go wrong. Being the assistant coach of a powerlifting team, I get to see just about everything wrong you can do. For the sake of shortening this article, I will touch upon a few of the more prominent things that squatters do to shorten their careers.

The knock-kneed squatter

This is a common problem among squatters. The reason for this is the stronger quadriceps muscles take over for the weaker hips. The lifter's hips are so weak that he/she cannot continue to force them out on the drive up, so the quads overcompensate.



Knock-kneed. The knees are coming in to take over for the weak hips.

Most times this knocking of the knees is harmless. However, if done too often and with too much weight, the lifter can begin to stress the ligaments of the knee and cause damage to the knee structure. Also, it eliminates how much weight you can handle, and it just looks bad!

The best way to defeat this is to swallow the pride, lower the weight, and concentrate on driving the knees out hard. Also, wrapping a mini band around the knees and concentrating on keeping it taut will help. Whatever method you choose, you need to beat this if you want to squat big weights!

The Hunch Back of Notre Dame squatter

We have all seen that squatter. Hell, I used to be that squatter! He descends with beauty into the hole, then loses his arch and shoots his hips up first. This leads to a bowing of the lower back and bar shooting out of the groove. Not only is this ugly and a biomechanics nightmare, it is very dangerous as well. In my last article about deadlifting I spoke about bowed back versus arched back lifting and the load distribution. It is the same on the squat. Bowed backs = injured backs.



Hips shooting up first, back bowed over, head down, and bar out of the groove.

This is something that I advise you fix immediately. I didn't, and I eventually hurt my back to the point of it being painful down both legs. Cleaning up my form, strengthening my back, and going to the chiropractor saved my lifting.

To fix this, you need to focus on keeping a tight arch all the way through the movement. If you get loose at the bottom and lose it, then you need to drive back on the bar and get it back. I have seen lifters at the gym hunched over with 700. It is awful and it looks like they are going to split in 2 pieces. Squatting like this will ALWAYS lead to injury. Maybe not soon, but certainly later.

Strengthen the back through arched back good mornings and reverse hypers. Lower the squat weight until you can maintain an arch all the way through the movement.

Knees forward squatter

This is the guy that seems like he is going to descend nicely. He sits back well, has a good arch, and stays tight. However, as he nears the hole, he fears sitting back and shoots forward. This takes the bar out of the groove, puts a lot of pressure on the knees, and screws the ascent with the weight.



Good intentions gone bad.

A good way to fix this is to put the lifter on a box with a light weight. Assure them through proper form and good spotting that they won't fall backwards. If necessary, put them in a slightly heeled boot or shoe for some time, allowing them to sit back more comfortably. Once they get it down, switch back to the flat shoe.

Another way is to have them hold onto the cage as they lower themselves. This lets them get a feel for the groove of the squat.

Box Squats

What squatting article would be complete without a discussion about box squats. Personally, I love them. Everyone in the gym does them and we have had 0 injuries from them. The head coach has had them box squatting now for 7 years with no injuries. Can you get injured from box squatting? Sure. You can get injured from anything if you do it negligently.

So how does one do the box squat? Well, the box squat is done exactly like the regular back squat. The form stays exactly the same! The only difference is you stop and pause on a box, breaking up the eccentric/concentric chain. The box squat allows you to relax,

then re-flex the hips. This builds tremendous strength in the hips that benefits both the squat and the deadlift.

Reasons for injuries on the box are numerous. Getting loose on the box, that is, losing your arch, can cause an injury. The old style of box squats had the lifter rocking. This is a big no-no as it cause you to lose your arch and enforces bad form. Do you rock when you do back squats? NO! So why rock when you do a box squat???

Slamming onto the box will cause compression injuries. Use a weight you can handle, and control it throughout the movement. Don't sit so far back that you lose it and plop onto the box. If you cannot control it on a deep box, then start high and work your way down.



Preparing to box squat. Same form, same style. Just another day at the office.



Lowering down to the box. Tight back, sitting back, driving out.



On the box. Back is tight, form is on. Everything remains the same. From the poor picture quality it looks like my head is down-I can assure you it isn't. Keep the head driving into the bar!



Driving up off the box. Head back into the bar, strong tight back. Notice I am pushing out on my shoes and spreading the floor.

Now let's look at the side view of the same:





Looking that sexy is not a requirement!

Gear

For the sake of a shorter article, I will only talk about the basics. Get a good powerlifting belt. A nice leather one will last forever if you treat it right. Whether you have a lever or a pronged buckle is up to you. I prefer the buckle. The belt will allow you to push air into your belly and drive into the belt. This will keep you tight. If haven't tried squatting this way-try it! It makes your mid section like an oak tree.

Shoes. Now, I know every great squatter out there talks about a certain shoe as being the best. Perhaps the best advice about squat shoes came from Louie Simmons: "Don't have \$100 shoes and a 10-cent squat."

Of course, there are those people out there who make a living off of selling their brand of equipment. They will tell you that they sell the best squat shoe on the market. Unless you are handling 1000-pounds on a regular basis, I would not get concerned about spending \$100 on a pair of shoes. You can spend that money on something else that will help your total far better than a pair of shoes! I find I like Chuck Taylors. They are cheap, and they last a long time. I also have a nice cheap pair of Nikes I got at a Finish Line. They have a flat sole and are a little stiffer than the Chucks. Experiment and find out what works for you.

I will say this. I used a pair of Safe SST Pro Series (\$160) for my squat workout a few weeks back. The head coach had a pair, so I tried them. My hips and glutes did not get half the workout they get in the flat-soled shoes. Call me crazy, but a \$30 pair of Chucks works just fine.

Conclusion

I hope you have learned something in this long-winded article! I know that I am much healthier squatting this way, and I truly believe that has saved my career as well as my knees and back. It is nice to finish a squat workout with no knee pain and no back stiffness.

Everything I have talked about works. Incorporating it just might lead you to the promise land of BIG SQUATS! Good luck and good lifting.

Until next time: LIVESTRONG!

Rick Walker, CSCS