

Coach Karen Kuplicki, Olympus School of Gymnastics, Sandy, Utah.



Pain-Free Front Squats

BY KIM GOSS

Here's a practical way to perform this valuable exercise without wrist pain

Many strength coaches believe the front squat is a better leg exercise than the back squat for athletes. One reason is that since the barbell is positioned on the front of the shoulders rather than on the back, the quads work harder. At the very least, the front squat should be considered a key auxiliary exercise for any athlete. In fact, in one survey of top European coaches who were asked to name the three best weight training exercises for sports, the consensus was the power snatch, the incline press and the front squat.

As for how much emphasis the front squat should receive in an athlete's training, that's up to the strength coach. At BFS, we believe that the back squat should be the primary leg exercise for a young athlete; with the front squat, box squat and hip sled as key auxiliary exercises. For more experienced athletes with a good base of strength built from years of back squatting,

more emphasis could be placed on sport-specific exercises such as front squats and lunges.

One drawback to the front squat is that because holding the weight on the shoulders compresses the chest and makes breathing more labored, it's difficult to perform higher repetitions in this exercise. Performing more than three repetitions often leads to a breakdown in form and even the possibility of blacking out. But a more important question to ask about this exercise is not whether it can replace back squats but why don't more coaches prescribe front squats for their athletes? The answer is pain.

The best way to hold a barbell in a front squat is to use the same grip as you would in a power clean, which is with your hands supinated (palms down) and elbows held high. Unfortunately, to hold the bar in this manner can cause pain in

the wrists and elbows if you have relatively long forearms or tightness in the wrists or – the primary problem – tightness in the upper back or shoulders.

It's not that no one has tried to find a solution. Sure, the hardcore Olympic lifters simply say, "Deal with it! Flexibility will come." But others will offer special exercises, such as holding the bar while a training partner presses up on your elbows. Some will say, "Just relax your hands and hold on to the bar with your fingertips, being certain you keep the elbows high."

Another technique is to cross your arms in front of you. This method works, but balance can be especially difficult to manage – often you have to focus so much on balancing that it can be hard to put a lot of intensity into the exercise. There is actually a device called the Sting Ray, manufactured by the same company that produces the Manta Ray, designed to more securely position the bar with this type of lift. BFS sold this at one time; but the feedback we received from many of our customers was that it was awkward to use, so we discontinued selling it.

We've also tried several other devices, such as the E-Z Squat and the Front Squat Harness. These devices consisted of a harness that attaches to the front of the body and allows the weight to be supported on hooks; the athlete holds on to handles for support. The issue with this equipment is that it encourages a rounded back posture, making it even more difficult to breathe. Also, we found that with the E-Z Squat, because the elbows are pointed down with this device, it is possible to jam the elbows into the knees at the bottom position.

The best alternative we've found to the traditional front squat, and one that we unfortunately cannot take credit for (or for that matter make a lot of money from suggesting), involves the use of lifting straps. Yes, lifting straps.

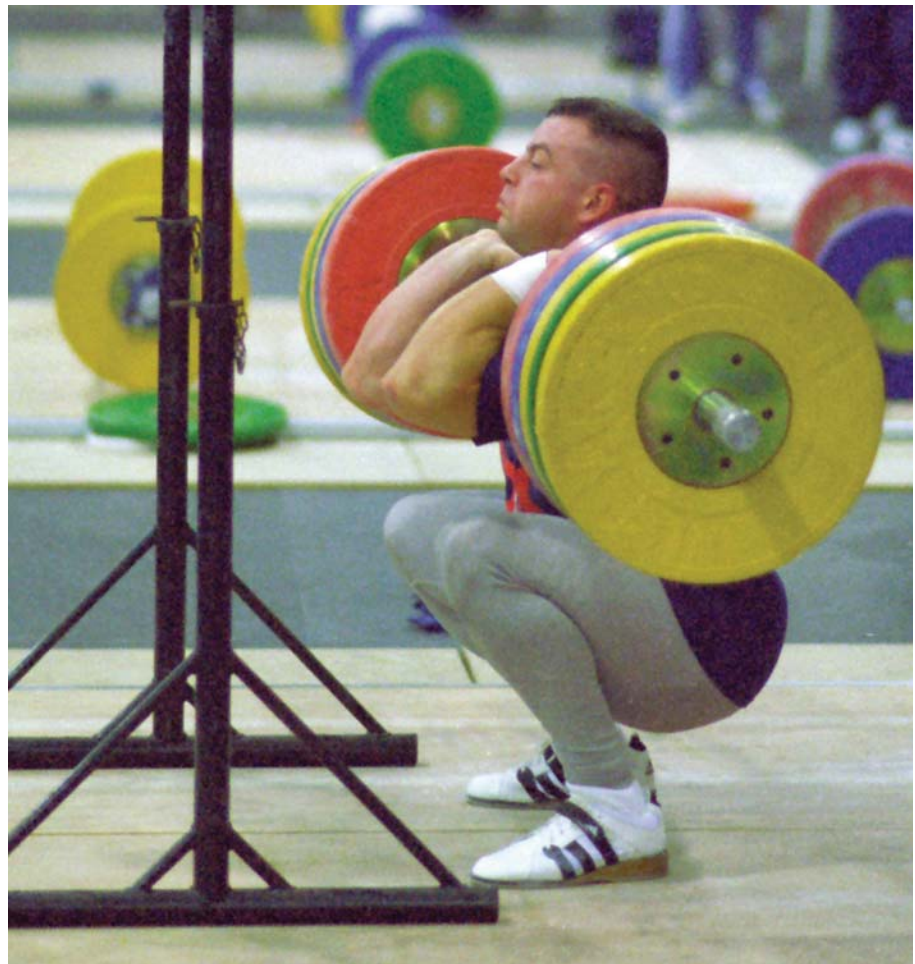
The Lifting Strap Solution

The type of front squat I'm about to describe requires the use of two lifting straps, preferably a pair that has about a foot of length after being tied to the bar – some of the "quick release" straps Olympic lifters use won't work well for this exercise. Simply hook the straps around the bar at shoulder width or the position that you

would normally use for a front squat. Generally, this is the same width as your power clean grip.

To perform the exercise, place your shoulders under the bar and grasp the straps with a neutral grip (i.e., palms facing each other). How high up you grab the straps depends upon your flexibility (the less space between the bar and your hands, the better). From this position, simply lift the weight off the squat racks and begin front squatting. You'll find that you can keep your elbows high and the weight securely on your shoulders with this method. The only drawback is it can be difficult to replace the bar onto the racks, so you should have a spotter assist you.

To give you an example of how well this method works, teen weightlifter Maegan Snodgrass' best front squat last summer was 193 pounds at a bodyweight of 135 pounds. However, she injured her wrist in gymnastics so we decided not to put extra stress on her wrists with front squats, preferring back squats instead. This summer we tried the front squat with



US Marine and Olympian Tom Gough shows great form in the front squat. Unfortunately, beginners often find that the front squat puts excessive stress on the wrist and elbows. (Bruce Klemens photo)

straps. On her second workout she easily did 198 pounds, and three workouts later she did 231 pounds! “From the very first time I tried this exercise, the bar felt very secure on my shoulders and I felt no stress on my wrists,” says Maegan.

The reason there is less stress on the wrists is twofold: the upper arms do not have to be bent back as far as with a regular front squat; and the wrists are in a neutral position, as opposed to the supinated position (palms up) used with regular front squatting. In fact, there are many reasons this method of front squatting may be superior to regular front squats.

The Lifting Strap Advantage

For many athletes, wrist injuries can be devastating. If baseball players injure their wrists, they simply cannot play. When BFS interviewed Oakland A’s coach Bob Alejo in the 90s, he said that he often avoided introducing his athletes to certain Olympic lifts because of the additional stress on the wrists, especially with those athletes who had no background in the lifts.

The problem is, a wrist injury can be devastating to any athlete; and for those with a history of injury to this area, the regular front squat may not be an appropriate exercise. For Olympic lifters, who perform a high number of repetitions on snatches and clean and jerks, there is already plenty of stress on the wrists without thinking of adding even more. So, it seems



Crossing the arms in front is one alternative method of performing the front squat. A device called the Sting Ray was designed to make this variation even more comfortable, but many athletes found it awkward to use.

only natural to ask why not give the wrists a break with lifting straps? In Maegan’s case, she was healing from her wrist injury and could perform only a limited number of Olympic lifts, so the additional stress of regular front squats was out of the question. Our approach was simply to have her perform back squats until her wrists could handle the additional stress of front squats.

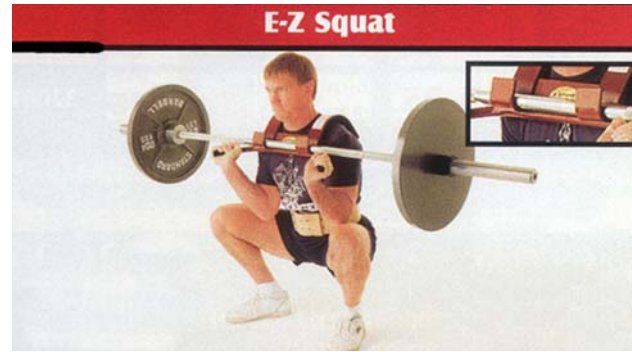
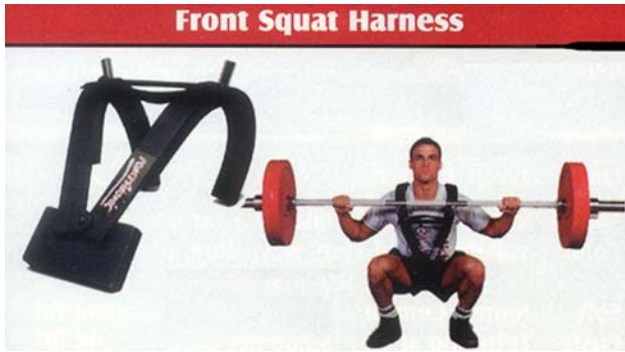
Another advantage of this exercise is that if you are not capable of performing front squats, this technique will improve your flexibility until such time as you are able to perform them. Start by holding the top end of the straps; and as your flexibility improves, move your hands close to the bottom. Eventually you should be able to smoothly transition into regular front squats, if this is your desire.

Just one more word about straps: At BFS we’ve experimented with several different types of straps, and some of the best we’ve found are called Super Grips. They are made of rubber woven throughout the strap to increase durability and provide the most secure grip for your hands, and the rubber sticks to the bar much better than leather or cloth straps do. They’re also 18 inches long, which is great for front squats, as the “quick release” straps are often too short to provide the best grip.

How much can athletes lift in the front squat? We’ve heard reports of numerous top superheavy weightlifters such as Paul Anderson, Vladimir Marchuk and Mark Henry – going all the way down and using no special



Instead of tying the straps around the wrist, with this exercise you tie the strap around the bar. Adjust the strap so that it is equal to the grip you would use in the front squat; the further away your hands are from the bar, the less stress on the wrist. Now you’re ready to squat. Demonstrating the exercise is 17-year-old Maegan Snodgrass of Team BFS. At a bodyweight of 135 pounds, Maegan has front squatted 231 pounds using this technique.



Occupying a space in BFS's "Land of Misfit toys" are the Front Squat Harness (left) and the E-Z Squat (right). They reduced stress on the wrists and elbows, but made it difficult to keep the lower back in proper position.

equipment – use over 700 pounds in this exercise. Three-time Olympic champion Pyrrros Dimas of Greece and Dursun Sevinc of Turkey, both weighing 187 pounds, had reportedly lifted more than 600 pounds in this exercise. Generally, however, the ratio of back squat to front squat should be about 70-80 percent if you are going to equal depth in both exercises.

The front squat is a superior exercise, and many coaches

even prefer it to the back squat. At BFS, we've promoted it as a key auxiliary lower-body exercise because it has advantages in leg development and, in some cases, sport specificity. Whether you make the front squat a major part of your training or just throw it into your workout occasionally for variety, using lifting straps will help make performing front squats a lot easier – and pain free as well. **BFS**



Bruce Klemens photo

Alexander Kurlovich of Russia was one of numerous champion weightlifters who could front squat 700 pounds or more. This photo, taken 19 years ago, shows him cleaning 586 pounds.

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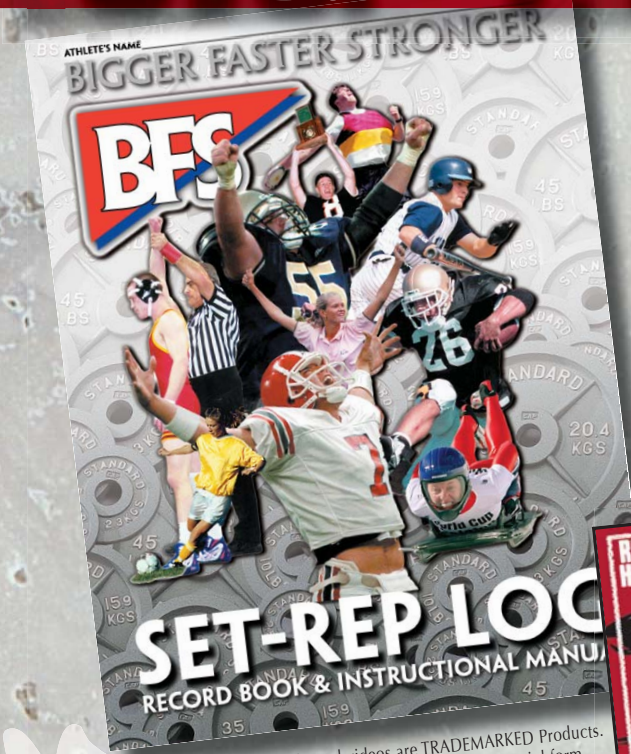
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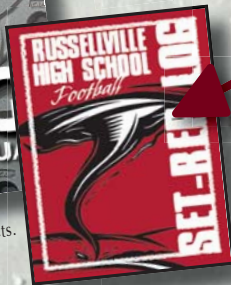
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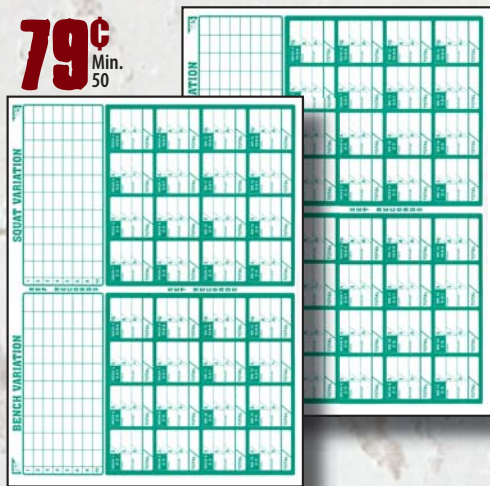
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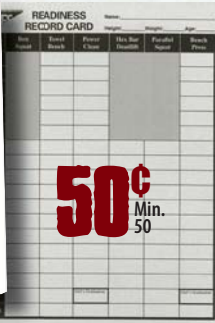
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