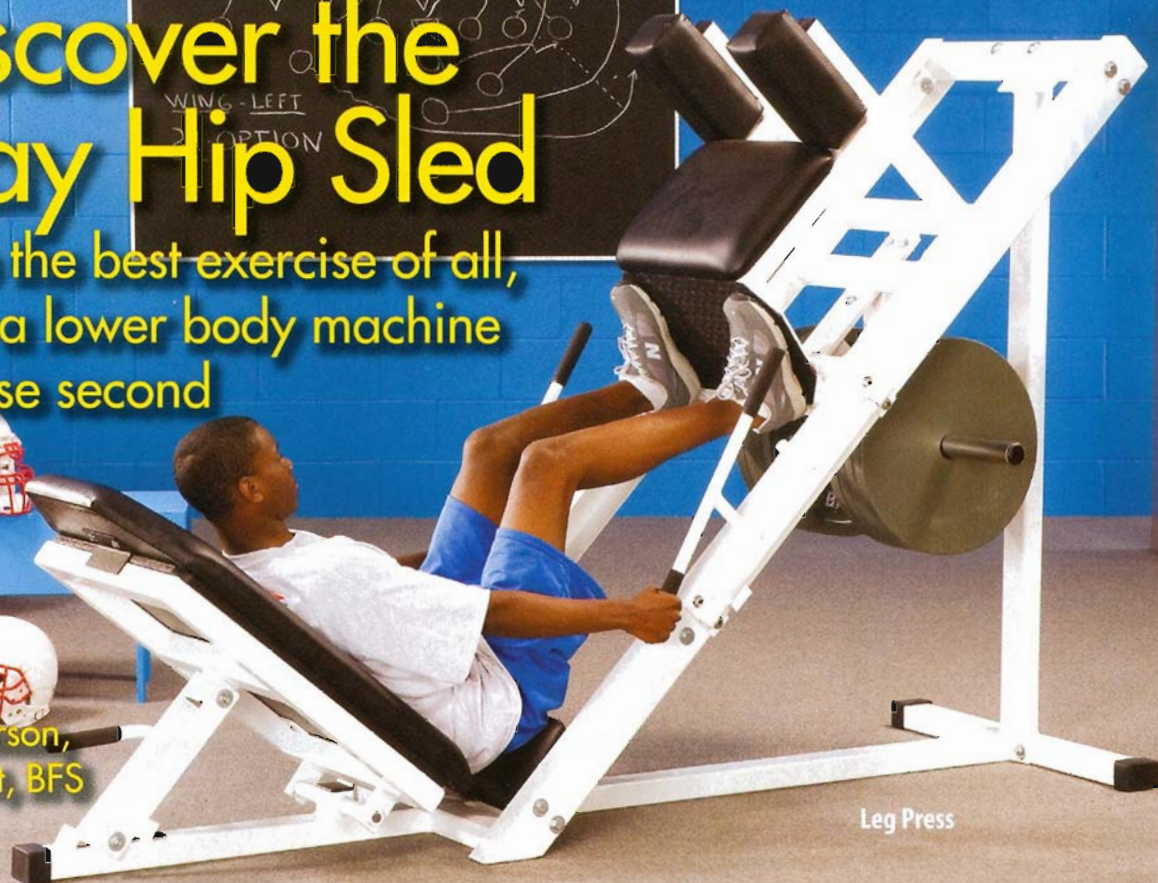


Rediscover the 3-Way Hip Sled

Squats are the best exercise of all, but there's a lower body machine that's a close second

By Rick Anderson,
Vice President, BFS



What is the best weight training exercise to help you jump higher and run faster? To increase overall strength and power? To gain muscle mass? No question — hands down, it's the squat. But when you're looking for variety in your leg training and want to give your lower back a rest, you just can't beat the 3-Way Hip Sled. And with good reason.

The 3-Way Hip Sled is, and has always been, our best-selling piece of heavy-duty leg equipment. And when you consider that we've been in business for 29 years, that's saying a lot. Sure, leg extension and leg curl machines are considered a must in the larger gyms, but for athletes who want to improve performance, the first choice in leg-training auxiliary exercises is the 3-Way Hip Sled.

Now that I've got your attention, let's take a closer look at the reasons why this is such a great piece of equipment. First, it's versatile. As its name suggests, there are three primary exercises that can be performed with the 3-Way Hip Sled: the leg press, the angled back squat and the hip thrust. Which variation you use depends upon your training goal.

The Leg Press

As with the squat, the leg press emphasizes the

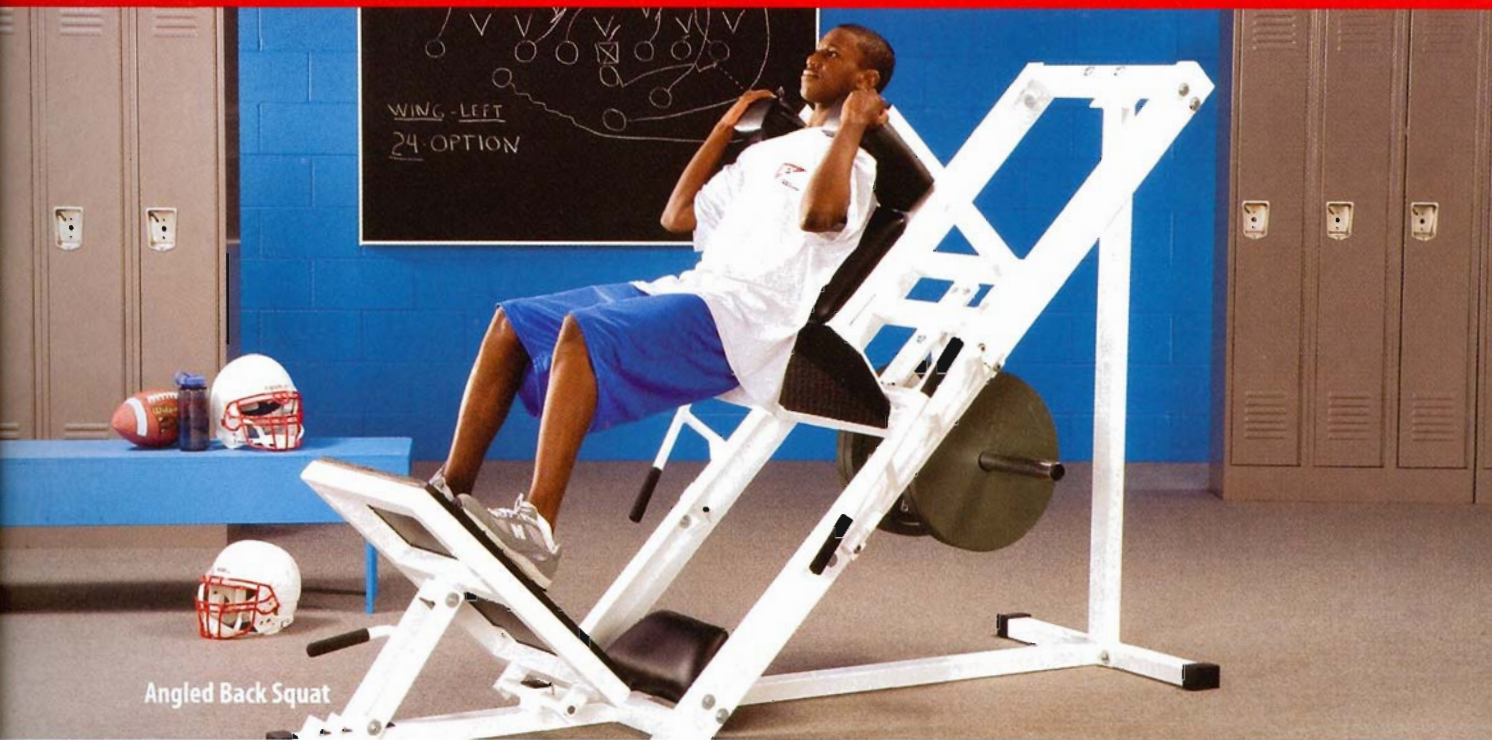
quadriceps, especially the outer quadriceps muscle called the vastus lateralis. It also works the hamstrings and glutes, although not to the extent to which the squat works them. But the advantage of the leg press is that because the back is stabilized on the backrest, there is minimal stress on the lower back. In fact, EMG studies show that the leg press reduces the amount of stress on the lower back by approximately 80 percent! This has several advantages.

First, athletes with lower back injuries or medical conditions that make squatting painful or even impossible, such as certain cases of scoliosis, can often perform the leg press without any discomfort. Sasha Hupmann, a 7' 2" former professional basketball player who is now involved with BFS nutrition, says that the stress of a pro season in basketball is especially hard on the lower backs of extremely tall basketball players. He said that whereas the smaller point guards, especially the younger ones, would have no problem squatting, often the "big men" he knew preferred to work their legs with the leg press, especially in season.

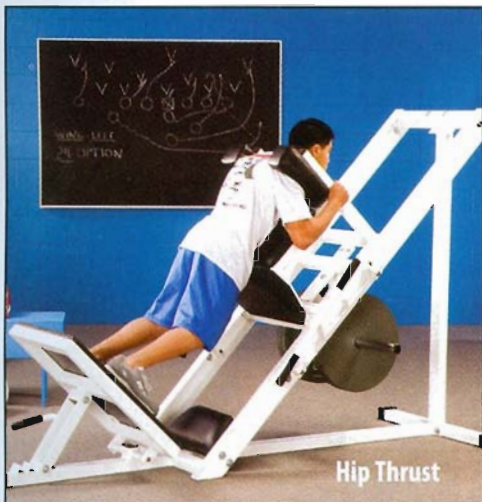
Powerlifters have recently rediscovered the leg press. With 1,000-pound squats being rather commonplace in this sport, working on the squat

places tremendous stress on the lower back. To get in enough work on the legs at that level, without stressing the lower back, many powerlifters include leg presses. Several world record holders in the squat include leg presses in their program. I've read an interview in which Steve Goggins, who squatted 1,102 pounds at a bodyweight of 242, attributes much of his phenomenal results to leg presses. Andy Bolton, world record holder in the deadlift who recently tried 1,000 pounds in this lift (actually clearing it several inches off the ground), reportedly does leg presses for a month after every contest.

The idea of including supplementary leg exercises is not new. Leonid Taranenko, absolute world-record holder in the clean and jerk with 589 pounds, reportedly did step-ups with weights up to 496 pounds to keep his legs strong when his back was tired. Heavy step-ups, we must caution, have a higher level of instability than those at lower weights. They should be performed in a power rack and should only be performed with spotters in case the athlete loses balance. Serious knee, ankle and lower back injuries can occur from step-ups (especially when compared to the leg press) if these precautions are not taken.



Angled Back Squat



Hip Thrust

The position used in performing the leg press is similar to that used in the start position for sprinting and in sports such as speed skating and ice hockey. The sprint position is definitely worth spending time on since a lot of work takes place in sports where the trunk is inclined. Therefore, the leg press can be considered a sport-specific exercise for many athletic activities.

Injuries are rare, but the major point is to not allow the weight to be lowered to a point at which the lower back is rounded at the bottom. Just as we teach athletes to “lock in” the lower back when squatting, the back should be in proper alignment when performing the leg press. Also, the advantages of starting at the top are that the user can determine exactly how low to go; and does not create risk of injury from jerking the weight on the first rep to get the movement started. When you compare the leg press performed on the

3-Way Hip Sled to the exercise performed on the BFS Squat Press, the major differences are the Squat Press has variable resistance and a larger footplate. The variable-resistance feature increases the resistance at the end range of motion, where you are strongest. The larger footplate allows you to place your feet in an “athletic” stance, which has greater carryover to some sporting positions, and to place the feet higher up on the plate to increase the involvement of the glutes and hamstrings.

Angled Back Squat

The angled back squat closely resembles the motion of a back squat, so for most athletes the strength gained from this exercise will have a greater carryover to the back squat.

As for range of motion of the hip, it is much greater in the angled back squat than in the leg press. One EMG study showed that compared with the squat, this movement had similar effects on the vastus lateralis, and even more strongly worked the glutes and biceps femoris (the lower hamstring muscle involved in knee flexion). The movement of the angled back squat produced less involvement of the lower back (erector spinae) compared with the squat, but more involvement than with the leg press.

Although we at BFS love the squat, some athletes simply are uncomfortable laying heavy weights on their shoulders. Athletes with shoulder injuries or back problems are in this group. Also, young athletes who don't have the maturity to be


trusted to squat properly with spotters should not perform the squat. We don't want to suggest that the angled back squat is in any way better than the squat, but if you don't want to squat, or can't squat, this is the best substitute.

As with the leg press, injuries are rare in this exercise; and the major precaution is to keep the lower back “locked in” throughout the exercise. A weight-training belt will help in this regard.

Hip Thrust

The hip thrust is similar to the angled back squat; but because the athlete is facing the machine, it makes the exercise more biomechanically specific to many sports. Football players love this exercise, especially linemen and running backs. It's also a great exercise for sprinters to improve their start. The same safety precaution applies with the hip thrust as with the other exercises performed on the 3-Way Hip Sled: Keep the lower back “locked in” throughout the exercise.

One interesting side note about the exercises that can be performed on the 3-Way Hip Sled is that they can help improve reaction time. Dr. Greg Shepard did his master's thesis on using this type of machine to train football players to react faster to auditory and verbal clues.

After acquiring equipment such as power racks, benches and platforms to perform your core lifts, your next investment in athletic success should be this great auxiliary piece of exercise equipment. Sure, the squat is king, but you also need the 3-Way Hip Sled in your court. 

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Hip Thrust



Back Squat



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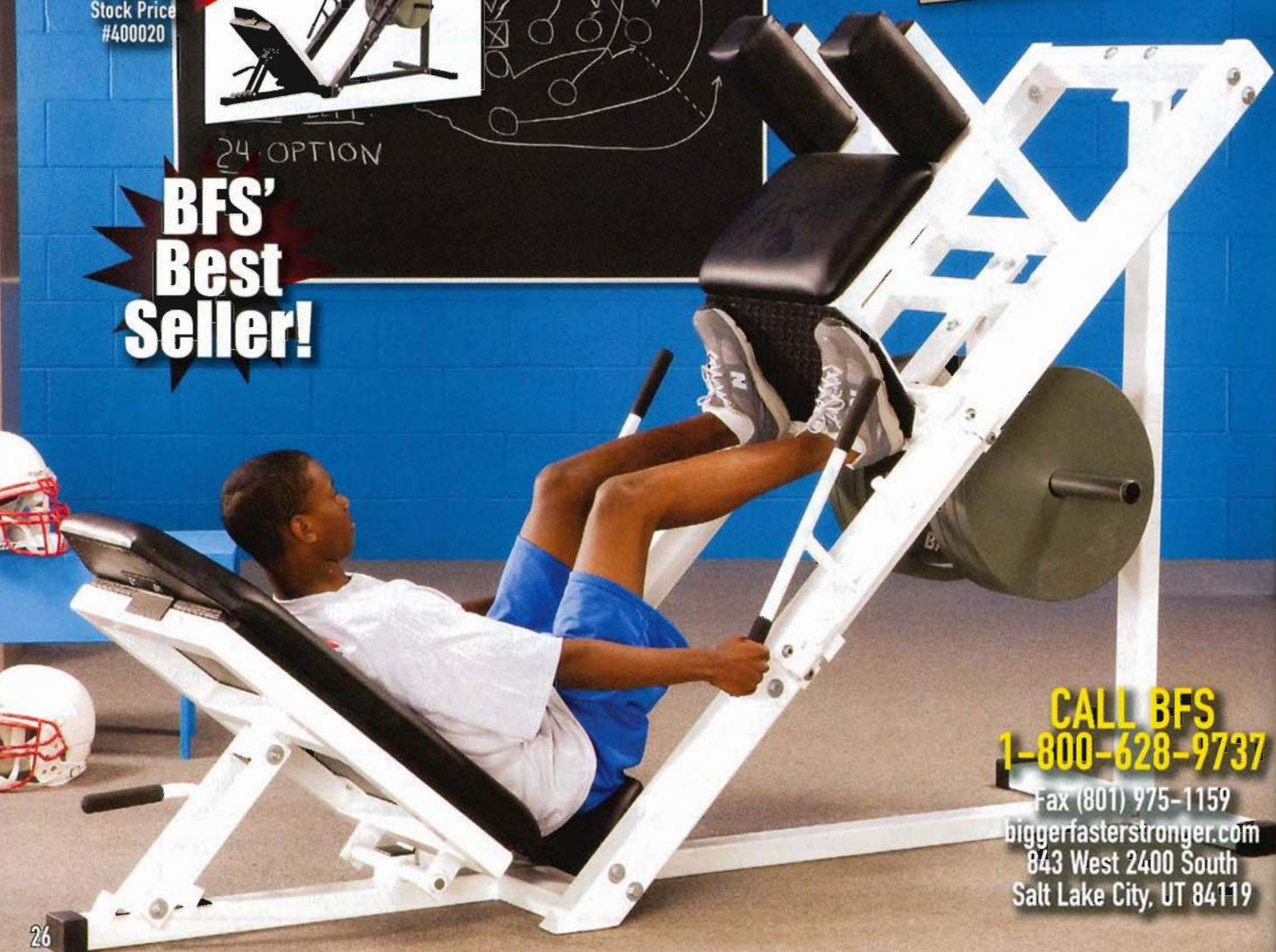
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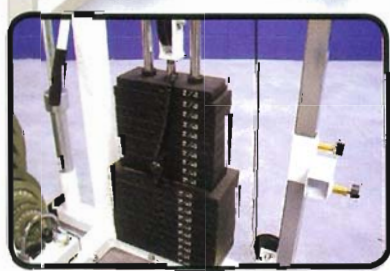


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