

# Rethinking the Deadlift

Questions and answers about a great, but often neglected, exercise

BY KIM GOSS, MS

As with the squat and the bench press, the deadlift has been a staple in the workouts of serious athletes for many years. Football players, weightlifters and even bodybuilders frequently include this total body movement in their workouts. In fact, three decades ago bodybuilder Franco Columbu reportedly lifted 780 pounds in this exercise, which at the time exceeded the world record at his bodyweight, and if you spend enough

time in cyberspace you'll find a photo of Arnold Schwarzenegger pulling 710 pounds.

The deadlift has been a part of the BFS program for over 30 years because it's a great lift that, like the squat, works a lot of large muscle groups that are key to running faster and jumping higher. The one major change over these 30 years is that BFS has come to prefer the hex bar deadlift over the straight bar deadlift because it's easier

to teach and places less stress on the lower back.

If you want to subject your brain to information overload, check out a copy of Bill Pearl's classic exercise reference book, *Keys to the Inner Universe*. However, don't go overboard with daffy deadlift variations. One recent study published in the *Journal of Strength and Conditioning Research* looked at the effects of performing deadlifts while standing on a BOSU



DeAnn Pertz, our 2008 BFS Female Athlete of the Year, performing the hex bar deadlift. DeAnn is a forensic science major at Duquesne University, where she is also on the swim team.

ball or a rocker board. The researchers found that deadlifting on unstable surfaces “does not increase performance, nor does it provide greater activation of the paraspinal muscles, leading us to question their value in the performance of other types of exercises.” In other words, not only do these types of deadlifts expose the user to a high risk of injury (from falling off these unstable surfaces), they have no special strength training effect.

Although it’s a great exercise, the deadlift has lost much of its popularity among strength coaches. One factor to consider is that many young strength coaches have not performed the lift as part of their training, and as such they are not comfortable teaching it. Another reason is that many coaches believe that the deadlift, and for that matter the back squat, is too dangerous, especially for young athletes.

To take a closer look at the risks and benefits of this exercise, I contacted Canadian strength coach and posturologist Paul Gagné. Gagné has done extensive study on the biomechanics of the deadlift, which he uses with many of the professional and top amateur athletes he trains.

## Dawn of the Deadlift

Two of the most popular deadlifts are the conventional style using a barbell, and the hex bar deadlift, which uses a horizontal barbell that enables individuals to perform the lift with their hands positioned at their sides. Another version is called the sumo style, which has the lifter start with the feet positioned wider than shoulder-width, the hips lower and the torso more upright. According to Gagné, the sumo style puts less compressive forces on the lower back and also works the inner thigh (adductor) muscles harder. “I often use the sumo style with my



Canadian weightlifter Marilou Dozois-Prévost placed 10th in the 2008 Olympics and uses snatch-grip deadlifts while standing on a platform as a key auxiliary exercise.

movement, but for some the lockout position is the most difficult part of the deadlift, and this variation enables them to focus on improving their weakness. Gagné says that partial-range movements can also be used for knee rehabilitation and to correct muscle imbalances: “I’ll start with a short range of motion, such as from the mid-thigh to lockout, and then lower the pins as the knee become stronger and the muscle imbalances are corrected.”

Another type of partial deadlift Gagné uses has the athlete standing on a low platform, with the barbell lifted just to the knees. He says this type of exercise increases the involvement of the quadriceps, and that for his especially tall athletes “the range of motion more closely approximates that of a squat. Many of the professional hockey players I work with are not proficient in the squat. I would prefer that they squat year-round, but often I can work with many of these athletes only a few weeks out of the year. For these

hockey players, as the adductors of the thighs are especially important in skating.”

Additional forms of deadlifts commonly used by powerlifters and strength athletes include partial-range deadlifts. These deadlifts can focus on the top, middle and bottom portion of the exercise.

The most popular type of partial-range deadlift is performed in a power rack with the barbell set on pins, such that the lift begins from a higher starting position. Most individuals can handle more weight with this type of

individuals, I often recommend that they focus on these longer-range types of deadlifts rather than risk injury from squatting incorrectly.”

## Deadlift Safety

Asked about the risk of injury, Gagné says that those who are most susceptible to injury with the deadlift are those with postural problems. “If an individual has disharmonic feet, which basically means you tend to carry more weight on one leg, they will twist their spine on the deadlift. This twisting creates unnatural shearing forces on the spine that can easily damage the disks.” Gagné says that disharmonic feet can often be corrected with special lower body exercises, the use of postural insoles or orthotics, and sometimes by simply wearing weightlifting shoes, “which can often help to properly align the feet with the bones of the lower leg.”

Foot problems aside, Gagné says the reason many individuals experience back pain from deadlifting is poor technique. “The deadlift is a complex exercise that requires proper instruction to perform correctly.” One cause of poor technique is trying to lift too much weight. As Gagné points out, “One should never sacrifice form on the deadlift in an attempt to use more weight, as often this leads to rounding the lower back. Rounding the back places unnaturally high compressive forces on the disks of the lower back, especially the three lowest lumbar vertebrae, L3-L5.”

The position of the head (BFS

Absolute #6) is important to deadlift safely. “You need to align your head with your spine when you deadlift,” says Gagné. “Many athletes will start the deadlift looking up in an attempt to make their back tighter, but this results in placing excessive tension on the lower back muscles and reduces the



Paul Gagné working with Joe Rullier of the Boston Bruins.

contribution of the legs. At the start of a deadlift your head should be in line with your spine, which may result in the head being tilted slightly down, and at the finish you should be looking straight ahead.”

Another technical issue Gagné says is important to address is the grip. To prevent the barbell from rolling out of their hands many athletes use a mixed grip, with one hand facing the body and the other hand facing away. Gagné says that using a mixed grip can easily injure the biceps, especially if an athlete has flexibility issues with the shoulder. “It would be better to use straps or a

hook grip (fingers wrapped around the thumb) like weightlifters use. With a hex bar, the hands are in a much stronger position, leverage-wise, and the barbell is less likely to roll out of the athlete’s fingers.”

Asked about the differences between men and women that can affect performance of the deadlift, Gagné says that the wider pelvis of a woman often causes the knees to buckle during the exercise. He says that because of this anatomical difference, coaches should pay special attention when coaching women to ensure they maintain proper alignment of the feet with the knees (BFS Absolutes #4 and #5). “Again, you must never sacrifice form in order to lift more weight.” He says if despite the best efforts of the coach a woman athlete’s knees continue to buckle when performing the lift, the athlete should consult with an appropriate health care professional, such as a podiatrist, to see if their feet are

the cause. “If an athlete has arches that easily collapse, among the possible solutions are to wear weightlifting shoes, use postural insoles or orthotics, and to perform special exercises such as seated calf raises to help correct the feet.”

Regardless of the athlete, there is probably a deadlift variation that will have a positive influence upon performance. And if you follow the advice in this article, you will progress rapidly with little risk of injury. Hopefully, more coaches will see the value of the deadlift and will resurrect it in their strength and conditioning programs. **BFS**

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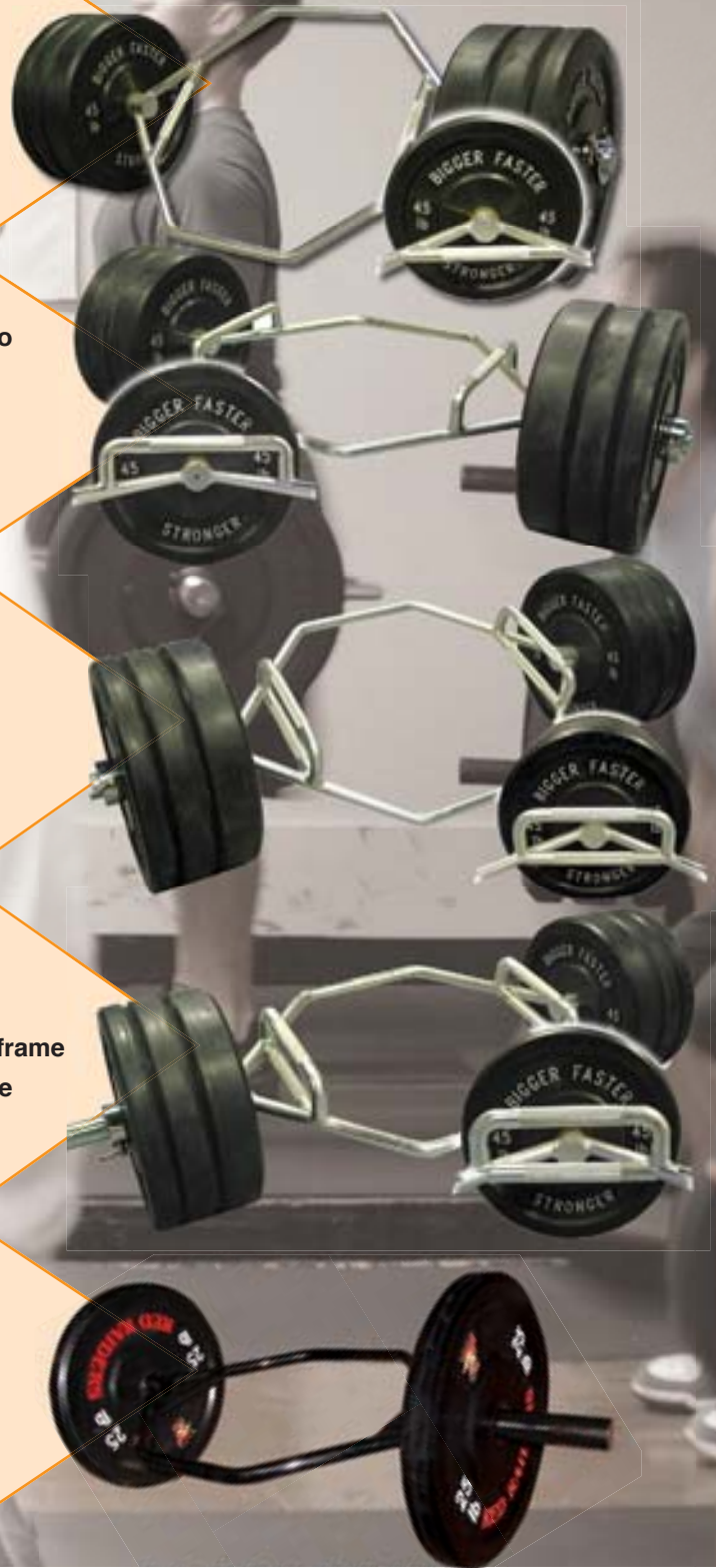
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