

Starting Strength

Lower back strength is an important component of sports conditioning. The ability to maintain a rigid lumbar spine under load is critical for both power transfer and safety. The deadlift builds back strength better than any other exercise, bar none.

The basic function of the lumbar muscles is to hold the low back in position so that power can be transferred through the trunk. They are aided in this task by all the muscles of the trunk: the abs, the obliques, the intercostals, and all of the many posterior muscles of the upper and lower back. These muscles function in isometric contraction – their main task is to allow no skeletal movement in the structures they are supporting (figure 1). When the trunk is held rigid, it can function as a solid segment along which the force generated by the hips and legs can be transferred to the load - on the shoulders, as in the squat or the press, or down the arms to the hands, as in the deadlift.

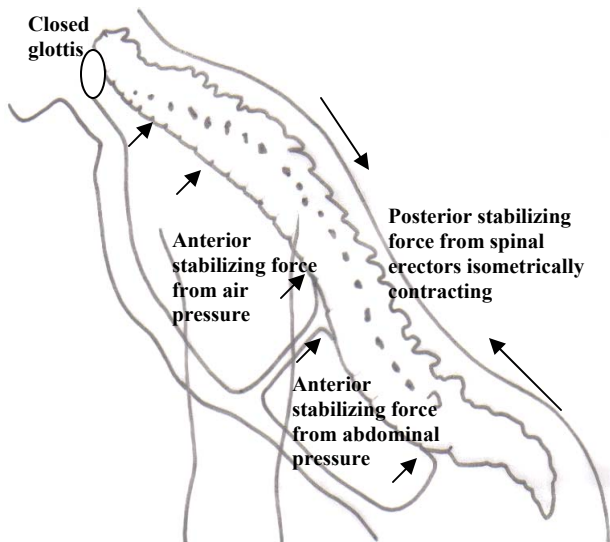


Figure 1. Stabilization of the spine during the deadlift is essential, and is accomplished in the same way as in the squat. Intra-abdominal and thoracic pressures rise in response to abdominal muscle contraction, spinal erector contraction, and the Valsalva Maneuver.

The deadlift is a simple movement. The bar is pulled off the floor up the legs with straight arms until the knees, hips, and shoulders are locked out. Immense weights have been moved in this way by very strong men (figure 2). In powerlifting, the deadlift is the last lift in the meet, and the expression, “The meet don’t start till the bar gets on the floor!” is very telling. Many a big subtotal has been overcome by a lifter with a strong deadlift, especially in the days before squat suits and bench shirts. The meet was often won by a lifter with a bigger deadlift than his squat. It is hard to overstate the strength of a man with an 800lb.+ deadlift, a feat accomplished by only an elite few lifters. Nine hundred-pound contest deadlifts have occurred only a handful of times, although many more have accomplished this with straps (which eliminate the grip-strength aspect of the lift).

But the deadlift is brutally hard, and can therefore complicate training if improperly used. It is very easy to do wrong (this is the main reason the author does not attend high school powerlifting meets anymore – it is just too difficult and painful to watch strong kids pull heavy weights incorrectly, even worse than watching half squats passed as legal) and a wrong deadlift is a potentially dangerous thing. There will be a few trainees that simply