BOX SQUATTING BENEFITS

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I am often asked, why do box squats? We do them to produce world-record squats. The late, great Matt Dimel made 1010 in 1985 at SHW. Chuck Vogelpohl pushed the limit of the squat by doing 1025 at 220 pounds, the lightest man to do a grand.

I am sure that the original Westside Barbell in Culver City, California, was asked the same questions in the 1960s and early 1970s, when Bill West and George Frenn were breaking squats records beyond comprehension. Frenn made 854 in gym trunks at 242 and held a world record in the weight throw.

Later men such as Larry Kidney and his training partners Marve Phillips broke many world record squats by box squatting.

Paul Childress has made 1123 at 308, and I am sure Paul has to defend why he box squats.

My friend Eskil, from Sweden, found a training manual from the 1950s at a Polish weight lifting facility demonstrating the box squat. Today, my friend Sakari, from Finland, teaches box squatting to their strongest lifters. Lifters from Ireland, Germany, England, Canada, and Sweden are also box squatting.

At Westside, in Columbus, Ohio, we have five men who squat more than 1000 pounds and a woman, Amy Weisburger, who at 148 has squatted 565.

Because I am asked why do box squats, I will explain simply and scientifically why we do them and why you should too.

First, there is only one way to box squat. `!Pure Power`! had an article on ways to box squat, but there is only one proven way: the Westside way. Here's how. First, push the glutes rearward

as far as possible. With a tight back arch to descend to the box. Push your neck into your traps. Push your knees apart to maximally activate the hips. When sitting on the box, the shins should be straight up and down or even past perpendicular. This places all the work on the hamstrings, glutes, hips, and low back. These are the precise muscle groups that do a very large percent of the squat. After sitting completely on the box, some glute and hip muscles are relaxed somewhat. Then forcefully flex the abs, hips, and glutes and jump off the box.

To ascend correctly, push the traps into the bar first. This will flex the back muscles, then the hips and glutes, and finally the legs. If you push with the legs first, you will be in a good morning position because the glutes will raise first, causing you to bend over. Remember that where the head goes, the body will follow. Note: Always push the feet out to the sides, not directly down. Chuck Taylors are the best shoes for squatting. This was tested at Ball State University in lab conditions.

Box squats have tremendous advantages over regular squats. These are as follows.

You do not get as sore from a box squat workout, and you can recover much faster.

If the box that you are squatting on is below parallel and you do a thousand squats, they will all be below parallel, regardless of the weight. This is important because when many lifters warm up, they cannot break parallel with light weight, or as the weight nears a max, many will cut depth. However, with a box to sit on, you will always break parallel, or any depth desired.

Box squats can increase flexibility. When monitoring flexibility,

you should be able to break parallel with your competition stance. If this is not possible, sit on a box about 2 inches above parallel. After mastering that height, reduce the box height by half an inch. The easiest way is to remove a 1/2 inch rubber mat. Then sit on the box at that new height until comfortable. Reduce the height half an inch again. Continue this until you are not only at parallel but below. Start with a shoulder-width stance. Then widen your stance by an inch or two each time until a very wide stance is achieved. John Stafford has

sat on a 6 inch box; he is 6 feet tall, 285 pounds.

I am always concerned when a coach asks how low can we squat, referring to Olympic squats. A very close squat stance makes no sense. Look at a pyramid; the wider the base, the greater the pyramid. I guess if my only claim to fame was bouncing my ass off my heels with 315, I would ask that question myself.

Box squatting with a slow count is a form of PNF (propriceptive neuromuscular facilitation), commonly used in clinical settings. This type of stretch involves a maximum precontraction of the muscle groups to undergo elongation. As the box is lowered to an extreme for your range of motion, a box squat can become a safe ballistic stretch method. This will not only increase your range of motion in the muscle groups but also increase joint mobility.

Box squats also resemble CRAC (contract relax agonist contract), a form of stretching. This information can be found in `!Strength and Power in Sport`! (1991).

If you lower to the box slowly and widen your stance slowly, more muscle flexibility and joint mobility can be achieved.

A lighter weight can achieve a bigger squat with box squatting. By training at 50-60% of your 1-rep max in a 3-week wave, a large

squat can be developed. Three lifters trained with 405-480 for 8-10 doubles with 120 pounds of chain as a reactive method. They all made their first 800+ squat.

Jumping ability is developed with box squats. John Stafford, at 290 body weight, can jump onto a 35 inch box with a pair of 35 pound dumbbells. John Harper, a sophomore at Kent State University, is a discus thrower (with 189 feet) who can jump onto a 50 inch box. Maybe more extraordinary is that he is able to sit on his knees and jump onto his feet with 255 pounds on his back, due largely to box squatting.

Box squatting increases pulling power. It closely simulates the motion of pulling off the floor, first by relaxing on the box after lowering onto it, then exploding upward. This is very close to the movement known as the modified dive.

If one suffers a knee injury, box squatting can be done while rehabing the injury. When sitting on a box fully and correctly, the shins are past perpendicular. This reduces the pressure on the patella tendons by placing the majority of the weight on the hamstrings and glutes and on the heels, not the toes. It should be noted that the box itself reduces a portion of the bar weight or body weight that you are trying to move.

After a complete patella tendon rupture, box squats helped me to go from an 821 squat in 1991 to a 920 at 235 body weight in 2002 after the injury. John Bott had similar success. Also, I mustn't forget Jim Hoskinson, who had a horrendous injury to both knees. He had a 744 squat before the injury and had recently done 1091 in the same weight class, 308.

A box squat combines two very important methods. One is the static-

dynamic method. It combines two muscle activities. Static work occurs while on the box, although the lifter is constantly moving backward or forward. Then by flexing off the box, the dynamic sequence occurs.

The second method that is used when box squatting is the relaxed-overcome-by-dynamic work. This occurs by sitting on the box with the hips rolling in a relaxed fashion, then switching to an explosive, or dynamic, concentric phase. Both of the above-mentioned methods build explosive strength as well as absolute strength.

Why are box squats superior to conventional squats? I hope to explain it further through physics. Lowering to the box in the eccentric phase is a form of potential energy. When sitting on the box in about 0.5 second, you are involved in a collision. By using a box to land on, we can produce kinetic energy. The amount of kinetic energy an object has depends on two things: its mass (weight) and its speed. A heavier weight means more kinetic energy. But more importantly, in a regular squat, the eccentric phase lasts about 1 second, about twice as long as in a box squat. By being able to relax some muscles and with the use of Jump-Stretch bands, the box squat is close to twice as fast. If you tripled the speed, it would represent 9 times more kinetic energy during the collision.

What about the development of power? Power is defined as work done divided by the time used to do the work. When you do a regular squat, you must do three things. The first is the eccentric phase, where muscles lengthen. When the eccentric phase stops, a static phase begins, where the muscles are not lengthening or shortening, but muscle

energy is decreasing. Then to raise concentrically, you must start a load

while the muscles are held statically, even to a brief extent. Could this

phenomenon be the reason that you can lower 50% more than you can raise?

After all, power can be produced only so long. In a regular squat,

you must produce power during all three phases, but a box squat breaks

up the eccentric and concentric phases because some of the muscles are

relaxing while others are held statically by movement in the hip joints.

Here is where force can be redirected very strongly. Because a heavy

squat uses a large amount of energy, it makes sense to break the work

into separate parts. While box squatting is not plyometrics, it builds

tremendous reversal strength.

Wilson's studies (1990) have shown that the stretch

reflex lasts up to 2 seconds. We have proven that by sitting on a box

correctly the reflex lasts up to 8 seconds. What an advantage for a

football lineman on a long count.

Explosive strength is developed mainly by explosive efforts,

such as jumps, shot put, and jerking dumbbells or a barbell. However,

it is easiest and safest to develop explosive strength by increasing

maximal strength (`!Science of Sports Training`!, Thomas Kurz).

I hope this convinces you to try box squatting, which many of the

old champs and the new champs are doing.

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