
THE CrossFit JOURNAL

Feet First

Bill Starr explains why the feet are the key to almost any lift.

By Bill Starr

February 2013



All images: Staff/CrossFit Journal

Oddly enough, few strength athletes think about their feet when performing an exercise—but they should.

Seldom do people even think about their feet unless something goes wrong with them. Stub a toe badly and you will suddenly understand how important that part of your foot is for locomotion and any other athletic movement.

The feet play a critical role in nearly every movement in the weight room. In a nutshell, every lift starts with the feet. On the more complicated lifts, such as cleans, snatches and jerks, the feet play an ever-greater role.

1 of 9

Building a Foudation

Whenever I tell some athlete that he is not using his feet correctly during the execution of one particular exercise, he usually gives me a blank look. It hasn't really occurred to him that his feet are major players for the exercise he has been doing: the bench press. Teaching someone the necessity of having his feet in the proper starting position and moving them fast and precisely on the dynamic lifts is rather easy because it's quite obvious, but getting an athlete to incorporate his feet into a less dynamic exercise is a lot more difficult.

"What in the world do my feet have to do with handling a heavy weight in the bench press?" I'm often asked.

My answer: "A great deal."

Of course, if the weights being used are moderate to light, the feet don't matter as much, but when you start approaching those tough sets, you have to bring your feet into the mix or you're going to fail. I've watched countless athletes simply lie down and let their feet more or less dangle off the bench or place them carelessly on the floor. Because the bench press is an upper-body exercise, all their focus is on their arms and chest, and sometimes the

back, although few bring that part of their body into the exercise either. All they're thinking about is involving their arms and chests.

Then when the bar hits the sticking point, they often go into gyrations: squirming around and twisting with their feet flopping like fish out of water. It seldom works. In fact, it only makes matters worse. What the better benchers have learned through experience is the feet play a very critical role in moving heavy weights.

**The very first thing the
advanced benchers would
always do is plant their feet
firmly on the floor.**



When performing the bench press, foot position is far more important than most lifters realize.

I was an active participant in the sport of powerlifting when it first became a part of the AAU. In the '60s, I used meets as training sessions to help me get stronger in the Olympic lifts. In the process I got to see some of the very best perform at the nationals and world championships. I saw Jim Williams come within a hair of pressing 700 at the nationals in York in '69. No suit and no drugs. The best I ever watched was Doug Young at the worlds in Birmingham, England, when I accompanied John Phillip there to coach.

The very first thing the advanced benchers would always do is plant their feet firmly on the floor. Then they would lie back on the bench and grind down into it. They were trying to become part of the bench. The combination of planting their feet and locking their backs into the bench provided a super-solid foundation, and in every exercise, the stronger the base, the easier it is to perform that movement more correctly and with heavier poundages. Now, when the bar hits the sticking point, the lifter can draw power from his super-solid base and bring it up into his chest and arms and move the bar steadily upward.



Locking your feet in position during a dip will prevent you from swaying all over the place as you perform the reps.

However. If his feet are not locked tightly to the floor and he is merely lying on the bench rather than being a part of it, or worse yet, if he allows his feet to move around, the odds of him making that attempt are slim to none. The reason why so many beginners make this mistake is because no one has bothered to tell them of the importance of the feet. It's really easy to fix the problem. Just start with thinking about your feet and the rest falls into place nicely.

This concept works the same for inclining. In fact, it's much easier to teach an athlete how to plant his feet and become one with the bench in the incline because he's more upright. Most inclines allow the lifter to plant his feet while he's almost in a standing position. This allows him to really push them down into the floor. While gripping the floor with his feet, it's not the least bit difficult to squeeze down into the bench to create a firm foundation from which to do the inclines. It's also essential that this rigid posture be held throughout the exercise. Should you relax after the first few reps, it will work against you just when you need that stable base to help you finish that final tough rep. When the bar sticks during an incline, you can actually change the angle of your pressing by scrunching back and down into the bench even more. This is often enough to help you complete that lift.

Of all the pressing movements, establishing a strong base is really the most necessary in the overhead press because there isn't any equipment to assist in supporting you. The overhead press is slowly but surely making a comeback in strength training, and I am very happy about it. The press was a vital part of my training program from the beginning, and once I got into Olympic lifting, overhead pressing often took up a fourth of my workouts.

The military, or overhead, press was considered a lift of strength. It was the gauge to judge not only overhead power but also body strength in general. Currently, this is not the case, but it's changing. Although having a firm base is not nearly as essential when light weights are used, it is still beneficial when someone is doing really high reps. That solid base can make the difference between doing 50 and 65 reps. They all add up.

When pressing a heavy weight, relatively speaking, a rock-solid foundation is most necessary. This is because your feet, ankles and lower legs in particular provide balance while the bar is in motion. Should that base get shaky, it will have an adverse affect on the lift. Lifters who merely stand on the floor or on a platform and try and press a demanding weight are not going to do nearly as well as those who lock onto the floor with their feet.

When pressing a heavy weight, relatively speaking, a rock-solid foundation is most necessary.

At York, the lifters would actually attempt to grip the floor with their toes. We compared this process to a giant bird gripping a tree limb with his talons. It worked, and once we had that strong base with our feet, it was rather easy to then tighten our legs, hips, glutes, back, shoulders and arms just prior to starting the pressing movement. A firm foundation not only allows the lifter to move a stalled bar through the sticking point but it also lets him keep a more precise line as the bar travels upward. That base assists him in maintaining balance from start to finish because pressing a max single or double requires a high degree of balance, as everyone discovers once he starts going after bigger and bigger numbers in the press.

It wouldn't seem as if the feet had any part in dipping, but they do. Locking your feet in a set position and keeping them there throughout the movement is most important once the poundages get heavy. If your feet, and therefore your legs, start swinging during the execution of the exercise, you will have to stop, or should you continue, you will eventually fatigue your shoulders and elbows.

Clawing Into the Floor

In the squat, few beginners bother to set up with their feet gripping the floor as I mentioned for the overhead press. They take the bar out of the rack, step back and with a relaxed body lower into the bottom position. Everything is loose, so when they get to some demanding weights,



In the squat, it's critical to tighten all muscles, and that process starts with the feet.

they either collapse like rag dolls or vainly attempt to tighten their legs, hips, back and shoulders while the bar is in motion. It's no surprise when the weights win this battle.

The squat starts when the lifter takes the bar off the rack. Even then, every body part should be taut, and each should stay that way as he positions his feet and gets set for his initial rep. When the weights are at max level, care must be taken to stay extra tight as he moves back to a position where he will not hit the rack when he's squatting. Should he relax any muscle group, he will quickly discover that it's much harder to tighten it up again with all the weight bearing down on his back, hips and legs.

When he's where he wants to be, he needs to take a moment to make absolutely certain that his entire body is extremely tight, from his toes to his traps. Now he's ready to squat. Because he's solid as a rock, he can guide the bar through the exact range of motion he desires. And if he starts the movement with an ultra-tight body, he will be able to drive out of the hole much stronger and be able to finish the lift smoothly.



A good set-up in the deadlift will produce PRs. Sloppy foot placement will result in misses when the weights get taxing.

It all starts with the feet. One, they must be positioned perfectly; not too close or too wide apart, with the toes pointed outward slightly. Two, they must be trying to grip the floor. When that occurs, the rest follows naturally. However, keep in mind that it's almost impossible to tighten the various parts of the body if your feet are passive. With a loose body, the bar will waver on the way down and up. With an extremely tight body, it will stay in the correct groove from start to finish.

**It's almost impossible to tighten
the various parts of the body if
your feet are passive.**

In the front squat, starting with a very solid base is even more important than it is for the back squat. This is because the line of descent and recovery is even more precise than it is for the back squat. In the back squat, when the hips come up too fast, the lifter, if he is strong enough, can pull it back into the proper line and save the lift. But if the bar runs forward at all in the front squat, it will be lost. There is no way to save it regardless of how strong the athlete might be. I'm talking max attempts here, not lighter warm-ups.

Foot placement is also more exact in the front squat because if the feet are not spaced exactly right, the lifter will not have sufficient thrust coming out of the bottom to drive the weight through the sticking point. Because much less weight is used in the front squat than in the back version, you don't have to get tight until you have set your feet where you want them. But be sure you do that before starting the downward motion.

Lunges are another useful and popular hip and leg exercise, and they involve the feet to an even higher degree. Feet move during a lunge, which means you must pay close attention. Yet you must still be extremely tight throughout the movement. Should anything relax, you will lose your balance and have to stop or sometimes even dump the bar. When you squat, your toes should be turned out a bit, but this is not the case for the lunge. In that lift, your feet need to be pointed straight ahead. When you step forward, that lead foot should slam in the floor and be placed straight ahead of where it started. The slamming of the lead foot will help you tighten everything as you hit the deep split position, and this is critical to maintaining balance. If the lead foot is planted in a lackadaisical manner, the lifter will stagger and have great difficulty in keeping his balance, making it tougher to recover and save that lift.

But when that front foot is jammed forcefully into the floor in the right position, everything else falls right in place. All the working muscles and attachments are taut and where they should be, making it easy to move the bar through the desired range of motion.

The same idea holds true for an overhead squat. Make sure your feet are where they need to be in terms of positioning, and make sure they are gripping the floor before you lower yourself to the deep bottom position. It only takes a brief moment to do this, and it will make a huge difference in the outcome of that set.

Solid Set-Up, Fast Feet

All pulling movements—from the relatively static deadlifts, bent-over rows and almost straight-legged deadlifts to the more dynamic lifts—require that the athlete pay close attention to his feet. I've seen many powerlifters merely walk up to the bar, reach down and grip the bar, then pull with their bodies so loose that their heels or toes move on the platform. Once the bar is in motion, they vainly attempt to contract their muscles, but it seldom works, particularly when a great deal of weight is on the bar. From that slack starting position, there is no possible way for them to tighten the many muscle groups that are involved in that lift to move the bar through the middle and top ranges.

In addition, whenever an athlete attempts to deadlift a max number when he hasn't bothered to get his body rigidly tight, the bar will invariably run forward because his hips rise up way too fast. With warm-up weights, this form fault can be corrected. With a PR on the bar, that fault will result in failure.



For lifts in which the feet must move, precise foot placement is even more critical.

I tell my athletes to get in the starting position with the feet at shoulder width, or more narrow than this for the deadlift, with the bar tucked in tight against the shins and the frontal deltoids slightly out in front of the bar. Now, rather than thinking of pulling the bar upward, try pushing your feet down through the floor while at the same time tightening every muscle in your body. The act of attempting to push your feet downward will enable you to make the rest of your body more solid. When this is done, the bar will come off the floor in the perfect line, which, in turn, allows the athlete to complete the lift flawlessly.

Wide stance or sumo deadlifts are excellent not only for building a strong back but also for working the adductors as well. In order for the sumos to be useful, the feet must be placed exactly right. They have to be pointed straight ahead. When they're turned inward or outward, it changes the effectiveness of the exercise. During the movement, all the weight must be pressed to the outsides of the feet. It's

very different from doing a conventional deadlift, where the weight starts out at the front of the foot and is transferred to the back as the bar is pulled higher. This same idea applies to wide-stance squats.

The power snatch, power clean, full snatch and full clean begin and end with the feet. The start is critical; if the start is weak, the middle and finish will be adversely affected. Use the same technique I mentioned for the deadlift: push your feet down into the floor and guide the bar upward in a tight line. Because snatching requires a longer pull than cleaning, the start on that lift has to really be neat and tight. Those who begin a snatch with their feet relaxed are not going to be able to extend as high on their toes, which means they will not be able to make the transfer from trying to jump up with the weight to instantaneously pulling themselves down to the floor while keeping the weight locked out overhead in the proper position.



After the second pull ends in the snatch or clean, the feet must be moved with great speed to the receiving position to create a foundation for the weight.

There's a good reason why the snatch and clean are called "quick lifts," and the quickness is entirely dependent on foot speed. Most lifters learn early on that they can move under the bar faster when they extend high on their toes than they can from a flat-footed base. I've observed coaches teaching their athletes to jump their feet to the side when power cleaning because they want them to learn to move their feet very fast at the conclusion of the pull. But what often happens is the lifters move their feet far too soon, before they're high on their toes, and when they do that, they cut the pull just a bit—yet that little bit of extra height can spell the difference between success and failure.

The split-style snatch requires even more attention to foot placement and speed because the feet have to move a much greater distance than in the squat style. In addition, they must hit the platform at exactly the same time, and their placement has to be absolutely exact when the weights get heavy.



Bill Starr recommends athletes finish the pull high on the toes before moving under the bar with maximum speed and aggression.

When skilled athletes like Norb Schemansky, Louis Riecke, and Stan Stanczyk performed the split snatch, they moved faster than any athlete in any sport. This isn't just my opinion. At the 1948 Olympics in London, scientists tested all the athletes to find out who had the fastest foot movement. This included sprinters coming off the blocks, shot putters going across the ring, discus and javelin and hammer throwers, swimmers, gymnasts, wrestlers, boxers, and weightlifters. Stan Stanczyk snatched 286 as a 181-pounder using the split style and was declared the fastest. At the '52 Olympiad in Helsinki, he won the title again and was given the nickname "Flash" Stanczyk. If you really want to increase your foot speed, you might want to give split snatching a try.

Fast feet are also critical in the jerk. I know that jerks can be done without moving the feet, but the majority of competitors prefer the split style. The biggest mistake I see lifters make on the jerk is they do not take time to make certain their feet are set properly before they jerk. They recover from the clean with their feet rather wide apart, then they move them in and prepare for the jerk. The feet should be on a line with the toes pointed straight ahead. But more often than not, one foot is behind the other and the toes are turned outward or inward. When the feet are not in the perfect starting position, the thrust of the bar upward will not be nearly as powerful, and when the feet move into the split they will not hit the platform right.

**When the feet are set perfectly,
the athlete can give the bar
a terrific jolt, climb high on
his toes, then explode.**

In contrast, when the feet are set perfectly, the athlete can give the bar a terrific jolt, climb high on his toes, then explode into a split with both feet hitting exactly where they should hit the platform.



Try looking at lifts from the bottom up. Fix the feet and then see what you can load on the bar.

After cleaning a weight and making sure your feet are right where they should be, take a moment to grip the platform with your feet and tighten your entire body. A successful jerk depends on strength and foot speed. However, there isn't a lifter—regardless of how strong he might be—who is going to jerk a maximum poundage without fast feet, and he is not going to make a jerk from a loose foundation. Some young athletes who are blessed with natural quickness can get away with form mistakes in the beginning, but eventually those faults will catch up with them, so it's a good idea to aim for perfection from the start.

Focus on the Feet

It's rather obvious that the feet play a very important role in those dynamic exercises, but what about those that are done statically, such as assistance work in the form of curls, triceps pushdowns, lat pulls, rows with dumbbells, and other movements? While the feet are not nearly as vital in these exercises, let me state that any movement will be more productive if done with a solid foundation, and in nearly every case, this starts with the feet. I even tighten my feet and ankles when I'm doing sit-ups or leg raises.

A perfect example is the good morning. There's nothing the least bit dynamic about this exercise, which needs to be done deliberately and very much under control. But the exercise will go much more smoothly, and more weight can be used, if the lifter thinks about squeezing the floor with his toes as he is doing the reps. This helps tighten his legs, hips, back and shoulder girdle as he bends forward and recovers. When everything is rock solid, form is no problem. Conversely, if the feet are just placed on the floor and the body is loose, each rep is torture.

Experienced runners know that running starts in the hands. Those who understand strength training know that weightlifting starts in the feet. Before you do any exercise, take a moment and bring your feet into the mix. That simple step will pay huge dividends.



Jody Foster

About the Author

*Bill Starr coached at the 1968 Olympics in Mexico City, the 1970 Olympic Weightlifting World Championship in Columbus, Ohio, and the 1975 World Powerlifting Championships in Birmingham, England. He was selected as head coach of the 1969 team that competed in the Tournament of Americas in Mayaguez, Puerto Rico, where the United States won the team title, making him the first active lifter to be head coach of an international Olympic weightlifting team. Starr is the author of the books **The Strongest Shall Survive: Strength Training for Football** and **Defying Gravity**, which can be found at [The Aasgaard Company Bookstore](http://TheAasgaardCompanyBookstore.com).*