

Find Your Feet

I've been around the Sport of Weightlifting for over 30 years and been helping others learn to lift better the past 20. Whether you are a weightlifter, athlete or CrossFitter - learning to find the delicate balance on your feet throughout the entire lift is arguably, worldwide, the most critical skill required for maximized movement performance of Olympic Weightlifting.

CrossFit first came to my attention in the beginning of 2006 while I was Head Coach of a Community Olympic Development Program for Weightlifting in Southern New Jersey. Interesting phenomena about this CrossFit community, once a coaching cue has been proven to work it's used for everything in life from brushing your teeth to interviewing your next boyfriend.

The most overused, misused, and completely misunderstood coaching cue I continue to hear - **“stay on your heels!”**

There is one and only one situation in the sport of Weightlifting when this coaching cue applies - during preparation for the jerk. No other time – period.

During the various phases of pulling the bar from the floor (clean or snatch) and into the receiving position (over head squat for snatch and front squat for the clean) the better we maintain the bar path inside “a narrow vertical column,” – OVER THE MIDDLE OF OUR FEET - the more successful we can be with the lift. As seen from a side view Figure #1 below shows this “Vertical Column” centered over the original Ctr. Line created between the barbell and gravity, when the barbell sat motionless on the platform.

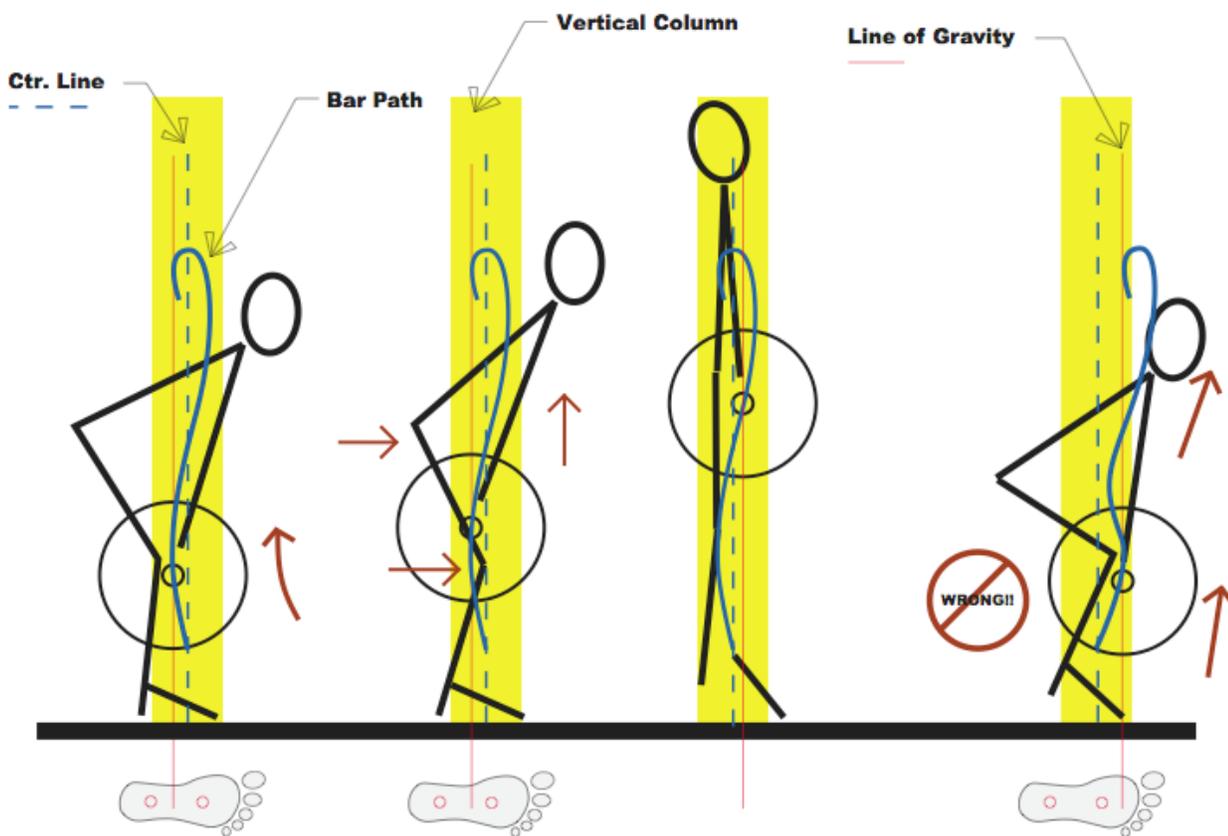


Figure #1

Dr. John Garhammer performed force plate studies⁽¹⁾ recording the point load on the feet of elite weightlifters. As I understand Dr. Garhammer's tabulated results from 30 years of data, the load is closer to the ball of our feet as we break the bar from the floor (see Figure #2). This point load moves slightly backward “toward” the heel and around the outside of the foot as the bar gets to knee height. The most complicated portion of the lift – getting the knees to extend as the barbell continues its momentum upward – completion of the 1st Pull. The barbell moves up and slightly backward before the shift of knees back under the barbell, while continuing the upward momentum. This shift causes the point load on the foot to move inside and forward until the thigh brush – violent hip/leg extension causing maximal force to be

driven down through the platform (middle of our feet) as we're squeezing our buttocks in a jumping fashion and shrugging our shoulders (arms straight) pulling up on the barbell, resulting in a rise onto the balls of our feet as we fully extend vertically pulling ourselves around and under the massive load.

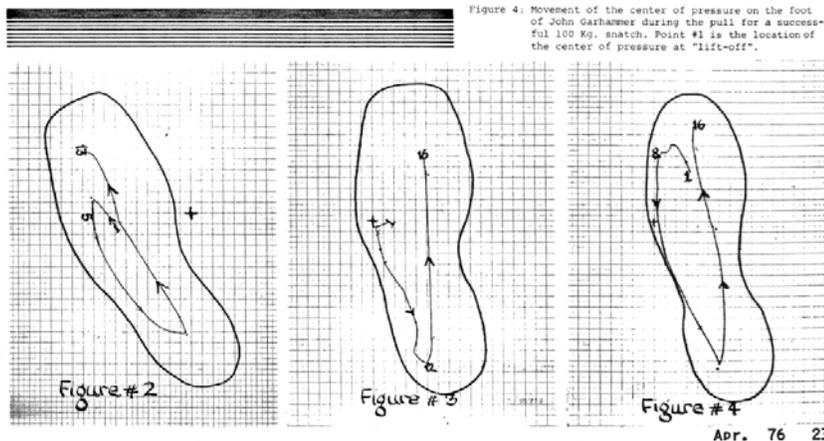


Figure #2 - force place studies of the shift in "point load" during three different snatches, same athlete.

If we can maintain this line of force and trajectory of the load inside this "Vertical Column," (see Figure #1) over our base of support – **OUR FEET**.... "...The closer the balance point is to the center of this base the more stable we are and it is easier to exert maximal vertical force."⁽¹⁾ It is not the heels, nor toes....but somewhere right in the middle where the largest amount of force can be applied to elevating the barbell. There is a shift of the "point load" on our feet throughout the phases of the lifts. Provided that "point load" does not go beyond our area of base we maintain our balance, feel it out...

...Find your feet!

(1) Garhammer, J. (1976). *Force Plate Analysis of Snatch Lift. International Olympic Lifter*, 3(4) 22-27.

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next article –

How far do you "toe out?"
 How wide should your pulling or squatting stance be?

