

# Starting Strength

## The Profession of Barbell Coaching

by

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What difference does a 2-inch stance width adjustment make in the execution of a squat? What happens if the 2-inch adjustment is made at the heels or the toes? Does an effect on the foot angle alter the movement mechanics above the feet? How? More importantly, how many pages could be written about *this single topic*, and how many popular books on exercise devote only one page to the entire discussion of the squat itself? How is the topic addressed by the major exercise certification mills? How many correctly designed studies on the squat exist in the literature?

When a person graduates to barbell training, and advances from merely exercising to the study of strength training – loaded human movement using a heavy barbell without falling down, things change drastically. The system of skeletal levers and the muscles that move it must interact effectively with both the barbell and the base of support – usually the floor, but occasionally the bench. All barbell movements – not just the popularly-revered snatch and clean & jerk – are complex accumulations of muscular and leverage effort, affected by *every single permutation* of position, angle, and bar path. Each of the variables must be identified, understood, assessed for efficiency, and coached effectively.

An enormously intricate task is being undertaken, the complexity of which is usually overlooked, certainly by the uninformed observer and sometimes even by us. It occurs to me that the difference between an expert barbell coach and a personal trainer is as stark and every bit as vast as that between a neurosurgeon and an LVN, a corrective dentist and a toothbrush salesman, or a chemical engineer and a freshman chemistry major. This difference must be appreciated by you the coach, lived up to during your practice, and valued by your clients and trainees.

Consider the above example. Coaching the squat effectively requires an understanding of the effects of the variation in position and function of every component of the kinetic chain, from the floor to the barbell on the back. Stance width, toe angle, shank angle, knee position, femoral angle, hip position, back angle, back extension, grip width, cervical extension, eye-gaze direction, and their position in the three-dimensions relative to both the bar and the floor at every point in the movement pattern are variables that affect the movement pattern in both gross and subtle ways. And all these variables are affected by the trainee's anthropometry. They must be recognized, accurately observed, analyzed against an understanding of the mechanics of the movement pattern being coached, and effectively corrected as necessary.

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Since barbell exercises use a resistance that moves through space unconstrained by anything other than the force produced by the lifter and the force of gravity on the barbell, the lifter is solely responsible for all movement of both the body and the bar in the three dimensions. The feet are fixed against the floor, but all motion of both body and barbell above the feet is under the control of the lifter. The primary barbell movements – the squat, press, deadlift, bench press, snatch, and clean – are as complex as bilateral human movement gets, and when performed with increasingly heavy weight, the complexity is compounded by the need to generate very high levels of force while remaining balanced.



And the exercises themselves are merely the components of the workouts, which are the components of the training *program*. Our approach to physical performance is to address *the process*, which means that each exercise in each workout has value because of the cumulative effects they have upon the adaptive status of the whole organism, not merely the biceps or the quads. Correctly designed barbell training matches systemically-stressful workouts with a program designed to produce constantly increasing systemic strength over time. The processes that control chronic adaptation must be understood and effectively incorporated into the program's design.

Mastery of this subject requires an extensive (although not necessarily formal) education in the relevant sciences – the physics, biology, chemistry, an ability for logical analysis, an extensive and absolutely necessary structured personal experience under the bar, above-average intelligence, many thousands of hours of coaching experience, and the perhaps untrainable talent for effective communication in a time-constrained environment. As of now there is no college or university that offers such a program, but as the demand for the product grows, so will the demand for the formal training.

Our Starting Strength Seminar identifies potentially talented coaches through a rigorous examination process that passes a small minority of those who elect to be candidates for the SSC credential. The examination process identifies coaches – it cannot develop them in a weekend seminar. No weekend educational product can develop a professional in *any* field of endeavor, and any organization that claims to do so is *marketing*, not educating.

It must be much more widely understood that barbell training coaches, specifically SSCs, *are not personal trainers*, and that a PhD in any of the Physical Education programs currently offered does not prepare the student for the task of effectively coaching loaded human movement under a barbell. Like any professional undertaking, it is a specialty that requires an extensive preparatory phase and tens of thousands of practical hours to master. Its practice is complex, nuanced, and with many constantly supplied subtle adjustments necessary to achieve any semblance of perfection, under a finely-honed guiding eye.

School may prepare you to *learn* the craft, but no school currently in existence even approximately finishes the job. An academic curriculum in Physical Education is the structured presentation of the ideas of a usually inexperienced group of professors – quite frequently a group of cyclists, runners, and badminton players – people who most often have no professional experience in barbell strength training and who seldom have any personal experience under the bar. Many of our best SSCs are self-taught, the products of their own efforts in organizing, educating, and training themselves for the task.

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What we do as professional Starting Strength Coaches is most usually underappreciated, and undervalued. SSCs are not merely movement specialists, but *loaded* movement specialists, focusing on the perfection of execution under the most adverse of circumstances – a maximal force production effort against a barbell while balanced on the ground. Any idiot can teach a lunge with 3-pound dumbbells, and such wastes of time are the purview of personal trainers at corporate gyms and “functional training” studios. Our focus is the professional engineering of correctly-executed heavily-loaded total body movement patterns, and the training of strength. We make a difference in people’s lives, and our professional status should be recognized for what it is.

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