

Strength/Power

Strength and power are two important components of conditioning.

The traditional way to improve conditioning is to focus on muscle training to increase strength. Strength training will increase muscle bulk and force generating capacity, but will not optimize performance. Power correlates directly with functional capability and performance; strength does not.

Power = work/time; power is strength applied in the shortest time.

In most sports situations, there is a split second to apply your technique, so being able to bench press 500lb does not correlate with optimal performance in football, boxing or other sports unless this strength can be applied in the shortest time. In addition, the feet and legs need to be tied to the center, the torso, to express this power through the shoulders and arms.

Power training enhances strength, but not the other way around. Power training improves many components of fitness and function, mobility, strength, endurance, cardio, speed and agility. Using power training we can achieve better conditioning in less time.

Power training is specific to the person and the task; it is different if the training is for a world class athlete, a fireman, for fitness or for a seventy years old person to be able to function well and enjoy life. All of these people can benefit from power training, but the loads, the speeds and the ranges are going to be different.

It is important to start where a person can be successful, in the ranges of motion in which he can keep good posture and form, with the loads with which he can maximize speed without compromising form and muscle recruitment sequence, and where he can effectively stabilize his spine. Ranges of motion is an important consideration in training because at the ends of ranges, the body loads as the muscles contract eccentrically; the muscles then unload, producing force, as they contract concentrically. In power training we train muscles both eccentrically and concentrically, unlike traditional conditioning that focuses mainly on producing force, which is more measurable, but in sports is dependant on the preceding loading. We teach the nervous system to recruit the muscles maximally in different ranges, both in loading and unloading. Think about karate: you have to be able to initiate powerful techniques from any given posture/muscle position.

Power training involves both explosive force generation in targeted muscle groups and the subconscious instantaneous recruitment of chain reaction muscle forces from throughout the body. The nervous system is central to functional strength and power training; it learns to respond to power training with explosive muscular output through the enhancement of reaction time and whole body muscle recruitment. Research shows that as we age power deteriorates before strength and that this is a sign of reduced function.

With proper training we can keep power and good function till old age.

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