



## REACH YOUR OPTIMAL FITNESS.

Our clients are people who want to get seriously fit. They include all types of people including amateur and professional athletes, and people who have minor or major impairments. We provide a multidisciplinary approach to help you achieve your optimal level of fitness no matter what your starting point.

## FREE WEIGHTS VS. MACHINES

One of the questions that I am most frequently asked is whether free weights or machine training will yield better results. If this was an absolute either/or proposition, my personal experience would lead me to side with free weight training. Fortunately the world of health and fitness is not so black and white, and there is a time and place as well as a benefit to



be derived from each of these tools. In this article, I will give a definition of free weights and machines, list mostly pros with a few cons, and provide a few examples of how I use these tools in my personal practice.

A free weight is defined as any object that is free to move in three-dimensional space and is not fixed to a set of axis. As I mentioned above, free weights are the preferred modality of training in my practice. Free weights are much more versatile than machines. A machine typically allows you to do one exercise in two to six ways (i.e. machine shoulder press with neutral and wide handle grips). A set of dumbbells, however, can be used to perform literally hundreds of varied and effective exercises. Free weights also generally save time and the confusion that comes with figuring out specific settings (i.e. seat height, adjusting various handle length relative to the size of the person using the machine). Finally, free weights improve function in three dimensions which in turn has more carry over into daily life. The barbell squat is good example. This is an all-around fantastic exercise for the legs, core and heart. If you are looking to build lean muscle tissue and improve function (through the need to stabilize the bar in all planes of motion), this is a superb choice. For comparison, we will also look at the smith machine squat. This can definitely serve the purpose of overloading the leg musculature (as well as loading the posterior chain, although not as significantly as the free weight squat) to induce muscle growth, however, the improvement of function will practically be negated.

Furthermore, a machine is unable to move in three-dimensional space and is usually only capable of moving in one or two planes of motion. First certain machines can be great for isolating a muscle as the synergistic stabilizer muscles are not called upon to assist the prime mover (main muscle being targeted). I also use machines in my practice when someone has an injury, such as low back pain, but needs to maintain muscle mass. The machine training allows you to train the muscle intensely without requiring your body to provide extra stabilization which may aggravate the low back pain.

In conclusion, free weights and machines can both be excellent tools for improving and/or maintaining optimal muscle, bone and cardiovascular health. As Paul Chek says, 'isolate (machine training) with the intention of integrating (free weight training).' Simply put, there is benefit in training a muscle in isolation, but human movement occurs via the integration of many muscles and structures working together. So to improve function, integration, in my experience, is the end goal.

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