

ECCENTRIC Training

What is eccentric training?

Eccentric training is the lengthening action of a muscle. Take a bicep curl when you lift the weight the biceps contracts (concentric) and when you lower the weight the bicep has to lengthen (eccentric). Eccentric training is much more demanding on the muscles and causes fatigue much quicker than training concentrically.

Why use eccentric training?

Eccentric training is a great way to introduce beginning athletes into body weight exercises. For example if you have an athlete who is unable to do a push up, you can just get them to do the lowering part of the exercise. They will soon build up the strength to be able to do both phases of the push up. We also use this to quickly build strength when recovering from injury. Eccentric exercises are also shown to prevent injury as they are also great for building stability.

This following link shows some basic eccentric exercises

<http://articles.elitefts.com/articles/training-articles/eccentric-training-for-athletes/>

You can also use eccentric training to really advance exercises when loading is not possible. Lets take the push up exercise, you can lower slowly and then accelerate on the push phase. You do not want an exercise to be slow all the way through as this can make you slow, this is why when ever I do eccentric training the push phase is always fast and explosive.

You can use eccentric training to bridge the gap between 2 limb and 1 limb exercises. You may be good at squats but what about a one leg squat.

How does eccentric training work?

Eccentric training only works a small percentage of motor units and can generate 1.3 times more muscle tension than concentric training. This increased tension means increased stimulation which allows for better adaptation. Research has shown that the stronger athletes are those that can also lower the heavier weights.

How often should I perform eccentric work?

You do not want to do this too often as it works by damaging muscle fibres in order to build them meaning you can feel quite sore after to doing these work outs. It will take a good 7-10 days to recover so only put them in every two weeks, never do eccentric work in your competitive season. Try and do 4-5 reps 3-4 sets. Progress slowly from body weight exercises to weighted. Weighted eccentric exercises are only for advanced athletes.

Essential exercises for runners include the 1) Glute/Hamstring raise, 2) slide board Hamstring extensions (can be done using gym ball) and 3) calf lowers (stand on top of a step with your heels over the end, quickly push upwards to balance on the balls of your feet and then slowly lower your heels back down). You will find how to do 1 and 2 in the link above.

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