

Plyometric Training for Runners

By Kelly Jacobs CSCS & NASM-PES

Plyometric training has been used by track and field athletes in Europe as far back as 1920. The benefits of this type of training, whether you are a sprinter or endurance runner are numerous. Here is an overview of plyometric principles, as well as exercises you can incorporate into your weekly training.

Plyometric training consists of hopping, skipping, bounding, and jumping to assist in developing lower-body strength, speed, power, and running economy.. These exercises also improve neural response, the essential component of quickness. Plyometric training utilizes the stretch-reflex mechanism, allowing for much greater than normal force to be generated by pre-stretching a muscle (eccentric contraction) before it contracts. In plyometric exercises, overload is applied to skeletal muscle in a manner that rapidly stretches the muscle immediately prior to the concentric contraction.

Plyometrics help you maximize force while minimizing the time it takes to achieve that force. In other words, it aids in explosiveness. By contrast, in weight training the focus is on the magnitude of the force; in plyometrics, the focus is on the speed of muscle contraction. The better trained you are, the less time it takes for your muscles to contract.

Examples of Plyometric Exercises

Squat Jumps (Low Intensity): Starting from the squat position, jump upwards to maximum height. Land back in the squat position and immediately start the next jump (repetition). Place your hands behind your head for each jump.

Double Leg Box Jumps (Medium Intensity):

Assume a comfortable upright position with feet shoulder-width apart. Begin the upward movement by jumping onto the box using both legs while landing in a half squat position. Step down from the box and repeat. Note: Increasing the height of the box can increase Intensity.



Split Squat Jumps (High Intensity): Starting from the lunge position, explosively jump up using arms to assist as needed. While off the ground, switch the position of the legs. Maximum height and power should be emphasized. When landing, maintain the lunge position and immediately repeat the jump.

Plyometric exercises are fairly advanced and should only be added to your routine after you've built a solid base of strength training. The examples above are just a few of the many variations that you can do. Try lower intensity exercises at first and progress to medium and high intensity over the course of several weeks.