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HOP, SKIP & JUMP TO BETTER PERFORMANCE – *Improving your explosive power is child’s play*

By Elaine Rogers

Think back a moment and remember your days as an active child, the hours you spent running around in the backyard, playing tag, hopscotch and leaping – oblivious to the fact that you were strengthening your body.

What you also didn’t know then (and may not know) is that those same kidstuff activities might have a place in your adult life too, both as a way of putting fun into your fitness routine and as a technique to help improve athletic speed and performance.

Many of the games we played as children employed explosive movements, rapid changes in direction and a momentary “cocking” action before the leap or throw. As such, they are variations of an athletic training technique called “plyometrics,” popular among athletes in track and field, basketball, gymnastics and virtually any sport requiring speed or power.

The basis of plyometrics is the myotatic reflex, which causes a muscle to stretch and then immediately contract. The forced stretch creates an explosive, elastic action that is absent from an ordinary muscle contraction, and proponents say plyometric drills build a muscle’s explosive power – in effect, making you a more powerful, faster athlete.

Also, the technique may have an indirect effect on the brain. In their book, *Plyometrics*, James C. Radcliffe and Robert C. Farentino explain that plyometric drills may enable your brain to send commands to your muscles faster. Officials of the U.S. Olympic



Committee say plyometric drills such as depth jumping (see box) and bounding (high knee skipping) are regularly included in their training programs.

The technique isn't just for top-notch athletes, however. Dr. Irving Dardik, founding chairman of the Olympic Sports Medicine Council, is a fan of skipping and considers it a "physical form of laughter" as well as easy and safe.

"Running and walking are very skeletal-oriented activities," he explains. "People plod along and absorb the shock with their joints rather than their muscles. That's why so many joggers get injuries."

In contrast, physiologists say skipping is not as stressful because you often have both feet on the ground at the same time, diffusing the pounding. Additionally, plyometric activities like skipping feature a bouncing action, so that the leg muscles, rather than the ankle or knee joints, absorb the shock.

"Skipping has more air-time than running," Dardik adds. "That serves as a built-in recovery time in which the muscles get to relax." Thus, he says, runners with knee problems might avoid new injuries by skipping through half their running workouts.

And yes, Dardik and others admit that the happy-go-lucky-skipping stride is bound to attract some attention from passers-by, "But," he adds, "it's a good workout, it's fun and it doesn't look as funny as speed-walking."

SIDEBAR:

Here are some other plyometric exercises. For a good workout perform two or three sets of six to 10 repetitions each. Rest for 45 seconds between sets.

* **Depth Jumping** (Maximizes jumping power) — Jump off a two-to three-foot-high bench, and upon landing, jump as high as possible.

* **Hopping** (Maximizes leg speed) — Jump high, bringing your feet up and under your buttocks and swinging your arms up for extra power.

* **Lateral Bounding** (Improves your lateral distance and speed) — Start from a crouched position with feet together. Jump to the left, pushing off with your right foot. You should land semi-crouched with your legs together and knees bent. Crouch and repeat to opposite side.

* **Horizontal Swings** (Develops strength and speed in your torso) — Stand straight and face forward. Hold a five- to 20-pound dumbbell with both hands, extend your arms in front of your chest and slowly swing the weight from side to side, resisting the force as the momentum increases.

* **Push-Ups** (Strengthens your entire upper body) — This is the same as regular push-ups (straight leg or knee bent), except that you will rapidly explode upward as you push yourself away from the ground and then lower yourself slowly to the ground.

Elaine Rogers is a frequent contributor to Women's Sports & Fitness.