

Plyometrics Leaps Into Mainstream -- But Experts Urge Caution

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NEW YORK, Sept 16 (Reuters) - Once the reserve of professional athletes, fitness experts say plyometrics has leaped into the mainstream thanks mainly to the explosive popularity of jump-filled workouts such as high-intensity interval training, CrossFit, and boot camp classes.

But the system, also called jump training, is not without its perils, especially for the everyday exerciser.

In his new book Donald A. Chu aims to guide coaches, trainers, athletes and others safely and progressively through the high-risk, high-reward regimen.

"This is the CrossFit crowd," said Chu, who co-wrote "Plyometrics" with Dr. Gregory Myers, the senior research adviser to the Micheli Center for Sports Injury Prevention in Massachusetts, referring to fans of the high intensity, constantly varied workout craze.

"They're the younger population who want to expend a lot of energy to accomplish high-end goals," he explained.

Plyometrics, Chu said, is designed to develop explosive strength in a muscle.

"It's one thing to be strong, another to be explosive," said Chu.

Plyometrics is any exercise in which muscles are repeatedly and rapidly stretched and then contracted, from jumping high off the ground to doing push-ups with a clap between each. Playing catch with a medicine ball is plyometrics, along with skipping, bounding and jumping.

"Plyometrics teaches the muscle to react faster. You develop more power because the faster a muscle can contract, the more powerful it becomes," said Chu, the director of Athercare Fitness and Rehabilitation in the San Francisco Bay area.

He said research shows that plyometrics improves strength, endurance and speed.

"It absolutely ups your game. It's long been part of training for accomplished athletes and sports," said Chu, whose book suggests sports-specific programs for tennis, baseball and volleyball, track and field, and even swimming.

"Plyometric programs have been found to go a long way towards developing the younger athlete," he said, but it doesn't get much attention in endurance activities.

"But if someone wants to surge in a marathon race plyometrics will help them," he said.

Chu stresses that with plyometrics proper training is progressive and the right instruction is crucial. Most injuries, he added, occur when people try these things without supervision.

Dr. Mark Kelly, an exercise physiologist with the American Council on Exercise said that while plyometric training is important for athletes, especially those who engage in stop-and-start sports like basketball and tennis, it is not something for everyone to jump into.

"It can be hard on the tendons," Kelly said, referring to the tissue attaching muscle to bone. "Tendon elasticity goes down with age and tendons get injured more as you get older."

He recommends that even the well-trained athlete limit plyometric drills to twice a week.

Correctly and sparingly is the only way Connecticut-based fitness coach Tom Holland believes people should do plyometric jumps, squats and lunges.

"Plyometrics is beneficial but high risk," said Holland, author of "The 12-Week Triathlete," adding that exercisers should not attempt the jumps until they can squat their own body weight.

"The ability to land safely takes time. You need to get strong first," he said.

For the soccer-playing college woman, Holland said, doing a lot of plyometric moves like jumping over cones, skipping and ladder-hopping on ground works to slowly train the neuromuscular system.

"But for the average person whose goal is weight loss, I'm not recommending it," he said. "For the weekend warrior, maybe I'd do it once a week for five minutes at low intensity."

But not every day.

"Most responsible coaches will tell you that for every hard workout, you need two days to recover," he said. "But it's hard to sell moderation." (Editing by Patricia Reaney and Richard Chang)