# Young Kids Get a Boost From Strength Training

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QUEBEC CITY — Children as young as 6 years can benefit from carefully supervised strength training, which can lay the foundation for an athletic future, either in competition or as part of a healthy lifestyle, said Avery Faigenbaum, Ed.D., at the joint annual meeting of the Canadian Academy of Sports Medicine and the Association Québécoise des Médecins du Sport.

"Medical organizations including the American Academy of Pediatrics, the British Association of Sports and Exercise Science, and the National Strength and Conditioning Association support supervised and properly progressed youth strength training programs," said Dr. Faigenbaum, of the department of health and exercise science at The College of New Jersey in Ewing.

"[These] children [are] training for whatever sport they want to do later in life because the skills they develop are transferable to anything they might choose," he continued in an interview.

There's debate, however, about the magnitude of benefit from early strength training. While some experts argue that strength training in young children may simply increase the rate at which they reach their predetermined genetic potential, Dr. Faigenbaum argues that it "is setting the stage for greater gains later on."

Overweight, nonathletic children also can derive significant benefit from strength training, he added. "Many of these children cannot do aerobic exercise, they cannot go out for a run or a jog or play soccer or basketball when they are 50 kg overweight. These kids actually love strength training because they're often the strongest in their class, it's not overly taxing, and it's more consistent with how they move."

Even in the absence of weight loss, strength training may decrease obese children's risk of diabetes. Data from a recent study in overweight boys found that strength training significantly improved insulin sensitivity independent of changes in body composition (Med. Sci. Sports Exerc. 2006;38:1208-15).

"What that tells us is that there's something going on in the muscle that's really benefiting [those] at risk of developing diabetes," said Dr. Faigenbaum.

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He is a strong advocate of strength training programs that are both child-friendly and aimed at hooking children in for the long term. "It is quite easy to increase the strength of a child. But the real question is, will it stick? It has to be enjoyable and fun. We really have to look at the process of how we're getting kids to move," he said.

"There [are] lots of different ways children can resistance train, from medicine balls to child-sized equipment, to bar bells and dumb bells and elastic bands."

He advocates the "instant activity" warm-up, a dynamic program as opposed to static stretching because "kids need to move right away." Several studies by his group have found this type of warm-up is associated with between 2% and 10% better performance levels, compared with static stretching (J. Strength Cond. Res. 2007; 21:52-6; J. Athl. Train. 2006;41:357-63).

Dr. Faigenbaum also advises a twice-weekly strength training program starting with moderate weights and one set of 10-15 repetitions. In a study of children aged 5-12 years, those who did either one set of 6-8 repetitions with a heavy load twice weekly, or one set of 13-15 repetitions with a moderate load, increased their muscular strength and endurance by 31% and 41%, respectively, compared with controls who did no training (Pediatrics 1999;104:e5).

"No scientific evidence suggests sensible training will stunt the growth of children or damage their growth plates. In fact, recent findings suggest that weight-bearing physical activity (and strength training) is essential for normal bone growth and development," he said. However, trained supervision is strongly advised. ■