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## **Study Shows Strength Training Beneficial for Young Athletes**

*Importance of a well-designed, adult supervised strength program emphasized*

**ROSEMONT, IL** – Participating in even a short-duration strength-training program during childhood and especially during adolescence may not only improve one's body composition, but also increase self-esteem and improve blood lipid profiles, according to a study published in the May/June issue of *Sports Health A Multidisciplinary Approach*.

The most recent research in this area has found that child and pre-adolescent athletes can improve their strength by 30-50 percent after just 8-12 weeks in a strength-training program. Other benefits also include improved bone mineral density and body composition, balance, lipid profiles and self-esteem," reports co-authors Katherine Stabenow Dahab, MD and Teri Metcalf McCambridge, MD, FAAP from Johns Hopkins Hospital in Baltimore, Maryland.

The study reviewed relevant research, consensus guidelines, and position statements to present a comprehensive review and guidelines for safe and effective youth strength training. The study recommends an individualized program based on age, maturity, and personal goals and objectives of the youth athlete. A comprehensive youth strength-training routine should incorporate:

- Ten to 20 minutes of warm up and cool down (5-10 minutes for each segment)
- A variety of resistance types (free weights, weight machines, rubber tubing, and medicine balls)
- Training the major muscle groups (chest, shoulders, back, arms, legs, abdomen, and lower back)
- A balanced effort between flexion and extension of the upper and lower body joints

"The goal is to perform two to three exercises per muscle group. Start with one to two sets per exercise, with 6 to 15 repetitions in each set," explains Dahab. "The participant should rest one to three minutes between sets. Appropriate weight should allow 10-15 repetitions to be completed with proper form, some fatigue, but not complete exhaustion."

In addition, the study suggests that adult supervision is a central part of the strength training program's success or failure. "Injuries that do occur to the youth athlete are a direct result of lack of supervision, misuse of equipment, lifting inappropriate amounts of weight, or use of improper techniques. It is crucial that a trained professional teach youth athletes proper form, as well as how and when to add weight." Dahab warns. As with any form of exercise a physician's clearance is important to obtain and a pre-training physical is recommended.

"The health benefits of strength training far outweigh the potential risks. Strength training, when done correctly, can improve the strength, and overall health of children and adolescents of all athletic abilities. This is especially important in today's society where childhood obesity rates continue to rise." Dahab concludes.

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