

Youth Strength Training: Why and How

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As our society becomes more sedentary and young people spend more of their time in non-physical pursuits (television, video games, movies, computers, etc.), we see progressively lower levels of physical fitness in increasingly larger numbers of boys and girls. Over a 15-year period, childhood obesity has increased over 50 percent and super obesity has more than doubled. As a result, Type II diabetes, formerly called adult onset diabetes, has become prevalent in teenagers and even preadolescents.

Body Composition

Research has shown that strength training is the best means for improving body composition in youth, as it addresses two major problems in many preadolescents, namely, too little muscle and too much fat.

Public School Study

In one of our public school studies, the underfit and overfat fifth graders who participated in a basic and brief strength training program gained significantly more muscle and lost twice as much fat as a matched group of students who did not perform strength exercise. Perhaps most important, the strength trained students made such noticeable physical improvements that the strength exercises were subsequently included in the standard physical education program.

Bone Development

The most critical time for developing strong bones is during the childhood years. Recent research indicates that strength training is about six times more effective for building bone in preadolescent girls than it is in young, middle-aged or older women. Contrary to the myth that strength training is detrimental to young bones (no such medical report has ever been documented), it is actually the best way to develop a strong musculoskeletal system.

Physiological Response

Because children have low levels of testosterone, some people assume that they cannot increase their muscle strength or that any strength gains are temporary. Our studies have consistently shown significant strength gains (15 to 100 percent) in preteens who complete a two-month training program. Moreover, after two additional months of no strength exercise, the strength trained youth retained 50 percent of their strength gain and were still significantly stronger than their non-training peers. Children, like women and seniors who also have low levels of testosterone, respond most favorably to strength exercise.

Performance Enhancement

In our most recent study, female figure skaters (average age 10 years) did one or two brief strength workouts a week. After 10 weeks of training, the preadolescent participants increased their overall strength by 67 percent, their vertical jump by 13 percent, and their skating performance by major proportions according to their coaches.

Training Guidelines

The skaters performed one set of 10 basic strength exercises for 13 to 15 repetitions each. We recommend using higher repetitions with moderate weightloads, as we have found significantly greater increases in children's strength and endurance when training with 13 to 15 repetitions compared to training with 6 to 8 repetitions.

After 15 years of youth strength training programs with no injuries, we are confident that this activity is safe and beneficial (physically and psychologically) for children. A sensible strength training program enhances musculoskeletal development, encourages self-confidence and elicits a physically active lifestyle.

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