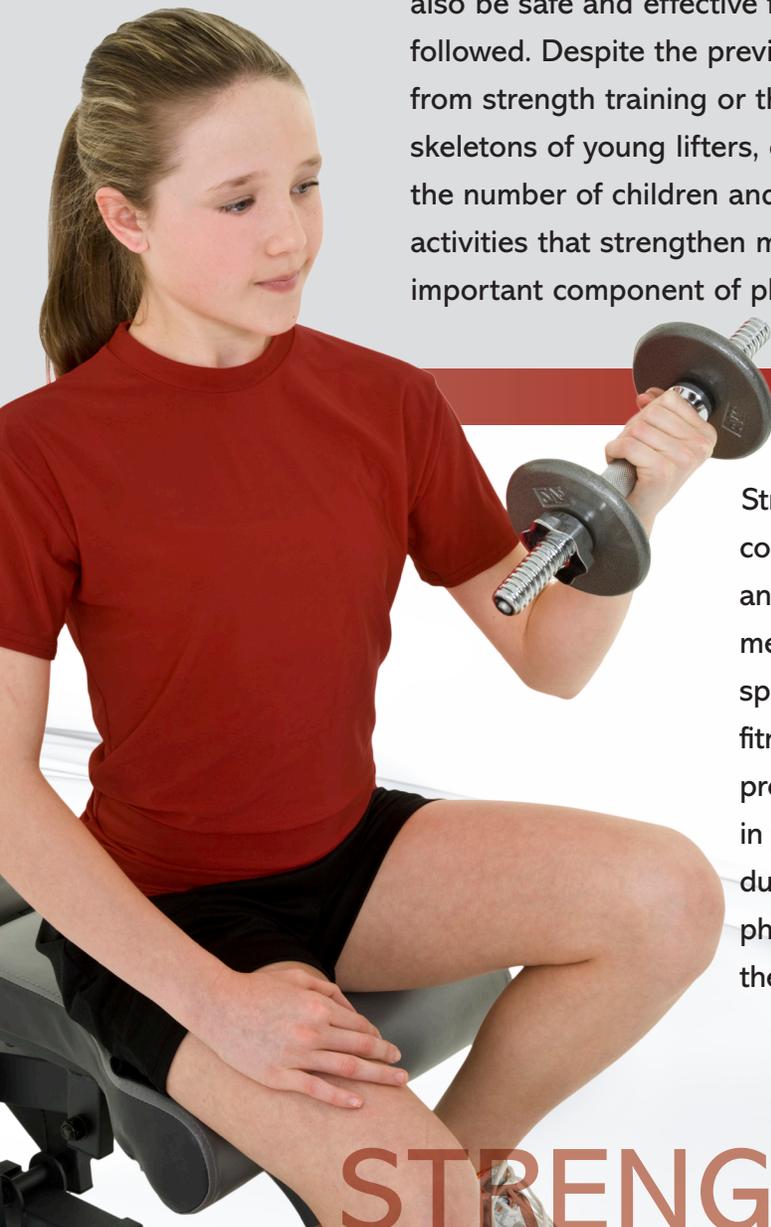




## YOUTH STRENGTH TRAINING

School-age youth need to participate regularly in physical activities that enhance and maintain cardiovascular and musculoskeletal health. While children and adolescents have traditionally been encouraged to participate in aerobic activities such as swimming and bicycling, strength training can also be safe and effective for youth, provided that appropriate guidelines are followed. Despite the previously held belief that children would not benefit from strength training or that this type of exercise would harm the growing skeletons of young lifters, current public health objectives now aim to increase the number of children and adolescents who regularly participate in physical activities that strengthen muscles and bones. Strength training can be an important component of physical activities to achieve those objectives.



### WHAT IS STRENGTH TRAINING?

Strength training refers to a specialized method of conditioning that involves a wide range of materials and activities, including dumbbells, weight machines, medicine balls, and body weight exercises that are specifically designed to enhance or maintain muscular fitness. Regular participation in a strength training program can reduce the risk of sports-related injuries in young athletes. This type of conditioning should start during childhood as a preventive measure to enhance physical fitness and prepare aspiring young athletes for the demands of sports practice and competition.

# STRENGTH TRAINING

## WHAT SHOULD I KNOW BEFORE STARTING MY CHILD IN A PROGRAM?

Although there is no minimum age for participating in a youth strength training program, children should have the emotional maturity to accept and follow directions and should appreciate the benefits and concerns associated with this type of training. In general, if a child is ready for participation in some type of sport activity (about age 7 or 8), then he or she may be ready to strength train. It is also important for a child to be physically fit enough to handle a program and not have any pre-existing conditions, which could increase the risk of injury.

Children and adolescents should not undertake strength training on their own. They need guidance from a qualified professional to match the strength training program to their needs, interests, and abilities. If qualified instruction and a safe training environment are not available, youth who train on their own are at an increased risk of injury. The key is to provide close supervision, age-related instruction, proper equipment, and a safe training environment.

## WHAT SHOULD A STRENGTH TRAINING PROGRAM INCLUDE?

There is not one optimal combination of sets, repetitions, and exercises for all youth. Rather, the structure of the program, individual effort, and qualified instruction will determine results. General youth strength training guidelines include:

- Providing qualified instruction and supervision
- Making sure the exercise environment is safe and free of hazards such as loose weights to trip on
- Focusing on developing proper exercise technique
- Beginning each session with a 5- to 10-minute warm-up period
- Starting with one light set of 10 to 15 repetitions on a variety of exercises
- Performing 8 to 12 exercises for the upper body, lower body, and midsection
- Progressing to 2 or 3 sets of 6 to 15 repetitions, depending on needs and goals
- Increasing the resistance gradually as strength improves
- Strengthening train 2 to 3 times per week on nonconsecutive days
- Using individualized workout logs to monitor progress
- Keeping the program fresh and challenging by varying the training program within the given guidelines of an athletic trainer or coach

## SUMMARY

Regular participation in strength training has the potential to offer observable health and fitness value to children and adolescents, provided that age-appropriate training guidelines are followed. Youth strength training programs must be appropriately designed, competently supervised, and properly taught. It is important that youth not train by themselves. They need a qualified instructor to provide close supervision, age-related instruction, proper equipment, and a safe training environment.

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## REFERENCES

*American Academy of Pediatrics* ([www.aap.org](http://www.aap.org))

National Strength and Conditioning Association  
([www.nscs-lift.org](http://www.nscs-lift.org))

American Orthopaedic Society for Sports Medicine  
([www.sportsmed.org](http://www.sportsmed.org))

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