



**Should children
perform exercises
aimed at developing
strength? ►**

Strength training refers to all the exercises and activities that develop strength and power. Until recently, strength training in prepubescent children was discouraged because it was thought to be ineffective and dangerous.

Today, new research shows that it is possible for pre-adolescents to increase strength with little risk of injury in properly supervised programs. In fact, by strengthening muscles that cross a joint, strength training may even offer some protection to the child already participating in sports such as athletics, alpine skiing, ice hockey, and figure skating which require bursts of power and impose a lot of stress on young muscles and bones.

One of the main benefits of a well-designed strength program is that it balances the strength of muscle pairs. This balance is an important aspect of injury prevention. Alpine skiers, for example, typically have very strong quadriceps and need to strengthen their hamstrings to prevent knee injuries.

For children, strength training should be seen as only one of the many components of fitness. Alain Marion, a consultant with the Coaching Association of Canada, recommends that before resorting to weights, children should be directed to use body weight as the basis of strength training. This allows a more natural strength-building progression. Calf raises, push-ups, and chin-ups are all examples of strength-training methods using body weight.

Strength-training programs for pre-adolescent children must focus on low weights and relatively high repetitions. Heavy lifting and excessive repetitions must be avoided. A child should be able to perform 12 or 15 repetitions of each exercise when using resistance training equipment. If he or she can only lift a weight three to five times, it is far too heavy. Attempting to lift heavy weights is not an appropriate activity for children.

Without the supervision of a qualified instructor, children who lift weights can injure themselves. On their own, children may try to lift weights that are too heavy for them. A recent American survey showed that most injuries associated with strength training in children are the result of accidents in the home, as unsupervised youngsters attempt to lift heavy weights.

For athletes who are beginning to train with weights, it is also important to first learn sound lifting techniques. This can only be done using relatively light weights. In general, the emphasis should be on technique for approximately one year after the adolescent growth spurt.