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Health Options
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Demands of exercise different for children and adults

Over the last 20 years, there has been a major decrease in the amount of exercise that children get. Playtime has been replaced by "screen time" in front of the television, computer and video games. This is likely a major contributing factor to the growing epidemic in juvenile obesity.

As summer arrives, bringing children more opportunities for physical activity, it's important to realize that they are not like small adults when it comes to how their bodies deal with exercise or hydration. Understanding differences between younger and older athletes can promote safer exercise.

Question: How are children different from adults in their response to exercise?

Answer: Children overheat during exercise easier than adults do. They do not sweat as much as adults and older teens and produce more heat relative to body size. They are more easily overheated on hot days and when they are dehydrated. Like adults, children typically drink less than they should during exercise. Meeting water needs is critical.

Q: Are other nutrient needs different for children?

A: In relation to their smaller body size, children burn more calories than adults during most physical activities. Consequently, tables designed to estimate the calories expended by adults through various activities can underestimate energy expended by kids by as much as 25 to 30 percent.

Also, pound for pound, children and teens need more protein than adults. Good sources of protein, adequate calories and high-carbohydrate foods will help kids come back with more zip for their next workout or competition.

Q: How can parents and coaches help prevent problems for children during exercise?

A: Perhaps the most important thing is to encourage regular drinking of fluids. Studies have shown that both kids and adults will drink more fluids if the drink is cold and tastes good. For this reason, sports drinks typically have some flavoring, sugar and a bit of salt. All of these help stimulate more drinking.

Dr. Oded Bar-Or at the Children's Exercise & Nutrition Centre, McMaster University, recommends that children be fully hydrated before exercise and that breaks for drinking be offered every 15 to 20 minutes, even if children aren't thirsty.

Bar-Or also recommends weighing athletes before and after exercise. Rapid changes in body weight are almost entirely due to water loss. Before the next bout of exercise, body weight should be restored by adequate drinking and eating.

Q: How does extra body fat affect children during exercise?

A: Overweight and obese kids have a greater tendency to overheat during exercise, especially on hot days. Most children will take about two weeks to adapt to the stress of exercise in the heat. Kids with extra body fat will adapt, too, but typically will have greater sweat loss and will always be more challenged by the heat than leaner children.

By understanding that kids are not just small adults when it comes to exercise, parents and coaches can work together to assure a safe environment for children to enjoy both training and competition.

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