



ACSM Information On...

PHYSICAL ACTIVITY IN CHILDREN AND ADOLESCENTS

Physical Activity Needs in Children and Adolescents

Daily active play and physical activity have traditionally been an important part of life for children and adolescents. Today, computers and social media have decreased the need and desire for children to move and play. Participation in physical activity decreases with age, and the decline is greater in girls than boys. The challenges associated with getting kids active every day should be met with age-appropriate physical activities, enthusiastic leadership, and support from family and friends.

A sedentary lifestyle is recognized as a major risk factor for obesity and cardiovascular disease. The prevalence of overweight and obesity among children and adolescents is a major public health concern, and weight-related health problems are being diagnosed earlier in childhood. A report from the Centers for Disease Control and Prevention highlights troubling trends among high school students in the United States:

- Only 27% of students accumulate 60 minutes of physical activity daily
- Only 52% of students participate in muscle strengthening activities
- Only 29% of students attend daily physical education
- 41% of students play video or computer games for 3 or more hours per day
- 32% of students watch television 3 or more hours per day

Physical activity is a learned behavior that is influenced by family, friends, teachers and coaches, as well as the environment. Children and adolescents who are not exposed to confidence-building opportunities in their physical abilities early in life tend to be less active later in life. Movement skills such as running, jumping, and throwing can serve as the building blocks for a lifetime of physical activity. Children who do not develop these skills early in life may be less likely to meet or exceed recommendations for daily physical activity later in life.

Physical Activity Benefits for Children and Adolescents

Regular participation in different types of physical activity is essential for healthy growth and development. Evidence shows that physical activity can have a beneficial effect on body composition, cholesterol, blood pressure, blood sugar, aerobic fitness, muscular strength, movement skills, and bone health. Regular physical activity can also improve academic performance and promote feelings of well-being. The positive lifestyle behaviors such as participating in daily physical activity that begin during childhood and adolescence tend to carry over into adulthood. In the long run, daily participation in outdoor games, fitness activities and recreational sports will help to improve the health and well-being of all children and adolescents.

Physical Activity Characteristics of Children and Adolescents

The natural activity pattern of boys and girls is characterized by short bursts of physical activity interspersed with brief rest periods as needed. Most children participate in physical activity to have fun, to make friends, and to learn something new. While youth sports programs can provide an opportunity for young athletes to be physically active, not all children enjoy intense competition and some boys and girls may not be prepared for the demands of sports practice and games. Children and adolescents with poor physical fitness are likely to drop out of sports due to frustration, embarrassment or physical discomforts, like pain or injury.

Children and adolescents should enjoy the process of being physically active. Although the value of creative free play should not be overlooked, physical activities with competent and caring instruction provide a unique opportunity for children and adolescents to learn new skills, improve exercise technique and feel good about their accomplishments. This is called physical literacy. The long-lasting value of developing physically literate individuals should be appreciated by parents, teachers and coaches. Children who learn how to play with confidence and are motivated to participate in a variety of games and activities are more likely to be physically active for a lifetime. Even inactive boys and girls can improve physical literacy by participating in

physical activity programs that are engaging and fun. Just like reading and writing, children need to learn how to perform movement games and sport skills safely and properly.

Promoting Success With Physical Activity Participation: Tips for Parents, Coaches and Teachers

The following tips may help parents, coaches and teachers develop safe, and enjoyable physical activity programs for children and adolescents:

- Focus on intrinsic values such as skill improvement, personal successes and having fun
- Recognize individual differences and capabilities in children and adolescents of the same age
- Offer a variety of creative activities and avoid regimentation
- Ensure children and adolescents wear appropriate footwear and clothing
- Regularly inspect activity areas and explain safety guidelines
- Be a good role model and engage in regular physical activity
- Emphasize 'best effort you can do' rather than 'being the best'
- Offer opportunities for older children to help teach the younger children.

Physical Activity Guidelines for Children and Adolescents

Based on the physical activity needs, benefits, and characteristics of children and adolescents, the following guidelines should be used to maximize health and well-being among children and adolescents. Children and adolescents should accumulate a minimum of 60 minutes of physical activity daily as part of transportation, physical education, sport, free play and planned exercise. The activities should be a combination of moderate and vigorous intensity. Moderate intensity is defined as activity that increases breathing, sweating, and heart rate and vigorous intensity substantially increases breathing, sweating, and heart rate.

Types of Physical Activity

Activities for children and adolescents should be varied, developmentally appropriate, and enjoyable. Examples of aerobic activities include cycling or bike riding, walking, running, field-court-rink games (soccer, lacrosse, basketball, volleyball, hockey, field hockey), roller blading, dancing, and swimming. Note that there is little need for healthy children and adolescents to monitor their heart rate during the activity period.

Children and adolescents should also participate in activities that promote muscle strength on two or three days per week. Examples of activities for young children include climbing, jumping, tumbling and gymnastics, and a variety of games. Older children and adolescents can participate in supervised strength training programs provided the focus is on developing proper exercise technique. Good form and mechanics should be stressed. Examples of appropriate activities include body weight calisthenics (i.e. push-ups, pull-ups), rock wall climbing, obstacle courses and strength exercises with dumbbells, medicine balls and elastic bands.

Traditional games and fitness activities that require participants to run fast, jump high, change direction or maintain balance can develop and reinforce needed movement skills. Jumping rope, animal races, trail running, scavenger hunts and hop scotch can get youth moving in fun activities. Participation in more than one sport or activity provides the child with skills that can be applied to others.

Sedentary activity is a strong contributor to overweight and low physical fitness. Sedentary activities such as television viewing, computer and telephone use, and inactive video games should be limited to < 2 hours per day.

Special Considerations for Children and Adolescents

- Provide positive feedback and encourage an active lifestyle.
- Children and youth should be exposed to a variety of physical activities and sports. This is important to prevent overuse injury and to develop a full variety of movement skills.
- Proper skills and mechanics should be learned from a qualified fitness professional in order to prevent injury and to encourage their success.
- Youth who cannot accumulate at least 60 minutes of physical activity per day should over time gradually increase their frequency and duration of activity until they can reach this activity goal.
- Youth with special conditions (e.g., diabetes, movement disorders) or disabilities should have their activity program tailored to their specific needs.

Youth Physical Activity Guidelines

Children and adolescents should accumulate a minimum of 60 minutes of physical activity daily as part of transportation, physical education, sport, free play and planned exercise. The activities should be a combination of moderate and vigorous intensity. Moderate intensity is defined as activity that increases breathing, sweating, and heart rate and vigorous intensity substantially increases breathing, sweating, and heart rate.

Types of Physical Activity

Activities for youth should be developmentally appropriate, offer variety, and be enjoyable. Examples of activities that may be classified as aerobic include bicycle riding, walking, running, games, dancing, soccer, and swimming. Note that there is little need for healthy children and adolescents to monitor their heart rate during the activity period.

Children and adolescents should also participate in activities that promote muscle strength on two or three days per week. Examples of activities for young children include climbing, jumping, tumbling and gymnastics, and a variety of games. Older children and adolescents can participate in supervised strength training programs provided the focus is on developing proper exercise technique. Good form and mechanics should be stressed. Examples of appropriate activities include body weight calisthenics (i.e. push-ups, pull-ups) and strength exercises with dumbbells, medicine balls and elastic bands.

Traditional games and fitness activities that require participants to run fast, jump high, change direction or maintain balance can develop and reinforce needed movement skills. Jumping rope, animal races, obstacle courses, scavenger hunts and hopscotch can get youth moving in fun activities.

Sedentary inactivity is a strong contributor to overweight and lack of physical fitness. Sedentary activities such as television viewing, computer and telephone use, and inactive video games should be discouraged and limited to < 2 hours per day.

Special Considerations for Children and Adolescents

- Youth are not simply miniature adults and have specific needs regarding physical activity. Their body systems are growing and developing. Adult exercise and conditioning programs are not appropriate for youth. High stress or continuous repetitive movements should be completed with caution, as this kind of exercise has a potential for injury.
- Provide youth with positive feedback and encourage an active lifestyle.
- Children and youth should be exposed to and encouraged to participate in a variety of physical activities, games and sports.
- Youth should learn the proper skills and exercise techniques from a qualified professional in order to prevent injury.
- Youth have immature thermoregulatory systems and care should be given to make sure they are properly hydrated and exercise in comfortable environments.
- Youth who cannot accumulate at least 60 minutes of physical activity per day should over time gradually increase their frequency and duration of activity until they can reach this activity goal.
- Youth with diseases or disabilities should have their activity program tailored to their specific needs.
- Nutritional requirements vary during the growing years and should be adequate for normal growth and maturation and match the energy and nutritional requirements associated with physical activity.



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