

# Physical Inactivity and Diet in Children

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Screen time has been on the rise when it comes to a child's preferred daily recreation. It is estimated that children in the United States spend 25% of their waking hours watching TV, using the computer, and playing video games in their leisure time. According to the Department of Health and Human Services, physical trend data indicate that one third of adolescents are not getting the recommended levels of moderate or vigorous activity, 10% are completely inactive, and physical activity falls as they get older. It is estimated that physical activity levels decrease by 1.8% to 2.7% per year for boys 10 to 17 years of age and by 2.6% to 7.4% per year for girls 10 to 17 years of age. The American Academy of Pediatrics notes that children who watch five or more hours of TV per day have four-and-a-half times greater risk of being overweight than those who watch two hours or less.

Physical activity is an important component of health and well-being for people of all ages. Children who are physically active may gain immediate and long-term positive effects, such as improved mental health status and self-esteem, increased physical fitness, which enhances performance of daily activities, promotion of bone formation, weight maintenance, and prevention of cardiovascular risk factors. In addition, physical activity patterns established during childhood may continue into adulthood, establishing healthier choices over the entire lifespan. Health benefits for physically active adults include lower risks of coronary artery disease, type 2 diabetes mellitus, hypertension, hyperlipidemia, osteoporosis, certain cancers, and depressive symptoms.

Diet and physical activity are inextricably linked. Overweight and obesity result when daily energy intake is greater than daily energy expenditure over time. This concept of energy balance is crucial for successful assessment, prevention, and management of overweight and obesity in childhood and adolescence. Energy intake is a relatively easy concept, because it includes all foods and beverages consumed during the day. Energy expenditure is more complex, because it is a combination of resting metabolic rate, the thermic effects of food, and the variety of activities the individual performs during the day. Therefore, measurement of physical activity is not equivalent to measurement of total energy expenditure; rather, physical activity is one (albeit the most variable and modifiable) element of total energy expenditure.

For children and adolescents, a certain amount of positive energy balance is necessary for proper growth and development. The overall energy balance should tip in favor of slightly greater energy intake, relative to expenditure, although the percentage of total energy required for growth is small after infancy.

Clarification of several terms is necessary to understand what is being measured when physical activity is being discussed. Physical activity is defined as any bodily movement produced by the contraction of skeletal muscles that increases energy expenditure above the basal level. Physical activity thus encompasses movement resulting from free play, structured activities such as sports, and general activities of daily living. Exercise is planned, structured, and repetitive bodily movement performed specifically to improve or to maintain physical fitness. Children and adolescents often participate in planned activities during physical education classes or in structured sports activities; however, the goal is not necessarily physical fitness. Physical fitness is a set of attributes that people have or achieve, such as cardio respiratory fitness, muscular strength, flexibility, endurance, and body composition.

Children today have adopted unhealthy diet consumption, including more fast foods, sugar-sweetened drinks, and not eating breakfast. Fast food is ready-to-eat, low cost, and easy to take home and serve. Having less nutritional value, fast food is also much higher in calories.

Dietary change and increased physical activity is cornerstone to reducing the risk of children becoming overweight or obese. Behavior modification is the key. In 2007, the American Academy of Pediatrics' Recommendations for Treatment of Child and Adolescent Overweight and Obesity include avoidance of sugar-sweetened beverages, reduced portion size, intake of 5 to 9 fruit and vegetable servings per day, 1 hour of moderate to vigorous physical activity daily, daily breakfast, maximum daily screen-time exposure of 2 hours of TV, and eating at home vs. eating at a fast food restaurant.

At GI for Kids, we offer a weight management program, Bee Fit 4 Kids, for overweight and obese children and teenagers.

Bee Fit involves individual counseling sessions to discuss healthy dietary habits with Pediatric Gastroenterologists,

Registered Dietitians, and a Psychologist if needed to ensure a successful weight loss journey.



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