Complete Summary

GUIDELINE TITLE

Active healthy living: prevention of childhood obesity through increased physical activity.

BIBLIOGRAPHIC SOURCE(S)

Council on Sports Medicine and Fitness, Council on School Health. Active healthy living: prevention of childhood obesity through increased physical activity. Pediatrics 2006 May;117(5):1834-42. [55 references] PubMed

GUIDELINE STATUS

This is the current release of the guideline.

All policy statements from the American Academy of Pediatrics automatically expire 5 years after publication unless reaffirmed, revised, or retired at or before that time.

COMPLETE SUMMARY CONTENT

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SCOPE

DISEASE/CONDITION(S)

Childhood obesity

GUIDELINE CATEGORY

Counseling
Prevention

CLINICAL SPECIALTY

Family Practice
Pediatrics
Preventive Medicine
Sports Medicine

INTENDED USERS

Allied Health Personnel
Health Care Providers
Nurses
Physician Assistants
Physicians
Public Health Departments

GUIDELINE OBJECTIVE(S)

To outline ways that pediatric health care providers and public health officials can encourage, monitor, and advocate for increased physical activity for children and teenagers

TARGET POPULATION

- Infants and toddlers (less than 2 years)
- Preschool-aged children (4-6 Years)
- Elementary school-aged children (6-9 Years)
- Middle school-aged children (10-12 Years)
- Adolescents

INTERVENTIONS AND PRACTICES CONSIDERED

1. Encouraging age-appropriate physical activity
2. Office-based physical activity assessment
3. Advocacy for physical activity within schools and the community
4. Promoting a healthy lifestyle in families through counseling and education

MAJOR OUTCOMES CONSIDERED

- Physical activity levels
- Weight loss or prevention of obesity

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Not stated

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Not stated

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not applicable

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Age-Appropriate Recommendations for Physical Activity

Clinicians should encourage parents to limit sedentary activity and make physical activity and sport recommendations to parents and caregivers that are consistent with the developmental level of the child (Harris, 2000). The following are guidelines from the American Academy of Pediatrics (AAP) for different age groups.

Infants and Toddlers

There is insufficient evidence to recommend exercise programs or classes for infants and toddlers as a means of promoting increased physical activity or preventing obesity in later years. The AAP has recommended that children younger than 2 years not watch any television. The AAP suggests that parents be encouraged to provide a safe, nurturing, and minimally structured play environment for their infant (AAP, 1988). Infants and toddlers should also be allowed to develop enjoyment of outdoor physical activity and unstructured exploration under the supervision of a responsible adult caregiver. Such activities include walking in the neighborhood, unorganized free play outdoors, and walking through a park or zoo.

Preschool-Aged Children (4-6 Years)

Free play should be encouraged with emphasis on fun, playfulness, exploration, and experimentation while being mindful of safety and proper supervision. Preschool-aged children should take part in unorganized play, preferably on flat surfaces with few variables and instruction limited to a show-and-tell format. Appropriate activities might include running, swimming, tumbling, throwing, and catching. Preschoolers should also begin walking tolerable distances with family members. In addition, parents should reduce sedentary transportation by car and stroller and, as applies to all age groups, limit screen time to <2 hours per day.

Elementary School-Aged Children (6-9 Years)

In this age group, children improve their motor skills, visual tracking, and balance. Parents should continue to encourage free play involving more sophisticated movement patterns with emphasis on fundamental skill acquisition. These children should be encouraged to walk, dance, or jump rope and may enjoy playing miniature golf. There is little difference between the sexes in weight, height, endurance, and motor skill development at this age; thus, co-ed participation is not contraindicated. Organized sports (soccer, baseball) may be initiated, but they should have flexible rules and short instruction time, allow free time in practices, and focus on enjoyment rather than competition. These children have a limited ability to learn team strategy.

Middle School-Aged Children (10-12 Years)

Preferred physical activities that focus on enjoyment with family members and friends should be encouraged as with previous groups. Emphasis on skill development and increasing focus on tactics and strategy as well as factors promoting continued participation are needed. Fully developed visual tracking, balance, and motor skills are typical in late childhood. Middle school-aged children are better able to process verbal instruction and integrate information from multiple sources so that participation in complex sports (football, basketball, ice

hockey) is more feasible. Puberty may begin at different rates, making some individuals bigger and stronger than others. Basing placement in contact and collision sports on maturity rather than chronologic age may result in less risk of injury and enhanced chance of success, especially for those at lower Tanner stages. Weight training may be initiated, provided that the program is well supervised, that small free weights are used with high repetitions (15-20), that proper technique is demonstrated, and that shorter sets using heavier weights and maximum lifts (squat lifts, clean and jerk, dead lifts) are avoided (Bernhardt et al., 2001).

Adolescents

Adolescents are highly social and influenced by their peers. Identifying activities that are of interest to the adolescent, especially those that are fun and include friends, is crucial for long-term participation. Physical activities may include personal fitness preferences (e.g., dance, yoga, running), active transportation (walking, cycling), household chores, and competitive and noncompetitive sports. Ideally, enrollment in competitive contact and collision sports should be based on size and ability instead of chronologic age. Weight training may continue, and as the individual reaches physical maturity (Tanner stage 5), longer sets using heavier weights and fewer repetitions may be safely pursued while continuing to stress the importance of proper technique.

Office-Based Physical Activity Assessment

An accurate assessment of an individual child's physical activity level by history or questionnaire is difficult and fraught with methodologic problems. It may be easier for parents to recall the number of times per week their child plays outside for at least 30 minutes than to estimate the average daily minutes spent in physical activity. In addition, asking parents about the number of hours per day their child spends in front of a television, video game, or computer screen may be simpler to quantify and track than time spent in active play. Pedometers may also be helpful, because they provide a simple and more objective method of measuring activity, are inexpensive, and have a "gadget appeal" among youngsters. It has been recommended that adults accumulate 10,000 steps per day to follow a healthy lifestyle (Hatano, 1993). Requirements are less clearly defined in children, but guidelines range from 11,000 to 12,000 steps per day for girls and 13,000 to 15,000 steps per day for boys (Vincent & Pangrazi, 2002; Tudor-Locke et al., 2004).

Recommendations

Research has shown the importance of social, physical, and cultural environments in determining the extent to which people are able to be active in all facets of daily life, including work, education, family life, and leisure (Health Canada, 2001). Creating active school communities is an ideal way to ensure that children and youth adopt active, healthy lifestyles. These communities require a collaborative framework between families, schools, community recreation leaders, and health care professionals. Physicians can be instrumental in the development of active school communities by advocating for policy changes at the community, state, and national levels that support healthy nutrition, reducing sedentary time, and increasing physical activity levels while providing education and health

supervision about regular physical activity and reduced sedentary time to families in their practices.

Advocacy

In addition to promoting healthy nutrition recommendations suggested by the AAP Committee on Nutrition, physicians and health care professionals and their national organizations should advocate for:

- Social marketing that promotes increased physical activity.
- The appropriate allocation of funding for quality research in the prevention of childhood obesity.
- The development and implementation of a school wellness counsel on which local physician representation is encouraged.
- A school curriculum that teaches children and youth the health benefits of regular physical activity.
- Comprehensive community sport and recreation programs that allow for community and school facilities to be open after hours and make physical activities available to all children and youth at reasonable costs; access to recreation facilities should be equally available to both sexes.
- The reinstatement of compulsory, quality, daily physical education (PE) classes in all schools (kindergarten through grade 12) taught by qualified, trained educators. The curricula should emphasize enjoyable participation in physical activity that helps students develop the knowledge, attitudes, motor skills, behavioral skills, and confidence required to adopt and maintain healthy active lifestyles. These classes should allow participation by all children regardless of ability, illness, injury, and developmental disability, including those with obesity and those who are disinterested in traditional competitive team sports. Commitment of adequate resources for program funding, trained PE personnel, safe equipment, and facilities is also recommended.
- The provision of a variety of physical activity opportunities in addition to PE, including the protection of children's recess time and the requirement of extracurricular physical activity programs and nonstructured physical activity before, during, and after school hours, that address the needs and interests of all students.
- The reduction of environmental barriers to an active lifestyle through the construction of safe recreational facilities, parks, playgrounds, bicycle paths, sidewalks, and crosswalks.

Promoting a Healthy Lifestyle

Physicians and health care professionals should promote active healthy living within each family unit by:

- Serving as role models through the adoption of an active lifestyle.
- Inquiring about nutritional intake, calculating and plotting body mass index (BMI), identifying obesity-related comorbidities, and promoting healthy eating as suggested by the AAP Committee on Nutrition.
- Documenting the number of hours per day spent on sedentary activities and limiting screen (television, video game, and computer) time according to AAP guidelines.

- Determining physical activity levels of the child and family members at regular health care visits.
- Tabulating the amount of physical activity the child or youth does each day at home, school, or child care as part of transportation, work, recreation, and unorganized sports, which should include determining the actual minutes of PE and recess-related physical activity achieved at school each week. In addition, the number of times per week spent in outdoor play for at least 30 minutes and/or the number of daily steps achieved (monitored by using a pedometer) should be documented. Specific involvement in organized sports and dance also should be noted.
- Encouraging children and adolescents to be physically active for at least 60 minutes per day, which does not need to be acquired in a continuous fashion but rather may be accumulated by using smaller increments. Events should be of moderate intensity and include a wide variety of activities as part of sports, recreation, transportation, chores, work, planned exercise, and school-based PE classes. These activities should be primarily unstructured and fun if they are to achieve best compliance.
- Identifying any barriers the child, youth, or parent might have against increasing physical activity, which might include lack of time, competing interests, perceived lack of motor skills, and fear of injury on the part of the child. Parents might be additionally concerned about financial and safety issues. Efforts must then be made to work with the family to educate them regarding the importance of lifelong physical activity and to identify potential strategies to overcome some of their barriers.
- Recommending that parents become good role models by increasing their own level of physical activity. Parents should also incorporate physical activities that family members of all ages and abilities can do together. They should encourage children to play outside as much as possible. Safety should be promoted by the use of appropriate protective equipment (bicycle helmets, life jackets, etc).
- Advising parents to support their children and youth in developmentally and age-appropriate sports and recreational activities. The child's favorite types of physical activity should be a priority. These might best occur in the school setting during extracurricular activities, in which parents/grandparents can take part as leaders and coaches.
- Suggesting that overweight children partake in activities that take advantage of their tall stature and muscle strength, such as water-based sports and strength training, rather than those that require weight bearing (e.g., jumping, jogging).
- Recommending that parents of overweight children and youth play a supporting, accepting, and encouraging role in returning them to healthier lifestyles to increase self-esteem.
- Encouraging youth to promote physical activities for their peers and become role models and leaders for younger students.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

REFERENCES SUPPORTING THE RECOMMENDATIONS

References open in a new window

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of evidence supporting the recommendations is not specifically stated.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Age-Appropriate Physical Activity

- Regular physical activity is important in weight reduction and improving insulin sensitivity in youth with type 2 diabetes.
- Aerobic exercise has been shown in a prospective randomized, controlled study of 64 children (9 to 11 years old) with hypertension to reduce systolic and diastolic blood pressure over 8 months.
- Resistance training (e.g., weight lifting) after aerobic exercise seems to prevent the return of blood pressure to preintervention levels in hypertensive adolescents.
- Weight loss through moderate aerobic exercise has been shown to reduce the hyperinsulinemia, hepatomegaly, and liver enzyme elevation seen in patients with steatohepatitis.
- Regular physical activity is also beneficial psychologically for all youth regardless of weight. It is associated with an increase in self-esteem and self-concept and a decrease in anxiety and depression.

Advocacy/Promoting a Healthy Lifestyle

Creating active school communities is an ideal way to ensure that children and youth adopt active, healthy lifestyles.

POTENTIAL HARMS

Not stated

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Council on Sports Medicine and Fitness, Council on School Health. Active healthy living: prevention of childhood obesity through increased physical activity. Pediatrics 2006 May;117(5):1834-42. [55 references] PubMed

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2006 May 1

GUIDELINE DEVELOPER(S)

American Academy of Pediatrics - Medical Specialty Society

SOURCE(S) OF FUNDING

American Academy of Pediatrics

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Council on Sports Medicine and Fitness
Council on School Health

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

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GUIDELINE AVAILABILITY

Electronic copies: Available from the American Academy of Pediatrics (AAP) Policy Web site.

Print copies: Available from American Academy of Pediatrics, 141 Northwest Point Blvd., P.O. Box 927, Elk Grove Village, IL 60009-0927.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI on May 22, 2006. The information was verified by the guideline developer on June 9, 2006.

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