Healthy People 2010
GRANT PROGRAM FOR CHAPTERS

Obesity/Physical Fitness Program Summaries:
Goals, Outcomes, and Future Plans
ACKNOWLEDGMENT

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INTRODUCTION

Healthy People 2010 presents a comprehensive, nationwide health promotion and disease prevention agenda. It is designed to serve as a road map for improving the health of all people in the United States during the first decade of the 21st century. Healthy People 2010 represents the third time that the US Department of Health and Human Services (HHS) has developed 10-year health objectives for the nation.

In 2002, the AAP Board of Directors approved the Healthy People 2010 Grant Program for Chapters and assigned the oversight role for this grant program to the District Vice Chairpersons (DVCs) Committee. The overall goal of the program is to help chapters establish networks in their communities to support the development and implementation of programs that address pediatric objectives within the US Department of Health and Human Services’ Healthy People 2010 initiative.

In January 2003, the DVCs reviewed the Healthy People 2010 pediatric objectives and determined that childhood obesity was the topic area on which the Healthy People 2010 Grant Program should focus for 2004. Through the support of the AAP Friends of Children Fund, the Academy offered a grant opportunity to chapters to help them develop and implement programs that addressed the prevention and treatment of child obesity and promotion of physical activity (focus area 19, “Nutrition and Overweight” and focus area 22, “Physical Activity and Fitness”, as identified in Volume II of the November 2000 edition of Healthy People 2010, which is available at www.healthypeople.gov).

Five chapters were awarded grants of $20,000 each to fund their programs. The period of performance began on March 1, 2004 and concluded on March 31, 2006. As stipulated in the terms of the agreement, chapters were required to submit final reports at the conclusion of the grant period and highlights from those reports are included in this publication.

These program summaries describe five very different approaches to reducing obesity and promoting physical fitness among today's youth. Each of these pilots demonstrates some promising practices that warrant further study to determine their long-range effectiveness. In the short term, all 5 chapters forged new partnerships, activated communities to address this important issue, and have plans to continue this work.

Summaries include information on the program goals, what groups they collaborated with, evaluation tools, and outcomes. Please contact the project director if you would like more information about a particular program.
PROGRAM SELECTION CRITERIA

A Request for Proposal that included the following eligibility criteria was mailed to all chapter presidents, vice presidents and executive directors. The programs submitted must:

- Have a measurable impact on the Healthy People 2010 leading indicators, obesity and/or physical activity.
- Be a new program.
- Be led by a full Fellow of the Academy.
- Be supported by chapter leadership.
- Encourage general membership participation.
- Show collaboration with private and public partners.
- Demonstrate a realistic, achievable evaluation system.
- Include a concrete timeline for goals to be accomplished.

Priority was given to proposals that:
- Demonstrate innovative and creative approaches.
- Address hard-to-reach populations.
- Demonstrate continuation of the program beyond initial funding.

Using this criteria as a guideline, a score sheet was created to assist the DVC committee members in assessing and ranking the applications. Thirty-one proposals were submitted, reviewed, scored and ranked. Chapters scoring a total of 180 points or above and a ranking of 5 or better were considered for funding. As a result of this process, twelve chapters were eligible for consideration.

The committee reviewed and discussed proposals submitted from those twelve chapters and voted to award grants to California Chapter 4, Illinois, Kansas, Maine, and West Virginia. The committee also made a concerted effort to select chapters with diverse activities and target populations, in an effort to encompass a variety of programs.
PROGRAM SUMMARY

I  CALIFORNIA CHAPTER 4

Grantee: AAP California Chapter 4
Program Name: PE for ME
Primary Contact: Michael Weiss, DO, FAAP
mweiss3@cox.net
Project Director: Debbie Monfea
dmonfea@aap.net

PROGRAM DESCRIPTION & GOALS

AAP California Chapter 4 pediatricians collaborated with three Orange County high schools to offer extra credit or independent study in physical education tailored to the needs of overweight youth age 14-18 years. This pilot project, “PE for ME: An Independent Study Program for High School Students,” provided pediatricians the opportunity to prescribe a physical fitness program for overweight teens. The overall goals of the program were:

1. Establish policies at 3-4 high schools that will allow overweight youth to obtain high school credit or extra credit for independent study courses in physical education.
2. Develop model curricula that are geared to the needs of overweight youth, meet educational standards and utilize school, community and web-based physical activity programs.
3. Conduct a pilot project to improve the fitness status of 50 overweight youth at 3-4 Orange County high schools representing the varied cultural and economic diversity of the county.
4. Develop model protocols and foster implementation by additional pediatricians.

COLLABORATION

The chapter collaborated with the University of California’s (UCI-Irvine) Department of Pediatrics, General Clinical Research Center, and Statistics Department. The chapter received a small grant ($1,500) from the HealthCare Foundation for Orange County to help supplement the salary of the teacher at one of the high schools when the school district developed financial difficulties. Various fitness professionals in the community helped with the program (e.g. kickboxing instructor, personal trainers, etc).
EVALUATION/MEASUREMENT

Each enrolled student received a physical examination performed by an AAP California Chapter 4 Fellow that included measurement of height, weight, blood pressure and calculation of body mass index. All students also underwent mid-program and end of program follow-up assessments of height, weight, and BMI. All students completed initial screening surveys that included questions regarding baseline physical activity, fruit/vegetable intake, family and personal medical history, and television/computer habits. The students were asked to complete a follow-up survey at the end of the semester to see if there were changes from the initial responses.

PROGRAM OUTCOMES

The following briefly summarizes outcomes that occurred as a result of the program:

- 106 students were enrolled in the PE for ME program at three different Orange County high schools and the class curriculum was unanimously endorsed by the Capistrano Unified School District Board.
- Two of the classes were credited classes during traditional school hours, while one of the classes was an independent study class that students participated in outside of school hours, but also for school credit.
- Outcomes for the independent study class were less successful than the school-based classes, with only 50% of the students showing a decrease in BMI. This was a valuable lesson learned, resulting in discontinuing further independent study curricula.
- The program secured the domain name, “PE4MEonline.com” and created a Web site for the program (www.PE4Meonline.com). The site contains a description of the program, sample curricula, video vignettes of sample exercise, a 25-minute video presentation by a clinical nutritionist, samples of all the intake and follow up forms, links to numerous nutrition and exercise sites, as well as links to reliable vendors for the needed equipment.
- Presentations on this program were made to PTAs and have generated community interest and possible sources for future funding.
- In the second year of the program, classes were expanded to 6 high schools and a total of 211 students.

CHILD HEALTH OUTCOMES

- 67% of enrolled students demonstrated a decrease in BMI over the first semester.
- 33% of the enrolled students demonstrated no change or an increase in BMI over the first semester.
➢ The mean BMI change for students in the first semester was –0.74.
➢ During the screening physical exams, 8 students were diagnosed with Acanthosis Nigricans and referred to primary care physicians for proper evaluation. In addition, one student was found to have insulin resistance and was placed on medication.
➢ In the second year of the program, an additional 24 students were diagnosed with Acanthosis Nigricans and referred for evaluation. One student was diagnosed with aortic stenosis.

FUTURE PLANS

The program was successful in obtaining a number of additional grants as it entered the second year: $25,000 from the HealthCare Foundation for Orange County; $5,000 from the Mark McGuire Foundation; $5,000 from the Kaiser Foundation; $10,000 from the California Medical Association, and additional support from the Tesoro High School Parent, Teacher, Student Association.

Planning ahead for year 3, the program has applied for the following grants: $10,000 AAP CATCH; $25,000 Kaiser Foundation; $25,000 Aetna Foundation; and $25,000 the Tiger Woods Foundation.

If an AAP CATCH grant is secured, the goal is to develop a PE 4 ME program that can be implemented in the preschool and kindergarten age groups. The thought is that children are much more impressionable at younger ages and the program may be even more successful for those children.

In an effort to expand the program to other school districts, presentations will be made to the Anaheim Unified School District, as it has expressed interest in implementing the program in 17 middle and high schools. The chapter is also planning to expand the capabilities of the Web page to include the ability for schools to interact with each other as well as the ability for students to log on, confidentially, and track their own progress in the program. In addition, a formalized curriculum is being developed for physical education teachers.
PROGRAM SUMMARY

II  ILLINOIS CHAPTER

Grantee: AAP Illinois Chapter

Program Name: IMPACT (Increasing Movement and Physical Activity Through Community-based Teams)

Primary Contact: Holly J. Benjamin, MD, FAAP
hbenjami@peds.bsd.uchicago.edu

Cynthia Mears, DO, FAAP
c-mears@northwestern.edu

Project Director: Scott Allen
sallen@illinoisapp.com

PROGRAM DESCRIPTION & GOALS

The IMPACT project sought to increase school-based fitness and physical education programs, increase the number of schools adhering to the Illinois daily physical education law, and leverage community resources for sport and physical activity opportunities so that Illinois school children increase fitness and reduce the risk for obesity. The project proposed that schools make minor implementable changes to existing physical education and activity programs in order to meet these goals. Project goals included forming multiple partnerships with other organizations, successfully promoting the project to create a pool of volunteers interested in becoming more involved in this issue, engaging pediatrician and other pediatric health care and education volunteers, developing a project tool kit, and increasing the Illinois Chapter’s involvement in advocacy on physical activity programs for children. Specific IMPACT objectives were:

1. Identify and support advocacy teams in 8 suburban communities.
2. Create community awareness of the need for school physical education, recreational fitness activities, safe routes to school, etc.
3. Advance legislation that supports adherence to the Illinois law requiring daily physical education and mandates reporting on fitness levels by school districts.
4. Determine the impact of the project.
COLLABORATION

The chapter collaborated with many state and community advocates, including the Illinois Association for Health, Physical Education, Recreation and Dance, the Consortium to Lower Obesity in Chicago Children, the American Heart Association, the Illinois Coalition for School-based Health Centers, and the Healthy Schools Campaign. These partners participated in multiple meetings and supported IMPACT by helping to develop and compile resources for the tool kit, collaborating on statewide advocacy efforts and identifying partners for community-based teams. Various project promotions were undertaken to engage volunteers in the activities, resulting in a project roster that included planning committee members, community-based team volunteers, target community contacts, and advocacy and content consultants.

EVALUATION/MEASUREMENT

An evaluation instrument (survey) was developed to accompany the project tool kit. The evaluation survey was disseminated with all kits, and follow-up activities are in process.

OUTCOMES

The following briefly summarizes outcomes that occurred as a result of the program:

- The Illinois Chapter now serves as a member of the School Wellness Policy Task Force convened by the Illinois Department of Public Health.
- An IMPACT tool kit was developed and distributed to members of all community teams and any chapter member that requested a kit. To date, a total of 75 kits have been distributed. The kit includes a project overview, suggestions for using the tool kit to become more involved with this issue locally through schools, highlights from recent studies, tips for increasing physical activity in schools including a series of six student activity handouts, materials for school meetings, as well as other useful resources and ready-to-use tools.
- Community Resource Guides were developed for 8 IMPACT program communities. The guides were designed to provide an overview of the resources, programs and services available for physical fitness, recreation, and other activities in the communities specifically targeted for the initial IMPACT program. The guides were created for patients, families and educators. The chapter will promote the guides and make them available via its Web site in the near future.
- Members of the chapter’s Committee on Sports Medicine and Fitness revised the “Return to School/Physical Education” form for inclusion in
the IMPACT tool kit. This form more specifically delineates details on exactly when it is appropriate for children to return to school physical education classes after an illness or injury as a means to encourage continued physical activity for students.

- The chapter co-sponsored two obesity policy summits. The summits produced a consensus agenda of legislation, which was then promoted in the 2005 legislative session with nearly total success. All bills passed, but appropriations were not at the amounts requested.
- Through the project’s efforts at the state level, legislation was passed that makes exemption waivers to the daily physical education law more difficult to obtain. Waivers are approved for five years at a time, and the impact of these changes will not be understood until waivers come up for renewal and are considered by the Illinois State Board of Education in the future.
- Increased involvement of chapter members, due to both the formation of the community-based teams and the effort to meet with legislators.

FUTURE PLANS

Components and activities developed under the rubric of the IMPACT project have been carefully constructed as templates and user-friendly resources for ease of replication in the future. Chapter staff continue to promote and disseminate information about the program, as well as the tool kits to members and others on request. The Chapter Executive Committee has determined that obesity should be one of the chapter’s highest priorities for 2006-2007 and the IMPACT materials will serve as the foundation for the strategic work on this priority area going forward.

Partnerships with the Consortium to Lower Obesity in Chicago Children, the Illinois Association for Health, Physical Education, Recreation and Dance, and other groups have been strengthened and numerous joint projects have been discussed. Partnerships established via the current community teams were designed to be long term and teams will continue to be supported by staff in their efforts to work on these issues with schools in the future.
PROGRAM SUMMARY

III KANSAS CHAPTER

Grantee: AAP Kansas Chapter

Program Name: Healthy Choices Make Healthy Kids (HCMHK)

Primary Contact: Sarah Hampl, MD, FAAP
shampl@cmh.edu

Project Director: Chris Steege
KansasAAP@aol.com

PROGRAM DESCRIPTION & GOALS

The Healthy Choices Make Healthy Kids (HCMHK) project involved the creation of a collaborative relationship between Kansas Chapter pediatricians and adolescents to influence younger children and their families. Five Kansas Chapter pediatricians worked with their local high school Family, Career and Community Leaders of America (FCCLA) chapters to create a skit that emphasizes selected Healthy People 2010 nutrition and physical activity goals. The skits were presented to 10 elementary schools and 6 community groups, reaching over 750 children and adults. Each pediatrician introduced the skit, fielded questions from the audience, and distributed take-home resources. Each FCCLA chapter submitted a video of its skit to the Kansas Chapter. A winning skit was chosen, duplicated, and sent to all Kansas public school districts with an accompanying letter from the Kansas Chapter. A Kansas pediatrician presented a certificate to the winning student team at the FCCLA state conference on April 5, 2005. The winning FCCLA student team performed their skit at the 2005 Kansas Chapter Spring CME conference. Specific goals were:

1. Identify and train Kansas Chapter pediatricians in nutrition and coalition building skills.
2. Pediatricians will work with local FCCLA chapters to create a skit promoting healthy lifestyles.
3. Skits will be presented to K-3rd grade students in school assemblies and community organizations.
4. Pediatricians will evaluate FCCLA members’ behavior changes.
5. One skit will be chosen as the best and will be duplicated and sent to all Kansas public school districts with an accompanying letter from the Kansas Chapter.
6. Winning skit will be performed at the chapter’s 2005 spring meeting and students will be presented with an award.
COLLABORATION

The chapter collaborated with five schools through the FCCLA advisors, teachers, administrators and parent organizations. Relationships were developed with several coalitions that advocate for child health issues including, Kansas Action for Healthy Kids, Healthy Kids Challenge, Kansas LEAN School Health Project, and the Kansas Department of Health and Environment.

EVALUATION/MEASUREMENT

The evaluation measures used included a 3-day dietary recall and a 7-day step counting log which was provided to FCCLA advisors to administer to the FCCLA students involved in skit development. The measures were to have been given prior to the onset of the HCMHK project and following its completion. There was variable administration of these measures to the FCCLA students, with some students not returning a pre-test or post-test despite multiple prompts. Meaningful analysis of the results was therefore difficult, as only 28 students returned a pre-test, a post-test or both. The software program, Food Processor, was used to analyze the 3-day dietary recalls. Simple descriptive statistics were performed on the nutrition and step counting data using Statistical Package for the Social Sciences (SPSS) version 12.0.

PROGRAM OUTCOMES

The following briefly summarizes outcomes that occurred as a result of the program:

- Satisfaction responses from project participants (FCCLA advisors, students and pediatricians) were positive and all respondents indicated that they thought the project was a good experience and would participate in it again.
- The Kansas Chapter’s Web site (www.aapkansas.org) now has a pediatric obesity Web page with resources and helpful Web links for providers and families.

CHILD HEALTH OUTCOMES

- There was no self-reported reduction in average total calories per day average, total fat grams per day, or average total saturated fat grams per day from the beginning to the end of the project for the FCCLA students.
- There was an improvement noted in the average amount of steps taken per day by the FCCLA students from the beginning to the end of the project, which hopefully indicates progress toward the Healthy
People 2010 goal (22:14) of an increased proportion of trips made by walking.

FUTURE PLANS

The chapter received notification from the Midwest Dairy Council that it will fund the Healthy Choices Make Healthy Kids program for 2006-2007. In addition, initial discussion has ensued regarding the possibility of a nation-wide FCCLA student module based upon the HCMHK project.
PROGRAM SUMMARY

IV    MAINE CHAPTER

Grantee:    AAP Maine Chapter
Program Name:    Maine AAP Medical Home Model for Childhood Obesity Preventive Management
Primary Contact:    Robert Holmberg, MD, MPH, FAAP
                     rholmberg@emh.org
Project Director:    Aubrie Entwood
                     aentwood@aap.org

PROGRAM DESCRIPTION & GOALS

This project used the “Breakthrough Series Collaborative” model developed by the Institute for Healthcare Improvement to bring together clinical experts, primary care practices, and community partners to develop local expertise and shared goals among clinical practice teams in order to improve the management of and decrease youth overweight within the state. Members of this project developed tools and methodologies for clinical evaluation and preventive interventions for overweight children 5-18 years old (BMI over 95th percentile). Specific program goals included:

1. Reduce Body Mass Index (BMI) percentiles
2. Increase daily physical activity
3. Improve lipid profiles
4. Prevent adult onset diabetes

Twelve practice teams were recruited to work with the state Title V Medical Director, a pediatric endocrinologist, nutritionist, and adolescent mental health specialist in a learning collaborative project for 18 months. The participating practice teams represented a diverse group widely dispersed throughout Maine. Practice sites included one pediatric residency program, one family practice residency program, nine primary care pediatric practices, and one family practice. Each site was requested to send a three-member multidisciplinary team (composed of a provider leader/champion, another medical staff person and an administrator) to three 1.5-day learning sessions. During the 18 months, coaching and support was provided through two additional learning sessions; bimonthly conference calls; site visits; an active email list providing the latest
news and literature on relevant topics; and periodic performance feedback based on expert faculty review of bimonthly project team reports.

COLLABORATION

The chapter collaborated with the Maine Center for Public Health (MCPH) and the Maine-Harvard Prevention Research Center (MHPRC), under the name “Maine Youth Overweight Collaborative” (MYOC). Practice teams were asked to link with their local Healthy Maine Partnership sites in order to familiarize themselves with local community resources that promote physical activity and good nutrition for patient referrals; and to create links with local schools (e.g. school nurse, coordinated school health program, PTO, school board) in order to address issues of physical activity and healthy eating in schools.

EVALUATION/MEASUREMENT

The following pre and post surveys were developed: 1) Maine Youth Overweight Collaborative Evaluation Survey Protocols and Timelines; 2) Provider Surveys; 3) Caretaker Surveys; 4) Online Practice Team Survey; and 5) Chart Review Data Form. These surveys were used to solicit input from all the practices that participated in the project to see if their involvement in the program changed the way they identified and treated obese children.

OUTCOMES

The following briefly summarizes outcomes that occurred as a result of the program:

- All practice sites incorporated office methods to routinely determine the BMI percentile and determination of overweight status on every child 5-8 seen for routine well child care.
- Participating physicians were trained in motivational interviewing to determine patient interest in a personal contract for weight management through physical activity or nutritional interventions.
- Provider surveys demonstrated improved knowledge of weight classification categories and how to address lifestyle issues with their patients. Providers’ efficacy and practice addressing lifestyle issues also improved. Results indicate that at post-test, providers were doing the most lifestyle-related work with their patients at highest risk.
- From parent caretaker surveys, it was learned that as compared to baseline, families heard substantially more messages about nutrition, television or screen time, physical activity and sugar-sweetened beverages at post-test.
- Teams reported high levels of satisfaction, overall, with collaborative implementation. All teams made connections with a community
coalition. Significant work was accomplished through practice/community partnerships.

- Practices incorporated a standard medical/laboratory evaluation guideline for all children with a BMI over the 94th percentile.
- An easily remembered “5210” guide was developed for surveying all well child care 5-18 years and also for overweight children to use in determining their personal management strategy (5 fruits and vegetables a day; 2 hours or less of screen time; 1 hour or more of physical activity, including pedometer measured walking; and 0 sugar soda/juices).

**FUTURE PLANS**

Members of the project are working with the MYOC leadership in seeking further funding to spread the Institute for Healthcare Improvement’s Learning Collaborative model in office systems change for childhood obesity prevention and management to more pediatric and family practices throughout Maine. The chapter and the Maine Association of Family Physicians will also be involved in this effort.
PROGRAM SUMMARY

WEST VIRGINIA CHAPTER

Grantee: AAP West Virginia Chapter

Program Name: Program Encouraging Prevention of Diabetes, Cancer and Heart Disease Among Overweight Adolescents (or PEP)

Primary Contact: Kathaleen Perkins, MD, FAAP
kperkins@hsc.wvu.edu

Project Director: Jeri Whitten
jwhitten@aap.org

PROGRAM DESCRIPTION & GOALS

In pursuit of the Centers for Disease Control and Prevention (CDC) guidelines, the West Virginia Chapter initiated a “Program Encouraging Prevention of Diabetes, Cancer and Heart Disease among Overweight Adolescents” (PEP) with the following objectives:

1. Increase the number of communities, families, individuals, health care centers and providers who are actively involved in addressing the problems of obesity as well as prevention of the devastating complications of this problem.
2. Collaborate with, and support any ongoing programs that work to change adolescent lifestyles.
3. Assist local personnel in assuming roles of nutrition and exercise specialists.
4. Determine the most effective ways of improving adolescent lifestyles.

The PEP intervention was directed primarily to adolescents age 10-21 years whose weight was over the 85 percentile, in order to delay and prevent the development of type II diabetes and cardiovascular risk. This program was aimed at training providers whose interest and contribution is vital to the success of any health care intervention. The intent is to provide materials and develop the skills of health care providers (pediatricians, nurse practitioners, school health personnel and Rural Health Centers [RHEP] etc.) to enable them to help adolescents make lifestyle changes to manage their weight.
COLLABORATION

The chapter recognized the importance of community involvement and worked with the local Y-Programs, academic centers, state Maternal and Child Health Department, and school-based and rural health centers.

EVALUATION/MEASUREMENT

A survey of professionals who provide healthcare for overweight adolescents was conducted in the first 3 months and repeated again in the last 3 months of the study. In addition to demographics and numbers of patients treated, the survey also included questions related to weight management counseling efforts. The chapter also created a shorter version of the survey that could be completed online by the participants, which improved the response rate. Responses were received from participants in most counties.

OUTCOMES

The following briefly summarizes outcomes that occurred as a result of the program:

- Specialty professionals developed a curriculum, which can be utilized in local offices and clinics.
- Specific “overweight visit” forms for history and physical exams were developed.
- A 45-minute training video was developed. The DVD contains ideas that can be developed and utilized by local communities. It provides tips on marking progress other than by focusing on weight alone. Daily physical activity suggestions are shared and counseling techniques are discussed. Over 50 copies of the video have been distributed locally, and an additional 30 copies have been distributed to other states and international sites.
- A core group of trainers has been established and these trainers have visited local communities to initiate new programs or support ongoing programs. The plan is to acquire new trainers who will then be willing to help neighboring communities.
- Chapter members have written to local newspapers and have worked with legislators to introduce a bill that would remove soft drinks from the school vending machines.
- The chapter president was invited by the First Lady of West Virginia to sit on the West Virginia Healthy Lifestyle Clinical Advisory Coalition.
- The Barbour County School for Nursing is using the PEP video as a training tool for nurse practitioners.
- All of the 55 counties in West Virginia provide some intervention directed toward weight control.
FUTURE PLANS

The chapter is encouraged by the enthusiasm that this pilot program has received. Chapter leadership will consider outcome measurements and data collection to determine the program’s effectiveness. The chapter is considering publication of the final report in an effort to share lessons learned and contemplate future actions as a result of this work.
Interest in the Healthy People 2010 Chapter Program for chapters focusing on childhood obesity and physical fitness was extremely high; thirty-one chapters applied for the grant. The proposals varied from developing tool kits to collaborating with high schools to offer independent study or extra credit in physical education tailored to the needs of overweight youth age 14-18.

While only 5 chapter programs could be funded through this grant opportunity, most chapters found other avenues or funding resources to help them focus on improving children’s health related to nutrition and physical activity. The most recent information related to chapter activities around childhood obesity has been extracted from the 2004-2005 chapter annual reports and is included in this publication. Fifty-two of the 59 US chapters provided brief summaries of their activities. This information reflects what was reported in the 2004-2005 chapter annual reports. Recent chapter initiatives can be obtained by contacting the appropriate chapter executive director.
Alabama: Chapter Executive Board member A.Z. Holloway, MD has been working with the state PTA and School Nurses Association on a Nutrition Task Force to look at increasing activity in schools and the nutritional value of foods offered in public school snack machines. The Chapter's Adolescent Leadership Team has also made plans to address child/adolescent obesity issues.

Alaska: The Alaska Chapter supports the national obesity initiative, Action for Healthy Kids (AFHK) and is a member of its state team. The Alaska state team of AFHK focuses on three areas: improving children's eating habits; increasing children's physical activity; and educating administrators, teachers and parents about how nutrition and physical activity affect children's health and academic achievement. Pediatricians, Laurie Montano, MD and Andrea Bateman, MD, are the chapter's champions for obesity issues.

Arizona: The Arizona Chapter collaborated with the Department of Health Services to develop and distribute a tool-kit, including educational materials on how to measure BMI in children and teens, and nutrition education materials.

Arkansas: The chapter was successful over the past year in helping to distribute and mail to pediatricians and family physicians a CME tool for physicians to help them identify children at risk for being overweight. The Arkansas Clinician's Guide to Weight Problems in Children and Adolescents is designed to provide current recommendations for assessment and management of abnormal BMI. The guide is only one component of an educational initiative that is directed at clinicians in the state concerning the assessment and management of overweight children. The chapter was successful in aiding in the development of the Nutritional and Physical Activity Standards of Arkansas Public Schools, which is in the final stages of being approved for the 2006 school year.

California 1: The success of the chapter’s Obesity Task Force last year led to its continuation as an official chapter committee. The task force assisted in creating an extremely successful (sold-out) CME meeting on obesity and diabetes and a resource guide divided by chapter region for all attendees. The work going forward will include updating the resource guide, serving as legislative advocates by reviewing and testifying as needed on the myriad state bills related to obesity, and creating community networks within the chapter. A CATCH grant to focus on an educational project for families dealing with obesity was awarded to the chapter.

California 2: California Chapter 2 developed a task force to consider the problem of obesity/overweight among children and youth and to make recommendations for AAP consideration. The task force developed a 9 page white paper culminating with 5 recommendations for consideration.
California 3: The chapter supported the Child Health & Disability Prevention Program’s new requirement for implementing new growth charts and BMIs on all children. The chapter participated in the San Diego Health Department’s Collaboration on Obesity Prevention to update resources and have them available for pediatricians, and worked with a nutritionist to develop, teach and implement a toolbox for lobbying and working with school boards on this complex issue. A successful conference was held to encourage quality service in the office and collaboration with the schools on this issue. A Centers for Disease Control and Prevention (CDC) expert speaker and two local pediatricians attended the conference. The chapter also helped to sponsor the California Obesity Summit for Children, which was held in San Diego in January of 2005.

California 4: A goal of California Chapter 4 is to reduce obesity and enhance the overall fitness and nutrition in the children, adolescents, and young adults of Orange County.

Connecticut: The chapter worked on the only piece of legislation that year that addressed childhood obesity (Vetoed by Governor). The chapter is part of a very large coalition, and intends to be back for next year's session. It also hopes to create a coordinated approach to the obesity issue looking at programs that include schools and other members of the entire community.

Delaware: The chapter sent a letter to all public school superintendents throughout the state informing them of the obesity crises. It was proposed that the schools support policies that improve nutritional options at school such as: the creation of a school nutritional advisory council, elimination of soft drinks, presentation of alternatives such as low fat milk, water, 100% juice in 12oz or less portion sizes, and legislation that soft drinks should not be sold as part or in competition with school lunch programs.

District of Columbia: The chapter will be represented on the D.C. Department of Health's Obesity Prevention Advisory Council. The chapter will work with them to help achieve the objectives they establish.

Florida: Representatives from different geographic regions have been meeting with State Health Department coordinators and with the Governor's Task Force on Obesity to develop and implement statewide action plans for the reduction of obesity, the increase in physical activity and the establishment of healthy lifestyles. These coalitions of stakeholders in children's health have been meeting on a quarterly basis around the state. Some issues that have been tackled are: vending machines in schools, lowering fat content of school meals, increasing physical education in the schools, and establishing after school activities that involve increasing physical activity and community involvement.

Georgia: Substantial activity has been accomplished and is pending in this area. A task force on this topic, co-chaired by a primary care pediatrician and a pediatric sub-specialist, was formed in the winter. "Tool kits" are being developed
for members and an Educating Pediatricians in their Community (EPIC) type model of educational delivery on this topic is being explored. A chapter member received a CATCH grant on a physical exercise project; and the chapter was invited to sit on a Steering Committee, chaired by former CDC Chief, Jeffery Koplan, MD, of a national group, Participate in the Lives of America’s Youth (PLAY), investigating physical exercise and its role in obesity.

Hawaii: The pursuit of research grants and projects is ongoing. The chapter is involved with a local Obesity Task Force, a coalition of community, university, government agencies and physicians.

Idaho: This year the chapter began to identify hospital and/or physician's practices that had programs for children with weight problems. The chapter is compiling a list of these programs and contacts, and will place that information on the chapter’s Website. The governor hosted a Nutrition and Activity Summit in June 2005 for a statewide planning prospective and the chapter was represented at that meeting.

Illinois: The Illinois Chapter (ICAAP) is a partner in the Consortium to Lower Obesity in Chicago Children (CLOCC). In 2004, ICAAP served on the planning committee for the CLOCC policy summit, which engaged nearly 80 organizations in developing legislative goals for the 2005 session. Nearly 50 groups signed onto five priorities, four of which were passed in 2005 (to establish a Food Systems Policy Council, a safe routes to school program, early learning program nutrition standards, and better standards for school physical education programs). In 2004-2005, ICAAP initiated its IMPACT project with AAP funding. The project assembled 6 teams of physicians and school staff in different communities, developed a toolkit, and facilitated the teams' interaction with school leaders to help improve physical activity. Public education and media materials were also developed. In April 2005, ICAAP leaders made obesity prevention and treatment one of its three strategic goals.

Indiana: The Indiana Chapter (INAAP) is very involved in the issue of obesity prevention. Obesity is a major problem in Indiana and the chapter addressing this on several fronts. The INAAP co-sponsoring a CATCH/Obesity Prevention conference on June 18, 2005, which was open to chapter members as well as other professionals involved in the health and well being of the children of Indiana. Solving the problem of obesity will be a coalition effort - physicians, schools, government officials, media, parents, etc. INAAP also received an AAP mini grant to continue in this effort. The follow up conference will be held in August and is in the planning stages now, but has generated much interest, not only from chapter members, but educators and state officials.

Iowa: The Iowa Chapter has devoted 2004, 2005, and 2006 Child Health Month to the childhood obesity issue. The chapter partnered with the Iowa Medical Society on an obesity prevention grant aimed at increasing office based education of parents to promote healthy nutrition and exercise for children ages 0-5. This is a state-wide project. The Iowa Chapter sponsored the governor’s
Barn Raising Conference of Iowa Department Of Health, which includes obesity prevention education. A panel presentation by Dr. Rizwan Shah covering prevention of childhood obesity is scheduled for Oct.14th, 2005, during World Food Prize Conference in Des Moines.

Kansas: KAAP received one of the AAP's HP2010 Obesity Grants and recently was chosen to receive one of the two Prevention of Obesity in School Health (POSH) grants. Dr. Sarah Hampl has been the KAAP leader in both of these very successful projects.

Kentucky: The chapter endorsed Obesity Prevention Study and Project in Kentucky, partnering with University of Kentucky and Dr. Thomas Badgett, Director of State Medicaid Program. The chapter’s newly designed website includes a Hot Topic area, one of which is Obesity. Members can access current information on this topic.

Louisiana: The chapter works closely with the Louisiana Obesity Commission, which is chaired by the Chapter Vice President, Stewart Gordon. The chapter supports legislative initiatives, training, and program activities geared to reducing childhood obesity. The school vending legislation resulted from this effort.

Maine: The chapter is proud to be a recipient of a Healthy People 2010 Grant for Obesity. This grant not only provided the chapter with the means to be able to hire a part-time Executive Director, but also enabled the chapter to join forces with the Maine Center for Public Health in the development of the Maine Youth Overweight Collaborative. The steering committee of this collaborative is well represented by chapter members and has put together a "tool kit" for primary care practices to recognize the overweight and at risk for overweight child and to make management decisions regarding further diagnostic studies, referral and "treatment" plans. This collaborative is based on a learning collaborative model and includes 11 primary care sites across Maine, 9 of which are pediatric sites. The Maine Center for Public Health, with chapter support, has recently applied for a CDC grant to study the effects of television viewing on childhood obesity. The chapter is involved in a pilot project with the Bingham Program that is looking at primary prevention of childhood overweight. This project includes intervention developed at the Yale Prevention Research Center and is aimed at education within the obstetrical, pediatric and family practice office setting for pregnant patients and families of newborn children. The focus of this project is on the earliest intervention, even before children are born.

Maryland: The chapter has a very strong Obesity Prevention Team with six pediatricians, the Executive Director, three registered dieticians and students from the Johns Hopkins Bloomberg School of Public Health. The chapter has received funding from Nestle Corporation and the Wilson Sanitarium. A National Institute Health application for parent education in Head Start programs is pending. The chapter also recently completed obesity focus groups in several communities in Baltimore City and Howard County. Through these focus groups the chapter hopes to develop an obesity awareness campaign before the end of
this year. The chapter hired a media campaign expert to guide it through the process of developing radio/TV public service announcements and printed materials for this campaign.

Massachusetts: The Massachusetts Chapter’s Obesity Committee was formed in October 2003 in response to an alarming increase in overweight children in the United States. In order to gain a broader perspective of the problem and a better understanding of current programs that address childhood obesity, members from various state organizations were invited to become a part of the Obesity Committee. The Committee has worked on developing strategies to identify children at increased risk for overweight and strategies to prevent and control overweight among children. The Committee keeps abreast of legislative matters pertaining to childhood obesity.

Michigan: The chapter has been asked by Blue Cross Blue Shield of Michigan to participate in developing an obesity toolkit. Several chapter representatives have been identified to participate in this project.

Mississippi: The Chapter customized and replicated the BMI assessment and treatment guide that was developed by the Arkansas chapter and its partners. This educational piece was inserted in the chapter newsletter, which was distributed to about 400 pediatricians in early Spring 2005. In addition, a Mississippi-specific article on obesity and overweight was included in that issue of the newsletter. The chapter also advocated for legislation that would mandate healthy alternatives in school vending machines. In the next legislative session in January of 2006, it is planned that legislation will be introduced to mandate daily physical education classes for public school students. The chapter was also invited to provide feedback about the MS State Department of Education's School Wellness Policy Framework, which is required for all schools participating in the free or reduced lunch programs. Chapter members were able to provide input and guidance to state-level school officials in regard to children's health.

Missouri: Chapter leaders hold positions on the Department of Health and Senior Services’ Obesity Commission. This commission is gearing up to meet (or exceed) the Healthy People 2010 goals by bringing together people representing many forms of industry.

Montana: The Montana Chapter developed a poster with accompanying parent handouts to promote healthy lifestyle choices in children and families, with emphasis on good nutrition and appropriate exercise. The chapter distributed 7000 posters and handouts to every elementary school, all pediatric and general practice offices, all WIC offices and clinics, and to the medical students at the Washington, Wyoming, Alaska, Montana, and Idaho (WWAMI) program in Bozeman. The Idaho, Washington, Wyoming and North Dakota chapters printed several copies of the poster and handouts and distributed them to physician offices and various other organizations.
Nebraska: The Executive Committee approved a chapter project to pull together various activities around the state that are addressing obesity. The chapter would like to work to collaborate various efforts so they compliment one another. The chapter aims to involve residents in this initiative.

New Hampshire: Chapter members will be embarking on a study to work with families to decrease obesity in their children by asking parents to make discrete changes in home behavior. A tool kit was developed to help schools and communities make healthier food choices.

New Jersey: The chapter participated in a Obesity Prevention Pilot Program. More than 120 children from Asbury Park, NJ participated in an event hosted by the Boys and Girls Club. Information materials and posters described the 5-A-Day program and a professional chef showcased snacks that were nutritious foods.

New Mexico: The chapter is active in an exciting coalition of over 40 organizations and agencies called Action for Healthy Kids. Considering this was their first year of work at the state legislature, the coalition did a remarkable job of keeping issues of children’s obesity and nutrition and physical education in the schools in the limelight. Competitive Foods in the Schools legislation passed and increased PE in the schools passed.

New York 2: The chapter’s Nutrition Committee and its Obesity Subcommittee is working on a General Pediatric Obesity Anticipatory Guidance program. This is envisioned to be composed of surveys and screening tools to be handed to patients and their parents in pediatricians' waiting rooms. There will then be another group of anticipatory guidance forms for the pediatrician to use based upon the screening tool information. The subcommittee has met several times and is reviewing these handouts with a group of chapter pediatricians. A chapter member received a CATCH Resident Implementation Grant for her proposal, "Community Approaches to Obesity Prevention Among Inner City Minority Families." The chapter also participated in several School Health Assemblies and was represented at a Nutrition and Fitness Assembly in Queens and Brooklyn.


North Carolina: Chapter members lead the North Carolina Health & Wellness Trust Fund Commission's Child Obesity Task Force in formulating statewide recommendations and policy to promote physical activity, nutrition and obesity/overweight prevention including legislation pending in the current session. Chapter members helped develop a Web site, www.fittogether.org, which was launched in November 2004, to promote community-based resources to help children/families complete a personal health risk assessment and the site provides a BMI calculator online.
North Dakota: A lecture on childhood obesity was given at the chapter’s annual meeting, as well as at grand rounds for UND School of Medicine, Altru Hospital (Grand Forks) and Merit Care (Fargo). A chapter member also participates in a state-wide initiative to improve the health of every North Dakotan. The chapter has been involved in a program called "The Shape Down Program", partnered with the YMCA to comprehensively change patterns for overweight children. This program involves pediatricians, dieticians, exercise trainers, and child psychologists, all working together with families to change patterns and to reform healthy lifestyles. It has been very successful and the data is in to show it is a beneficial process. The chapter is taking that information to Medicaid and the key players at Blue Cross Blue Shield to convince them to start reimbursing/coding for obesity treatment.

Ohio: The chapter established a Committee on Healthy Lifestyles in 2004. The committee has met several times and is establishing goals and objectives to be reviewed at a Board meeting in July 2005. The chapter also offered a CME presentation entitled “Practical Approach to Childhood Obesity” at its annual meeting in 2004.

Oklahoma: In October 2004, the chapter held an Obesity Summit meeting to bring together chapter members who have been active and interested in the problem of childhood obesity and 15 chapter members attended. Chapter members are active in several ongoing projects in the state, including “Schools for Healthy Lifestyles” - a program that was developed in 1997 to promote and maintain healthy lifestyles among children, families and school faculty; Fit Kids Coalition - a coalition of over 40 organizations organized at Integris Hospital in Oklahoma City whose goal is to lead Oklahoma’s fight against the epidemic of obesity, particularly child obesity; Action For Healthy Kids - a national organization established by the Surgeon General with chapters in each state; Lawton Pedometer Program - a project that provided pedometers to every 4th grader. Several bills were passed that included improvements in food choices in school vending machines and increased physical education.

Oregon: The Oregon Chapter advocates with the legislature on measures to address obesity, which include a requirement for physical education in elementary schools and removal of "junk food" in schools. The chapter supported a successful "Safe Routes to School" program to encourage children to walk or ride their bikes to school. In addition, the chapter provided an opportunity for one of its residents, a CATCH recipient, to deliver a CME presentation at the chapter’s annual meeting on his proposal for an obesity treatment program. The chapter will continue to work with other child advocacy groups concerned about the obesity issue.

Pennsylvania: The Pennsylvania Chapter has been an active participant in a Highmark (Blues) obesity education and awareness effort, the statewide PA Advocates for Nutrition and Activity initiative and in an obesity summit convened by the PA Medical Society. The chapter reviewed and commented on growth
screening (including BMI) protocols for universal use in schools beginning Sept 2005. The chapter also actively supported the AAP Resident Section initiative on elimination of soda machines in schools by sending their letter (edited to include Pennsylvania statistics and resources) to the 501 school districts in Pennsylvania. The chapter’s ECELS - Healthy Child Care America program convened a working group of early childhood and medical professionals to brainstorm ways to prevent obesity in pre-school children. The result of this meeting has been resources and education to child care providers via the HealthLink newsletter and workshops for child care personnel.

Rhode Island: The chapter joined a coalition of organizations working on a bill to provide healthy snacks and drinks in school vending machines. They worked in concert with the Dairy Association and the Dental Association.

South Carolina: Members worked with a state task force to develop a plan on obesity (released in June 2005). This was a two-year project supported by a CDC grant. The chapter also advised the State Medical Auxiliary on a state program for obesity to be set up in schools. The chapter helped to develop materials, reviewed the program, and captured resources. Chapter officers met with 5 insurance medical directors to develop obesity initiatives for their health insurance companies and to advocate for increased reimbursement for assessment and treatment of obesity. The chapter presented a proposal to use chapter expertise and relations to offer a program that would allow primary care providers to be trained in obesity assessment/ prevention/ treatment in their offices. This "mini-fellowship program" has received initial support from the medical directors and approval for funding to implement is pending.

Tennessee: A chapter member serves on CityWatch, the Nashville mayor's obesity prevention program, and is also our representative on the TN Healthy Weight Network Coalition. The chapter's foundation, Tennessee Pediatric Society Foundation, received a grant to pilot Health in Progress, a middle school walk/run program to five Nashville area public schools. The schools have been chosen, the program is currently being designed, and it will be implemented over the entire 2005/2006 school year.

Texas: The chapter’s Task Force on Obesity has completed the Obesity Toolkit along with a six-month field testing, and is now collaborating with "Zerobesity" for grants for publication and distribution. The Task Force has been given permanent status as the standing chapter's Committee on Obesity. Obesity will be another of the main CME topics for the 2005 Annual meeting.

Uniformed Services East: The chapter created a link on its website for current obesity programs so that other chapter members can access it for ideas when designing their own programs.

Uniformed Services West: The chapter, in partnership with the San Diego Zoo, held a "Kids-N-Kritters Annual Health Fair" at the San Diego Zoo on May 7, 2005. The fair focused on the health needs of children and their families. Fifteen
exhibitors participated in the fair, which was located in the Children’s Zoo area of zoo. There was an exhibit that included information on the importance of routine health care, height and weight, nutrition and exercise. Approximately 550-600 people attended this community event.

Utah: A state legislative resolution was passed, urging development of school wellness policies to reduce obesity in children and adolescents. A senior member has worked with the Provo City School Board on developing a proposal to limit school vending machines and to improve the nutritional value of items offered in remaining machines.

Vermont: The Vermont Chapter was asked to give guidance to the Vermont Department of Health on how to address BMI with school nurses and parents. A State Plan on Obesity is in the process of being written and the Chapter Board was surveyed for input. An Obesity Conference was held in October 2005. A pilot program housing WIC staff in primary care offices is currently taking place. This successful pilot is convenient for families, increases the accuracy of information for both WIC and the pediatrician, and allows for a consistent message. Chapter members participated in community projects on obesity, exercise and nutrition with schools and community organizations, as well as a Vermont Public Radio information and call-in show on obesity in children.

Virginia: Legislative proposals in the Virginia General Assembly related to school nutrition and physical education programs for children to reduce the incidence of childhood obesity are reviewed and supported as appropriate by the chapter each year. As a rule, these legislative proposals are opposed by school clubs, school athletic organizations, and the Department of Education, and are defeated in committee votes. Chapter members participated in regional meetings of the Commonwealth’s Health Approach and Mobilization Plan for Inactivity, Obesity, and Nutrition (CHAMPION) in May 2005. The purpose of these regional meetings is to develop a practical agenda to address childhood obesity in the Commonwealth. The chapter provided technical assistance for two CATCH implementation proposals for obesity prevention and treatment.

Washington: The chapter supported legislative efforts to curb the epidemic of obesity. They have made sure that not only would caloric density of foods be part of the discussion, but that marketing/availability of high caloric density foods to youth be curtailed. The chapter has also advocated to include increased physical activity as part of the agenda.

West Virginia: The goal of the chapter’s obesity grant project is to increase the number of providers involved in interventions that target children who have a BMI over the 85 percentile in order to delay or prevent the morbidities of obesity. A chapter team has made site visits and presented a video to private and school based practices. Tools and resources were displayed at the chapter’s spring meeting. A group has partnered with the Healthy Lifestyles Coalition and they worked together on the legislative bill on vending machines and physical education in schools.
Wisconsin: The Wisconsin Chapter collaborated with a fourth year medical student at the University of California at San Diego, who was working on an independent study project to develop a brief web-based survey of pediatricians and family physicians containing questions about their dietary approaches to treating obese children. The results of this survey are being analyzed at present. The chapter collaborated with its sister foundation, the Wisconsin Academy of Pediatrics Foundation, Inc., and Blue Cross Blue Shield of Wisconsin on a project with a budget of approximately $17,000 to distribute 75 “Healthy Habits for Healthy Kids” brochures to each of approximately 550 practicing chapter members. Additionally, as part of the mailing, each chapter member received a reference desktop tool titled "Patient Counseling Guidelines for Families with Overweight Children & Adolescents: Prevention, Detection, Assessment and Management".
NATIONAL OBESITY/PHYSICAL FITNESS INITIATIVES

The American Academy of Pediatrics is committed to children’s health and recognizes childhood overweight and obesity as a serious health concern. The Academy continues to work for improvement in obesity prevention, treatment, advocacy and reimbursement. The Academy’s Web site (www.aap.org/obesity) has more information on what the Academy is doing regarding recent policy statements, publications, physician education, family resources and advocacy related to this important children’s health issue. The following are new resources available to AAP members:

The PediaLink Module – “New Spin on Childhood Obesity” focuses on pediatric overweight and obesity, with exploration of factors associated with the full range of excess weight (“at risk” to “super obese”). The course does not include information about underweight. To learn more about this resource, go to www.pedialink.org/cme/_coursefinder. Information about the module is located under Self-paced AAP CME Activities, Internet CME.

Meet the challenges of today’s pediatric obesity epidemic with a new AAP resource: Pediatric Obesity: Prevention, Intervention, and Treatment Strategies for Primary Care by Sandra G. Hassink, MD, FAAP. The new manual brings pediatricians the most recent point-of-care recommendations, plus the ready-to-use tools needed to tackle the issue of childhood obesity. Also available is a new book for parents, A Parent’s Guide to Childhood Obesity, to help them win the battle against childhood obesity. Visit the AAP online Bookstore at www.aap.org/bookstore to order these resources.

The attached Coding Fact Sheet provides pediatricians with a guide to coding for obesity-related health care services. The Academy presents strategies and a template letter for pediatric practices to handle carrier denials and contractual issues in a separate document accessible from the AAP Private Sector Advocacy Web page on the Academy’s Member Center Web site (www.aap.org/moc).

The attached policy statement titled, “Active Healthy Living: Prevention of Childhood Obesity Through Increased Physical Activity”, outlines ways that pediatric health care providers and public health officials can encourage, monitor, and advocate for increased physical activity for children and teenagers.

The attached policy statement titled, “Prevention of Pediatric Overweight and Obesity”, proposes strategies to foster prevention and early identification of overweight and obesity in children.
The New 2006 ICD-9-CM Codes effective October 1, 2005 are highlighted.

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

Obesity and Related Co-Morbidities
Coding Fact Sheet for Primary Care Pediatricians

While coding for the care of children with obesity and related co-morbidities is relatively straightforward, ensuring that appropriate reimbursement is received for such services is a more complicated matter. Many insurance carriers will deny claims submitted with “obesity” codes (eg, 278.00), essentially carving out obesity-related care from the scope of benefits. Therefore, coding for obesity services is fundamentally a two-tiered system, where the first tier requires that the provider submit claims using appropriate codes and the second tier involves the practice-level issues of denial management and contract negotiation.

This Coding Fact Sheet will provide you with a guide to coding for obesity-related health care services. The Academy presents strategies and a template letter for pediatric practices to handle carrier denials and contractual issues in a separate document accessible from the AAP Private Sector Advocacy web page on the Academy’s Member Center web site (www.aap.org/moc).

Procedure Codes


Body Fat Composition Testing
There is no separate CPT code for body fat composition testing. This service would be included in the examination component of the evaluation and management (E/M) code reported.

Calorimetry
94690 Oxygen uptake, expired gas analysis; rest, indirect (separate procedure)
or
94799 Unlisted pulmonary service or procedure {Note: Special report required}

Glucose Monitoring
95250 Glucose monitoring for up to 72 hours by continuous recording and storage of glucose values from interstitial tissue fluid via a subcutaneous sensor (includes hook-up, calibration, patient initiation and training, recording, disconnection, downloading with printout of data)

Routine Venipuncture
36415 Collection of venous blood by venipuncture
36416 Collection of capillary blood specimen (eg, finger, heel, ear stick)
Venipuncture Necessitating Physician’s Skill
36406 Venipuncture, under age 3 years, necessitating physician’s skill, not to be used for routine venipuncture; other vein
36410 Venipuncture, age 3 years or older, necessitating physician’s skill (separate procedure), for diagnostic or therapeutic purposes (not to be used for routine venipuncture)

Digestive System Surgery Codes
43644 Laparoscopy, surgical, gastric restrictive procedure; with gastric bypass and Roux-en-Y gastroenterostomy (roux limb 150 cm or less)
43645 Laparoscopy, surgical, gastric restrictive procedure; with gastric bypass and small intestine reconstruction to limit absorption
43842 Gastric restrictive procedure, without gastric bypass, for morbid obesity; vertical-banded gastroplasty
43843 Gastric restrictive procedure, without gastric bypass, for morbid obesity; other than vertical-banded gastroplasty
43845 Gastric restrictive procedure with partial gastrectomy, pylorus-preserving duodenoileostomy and ileoileostomy (50 to 100 cm common channel) to limit absorption (biliopancreatic diversion with duodenal switch)
43846 Gastric restrictive procedure, with gastric bypass for morbid obesity; with short limb (150 cm or less) Roux-en-Y gastroenterostomy
43847 Gastric restrictive procedure, with gastric bypass for morbid obesity; with small intestine reconstruction to limit absorption
43848 Revision of gastric restrictive procedure for morbid obesity (separate procedure)

Health and Behavior Assessment/Intervention Codes
These codes cannot be reported by a physician nor can they be reported on the same day as Preventive Medicine Counseling codes (99401-99412).

96150 Health and behavior assessment (eg, health-focused clinical interview, behavioral observations, psychophysiological monitoring, health-oriented questionnaires), each 15 minutes face-to-face with the patient; initial assessment
96151 Health and behavior assessment (eg, health-focused clinical interview, behavioral observations, psychophysiological monitoring, health-oriented questionnaires), each 15 minutes face-to-face with the patient; re-assessment

The focus of the assessment is not on mental health but on the biopsychosocial factors important to physical health problems and treatments.

96152 Health and behavior intervention, each 15 minutes, face-to-face; individual
96153 Health and behavior intervention, each 15 minutes, face-to-face; group (2 or more patients)
96154 Health and behavior intervention, each 15 minutes, face-to-face; family (with patient present)
The New 2006 ICD-9-CM Codes effective October 1, 2005 are highlighted.

96155   Health and behavior intervention, each 15 minutes, face-to-face; family (without patient present)

The focus of the intervention is to improve the patient’s health and well-being utilizing cognitive, behavioral, social, and/or psychophysiological procedures designed to ameliorate the specific obesity-related problems.

Medical Nutrition Therapy Codes
These codes cannot be reported by a physician.

97802   Medical nutrition therapy; initial assessment and intervention, individual, face-to-face with patient, each 15 minutes
97803   Medical nutrition therapy; re-assessment and intervention, individual, face-to-face with the patient, each 15 minutes
97804   Medical nutrition therapy; group (2 or more individuals), each 30 minutes

Healthcare Common Procedural Coding System (HCPCS) Level II Procedure and Supply Codes

CPT codes are also known as Healthcare Common Procedure Coding System (HCPCS) Level I codes. The Healthcare Common Procedure Coding System also contains Level II codes. These Level II codes (commonly referred to as HCPCS (“hick-picks”) codes) are national codes that are included as part of the Health Insurance Portability and Accountability Act of 1996 (HIPAA) standard procedural transaction coding set along with CPT codes.

HCPCS Level II codes were developed to fill in the gaps in the CPT nomenclature. While they are reported in the same way as a CPT code, they consist of one alphabetic character (A-V) followed by four digits. In the past, insurance carriers did not uniformly recognize HCPCS Level II codes. However, with the advent of HIPAA, carrier software systems must now be able to recognize all HCPCS Level I (CPT) and Level II codes.

HCPCS Education and Counseling Codes
S9445 Patient education, not otherwise classified, non-physician provider, individual, per session
S9446 Patient education, not otherwise classified, non-physician provider, group, per session
S9449 Weight management classes, non-physician provider, per session
S9451 Exercise class, non-physician provider, per session
S9452 Nutrition class, non-physician provider, per session
S9454 Stress management class, non-physician provider, per session
S9455 Diabetic management program, group session
S9460 Diabetic management program, nurse visit
S9465 Diabetic management program, dietician visit
S9470 Nutritional counseling, dietician visit
### Diagnosis Codes

**International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Codes**

#### Circulatory System

- **401.9** Essential hypertension; unspecified
- **429.3** Cardiomegaly

#### Congenital Anomalies

<table>
<thead>
<tr>
<th>Code</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>758.0</td>
<td>Down syndrome</td>
</tr>
<tr>
<td>759.81</td>
<td>Prader-Willi syndrome</td>
</tr>
<tr>
<td>759.83</td>
<td>Fragile X syndrome</td>
</tr>
<tr>
<td>759.89</td>
<td>Other specified anomalies {Laurence-Moon-Biedl syndrome}</td>
</tr>
</tbody>
</table>

#### Digestive System

<table>
<thead>
<tr>
<th>Code</th>
<th>Condition</th>
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<tbody>
<tr>
<td>530.81</td>
<td>Esophageal reflux</td>
</tr>
<tr>
<td>564.00</td>
<td>Constipation, unspecified</td>
</tr>
<tr>
<td>571.8</td>
<td>Other chronic nonalcoholic liver disease</td>
</tr>
</tbody>
</table>

#### Endocrine, Nutritional, Metabolic

<table>
<thead>
<tr>
<th>Code</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>244.8</td>
<td>Other specified acquired hypothyroidism</td>
</tr>
<tr>
<td>244.9</td>
<td>Unspecified hypothyroidism</td>
</tr>
<tr>
<td>250.00</td>
<td>Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled</td>
</tr>
<tr>
<td>250.02</td>
<td>Diabetes mellitus without mention of complication, type II or unspecified type, uncontrolled</td>
</tr>
<tr>
<td>253.8</td>
<td>Other disorders of the pituitary and other syndromes of diencephalohypophyseal origin</td>
</tr>
<tr>
<td>255.8</td>
<td>Other specified disorders of adrenal glands</td>
</tr>
<tr>
<td>256.4</td>
<td>Polycystic ovaries</td>
</tr>
<tr>
<td>259.1</td>
<td>Precocious sexual development and puberty, not elsewhere specified</td>
</tr>
<tr>
<td>259.9</td>
<td>Unspecified endocrine disorder</td>
</tr>
<tr>
<td>272.0</td>
<td>Pure hypercholesterolemia</td>
</tr>
<tr>
<td>272.1</td>
<td>Pure hyperglyceridemia</td>
</tr>
<tr>
<td>272.2</td>
<td>Mixed hyperlipidemia</td>
</tr>
<tr>
<td>272.4</td>
<td>Other and unspecified hyperlipidemia</td>
</tr>
<tr>
<td>272.9</td>
<td>Unspecified disorder of lipoid metabolism</td>
</tr>
<tr>
<td>277.7</td>
<td>Dysmetabolic syndrome X/metabolic syndrome</td>
</tr>
<tr>
<td>278.00</td>
<td>Obesity, unspecified</td>
</tr>
<tr>
<td>278.01</td>
<td>Morbid obesity</td>
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<tr>
<td><strong>278.02</strong></td>
<td><strong>Overweight</strong></td>
</tr>
<tr>
<td>278.1</td>
<td>Localized adiposity</td>
</tr>
<tr>
<td>278.8</td>
<td>Other hyperalimentation</td>
</tr>
</tbody>
</table>

#### Genitourinary System

<table>
<thead>
<tr>
<th>Code</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>611.1</td>
<td>Hypertrophy of the breast</td>
</tr>
</tbody>
</table>
Mental Disorders
300.00 Anxiety state, unspecified
300.02 Generalized anxiety disorder
300.4 Dysthymic disorder
313.81 Oppositional defiant disorder
307.50 Eating disorder, unspecified
307.51 Bulimia nervosa
307.59 Other and unspecified disorders of eating
308.3 Other acute reactions to stress
308.9 Unspecified acute reaction to stress
311 Depressive disorder, not elsewhere classified
313.1 Misery and unhappiness disorder

Musculoskeletal System and Connective Tissue
732.4 Juvenile osteochondrosis of lower extremity, excluding foot

Nervous System and Sense Organs
327.23 Obstructive sleep apnea (adult) (pediatric)
348.2 Benign intracranial hypertension

Skin and Subcutaneous Tissue
701.2 Acquired acanthosis nigricans

Symptoms, Signs, and Ill-Defined Conditions
780.50 Sleep disturbance, unspecified
780.51 Insomnia with sleep apnea, unspecified
780.53 Hypersomnia with sleep apnea, unspecified
780.54 Other hypersomnia, unspecified
780.57 Other and unspecified sleep apnea
780.71 Chronic fatigue syndrome
780.79 Other malaise and fatigue
783.1 Abnormal weight gain
783.3 Feeding difficulties and mismanagement
783.40 Lack of normal physiological development, unspecified
783.43 Short stature
783.5 Polydipsia
783.6 Polyphagia
783.9 Other symptoms concerning nutrition, metabolism, and development
786.05 Shortness of breath
789.1 Hepatomegaly
790.22 Impaired glucose tolerance test (oral)
790.29 Other abnormal glucose: pre-diabetes not otherwise specified
790.4 Nonspecific elevation of levels of transaminase or lactic acid dehydrogenase [LDH]
790.6 Other abnormal blood chemistry (hyperglycemia)
Other

NOTE: The ICD-9-CM codes below are used to deal with occasions when circumstances other than a disease or injury are recorded as “diagnoses” or “problems.” Some carriers may request supporting documentation for the reporting of V codes.

V18.0 Family history of diabetes mellitus
V18.1 Family history of endocrine and metabolic diseases
V49.89 Other specified conditions influencing health status
V58.67 Long-term (current) use of insulin
V58.69 Long-term (current) use of other medications
V61.0 Family disruption
V61.20 Counseling for parent-child problem, unspecified
V61.29 Parent-child problems; other
V61.49 Health problems with family; other
V61.8 Health problems within family; other specified family circumstances
V61.9 Health problems within family; unspecified family circumstances
V62.81 Interpersonal problems, not elsewhere classified
V62.89 Other psychological or physical stress not elsewhere classified; other
V62.9 Unspecified psychosocial circumstance
V65.19 Other person consulting on behalf of another person
V65.3 Dietary surveillance and counseling
V65.41 Exercise counseling
V65.49 Other specified counseling
V69.0 Lack of physical exercise
V69.1 Inappropriate diet and eating habits
V69.8 Other problems relating to lifestyle; self-damaging behavior
V69.9 Problem related to lifestyle, unspecified

AAP Activities

Some chapters have created pediatric councils that meet with carrier medical directors to discuss pediatric issues. AAP members may contact their chapter to report issues related to coverage for obesity with carriers. Members may also report carrier issues using the AAP Hassle Factor Form, available on the Member Center (www.aap.org/moc) under the "More Resources" link.

The AAP Private Sector Advocacy Advisory Committee and Task Force on Obesity are addressing coverage and reimbursement issues for primary care and developmental and behavioral pediatricians including carve outs, health plan provider networks, coverage and compensation for evaluation and treatment and will be developing strategies and resources to help pediatric practices advocate for enhanced coverage and compensation for obesity. Refer to the AAP "Pediatric Overweight and Obesity" policy statement (http://aappolicy.aappublications.org/cgi/content/full/pediatrics;112/2/424) for recommendations for health care providers on the clinical assessment, prevention, and treatment of obesity. For more information on coding, contact the AAP Division of Health Care Finance and Quality Improvement at dhcfqi@aap.org.
Active Healthy Living: Prevention of Childhood Obesity Through Increased Physical Activity

Council on Sports Medicine and Fitness and Council on School Health

ABSTRACT

The current epidemic of inactivity and the associated epidemic of obesity are being driven by multiple factors (societal, technologic, industrial, commercial, financial) and must be addressed likewise on several fronts. Foremost among these are the expansion of school physical education, dissuading children from pursuing sedentary activities, providing suitable role models for physical activity, and making activity-promoting changes in the environment. This statement outlines ways that pediatric health care providers and public health officials can encourage, monitor, and advocate for increased physical activity for children and teenagers.

INTRODUCTION

In 1997, the World Health Organization declared obesity a global epidemic with major health implications. According to the 1999-2000 National Health and Nutrition Examination Survey (www.cdc.gov/nchs/nhanes.htm), the prevalence of overweight or obesity in children and youth in the United States is over 15%, a value that has tripled since the 1960s. The health implications of this epidemic are profound. Insulin resistance, type 2 diabetes mellitus, hypertension, obstructive sleep apnea, nonalcoholic steatohepatitis, poor self-esteem, and a lower health-related quality of life are among the comorbidities seen more commonly in affected children and youth than in their unaffected counterparts. In addition, up to 80% of obese youth continue this trend into adulthood. Adult obesity is associated with higher rates of hypertension, dyslipidemia, and insulin resistance, which are risk factors for coronary artery disease, the leading cause of death in North America.

Assessment of Overweight

Ideally, methods of measuring body fat should be accurate, inexpensive, and easy to use; have small measurement error; and be well documented with published reference values. Direct measures of body composition, such as underwater weighing, magnetic resonance imaging, computed axial tomography, and dual-energy radiograph absorptiometry, provide an estimate of total body fat mass. These techniques, however, are used mainly in tertiary care centers for research purposes. Anthropometric measures of relative fatness may be inexpensive and easy to use but rely on the skill of the measurer, and their relative accuracy must be validated against a "gold-standard" measure of adiposity. Such indirect methods of...
estimating body composition include measuring weight and weight for height, body mass index (BMI), waist circumference, skinfold thickness, and ponderal index.11 Of these, perhaps the most convenient is BMI, which can be calculated according to the following formulas (www.cdc.gov/growthcharts):

\[
\text{BMI} = \frac{\text{weight (kg)}}{\text{height (m)}^2}
\]

\[
\text{BMI} = \frac{\text{weight (kg)}}{\text{height (cm)/height (cm) x 10 000}}
\]

\[
\text{BMI} = \frac{\text{weight (lb)}}{\text{height (in)/height (in) x 703}}
\]

BMI varies with age and gender. It typically increases during the first months of life, decreases after the first year, and increases again around 6 years of age.11 A specific BMI value, therefore, should be evaluated against age- and gender-specific reference values. In the United States, such reference charts based on early 1970s survey data of children 2 to 20 years of age are readily available for clinical use.13 Children and youth with a BMI greater than the 95th percentile are classified as overweight or obese, and those between the 85th and 95th percentiles are designated at risk of overweight.13 Although BMI tends to underestimate overweight in tall individuals and overestimate overweight in short individuals and those with high lean body mass (ie, athletes), it generally correlates well with more precise measures of adiposity in individuals with BMI in the 95th percentile or greater.14

Factors Contributing to Obesity
Some children have medical conditions associated with obesity and/or require pharmacologic treatments resulting in significant weight gain. Others (1%-2% of obese children) have underlying genetic conditions such as Down, Prader-Willi, or Bardet-Biedle syndrome, which can be associated with obesity. Rarely, single-gene disorders, including congenital leptin deficiency and defects in the melanocortin 4 receptor, cause morbid childhood obesity.

Observations in twin, sibling, and family studies suggest that children are more likely to be overweight if relatives are similarly affected and that heritability may play a role in as many as 25% to 85% of cases. However, to suggest that only genetic factors have caused the recent global epidemic of childhood obesity would not be realistic. It is more likely that most of the world's population carries a combination of genes that may have evolved to cope with food scarcity. In obesogenic environments in which calorie-dense foods are readily available and low-energy expenditure is commonplace, this genetic predisposition would be maladaptive and could lead to an obese population.13

Nutritional factors contributing to the increase in obesity rates include, in no particular order, (1) insufficient infant breastfeeding, (2) a reduction in cereal fiber, fruit, and vegetable intake by children and youth, and (3) the excessive consumption of oversized fast foods and soda, which are encouraged by fast-food advertising during children's television programming and a greater availability of fast foods and sugar-containing beverages in school vending machines.15,16 Although nutritional issues have a significant role to play, this statement focuses on factors associated with decreased energy expenditure, namely excessive sedentary behaviors and lack of adequate physical activity.

Children and youth are more sedentary than ever with the widespread availability of television, videos, computers, and video games. Data from the 1988-1994 National Health and Nutrition Examination Survey indicated that 26% of American children (up to 33% of Mexican American and 43% of non-Hispanic black children) watched at least 4 hours of television per day, and these children were less likely to participate in vigorous physical activity. They also had greater BMIs and skinfold measurements than those who watched <2 hours of television per day.n

Not only are the rates of sedentary activities rising, but participation in physical activity is not optimal. In a 2002 Youth Media Campaign Longitudinal Survey, 4500 children 9 to 13 years of age and their parents were polled about physical activity levels outside of school hours. The report indicated that 61.5% of 9- to 13-year-olds did not participate in any organized physical activities and 22.6% did not partake in nonorganized physical activity during nonschool hours.17

Youth at Risk of Decreased Physical Activity
Particular individuals at increased risk of having low levels of physical activity have been identified and include children who are from ethnic minorities (especially girls) in the preadolescent/adolescent age groups, children living in poverty, children with disabilities, children residing in apartments or public housing, and children living in neighborhoods where outdoor physical activity is restricted by climate, safety concerns, or lack of facilities.18,20 According to the Centers for Disease Control and Prevention (www.cdc.gov/nceddphp/sgr/adoles.htm), inactivity is twice as common among females (14%) as males (7%) and among black females (21%) as white females (12%). In a meta-analysis that evaluated physical activity and cardiorespiratory fitness, 6- to 7-year-olds were more active in moderate to vigorous physical activity (46 minutes/day) compared with 10- to 16-year-olds (16-45 minutes/day). Boys were approximately 20% more active than girls, and mean activity levels decreased with age by 2.7% per year in boys compared with 7.4% per year in girls.21 Many reasons are stated for the general lack of physical activity among children and youth. These reasons include inactive role models (eg, parents and other caregivers), competing demands/time pressures, unsafe environments, lack of
recreation facilities or insufficient funds to begin recreation programs, and inadequate access to quality daily physical education.

Physical Activity in Schools
Children and youth spend most of their waking hours at school, so the availability of regular physical activity in that setting is critical. Although the Healthy People 2010 report recommends increasing the amount of daily PE for all students in a larger proportion of US schools, such changes do not seem to be forthcoming. In 2000, a school health policies and program study looked at a nationally representative sample of private and public schools and found that only 8% of American elementary schools, 6.4% of middle schools, and 5.8% of high schools with existing PE requirements provided daily PE classes for all grades for the entire year. In addition, although approximately 80% of states have policies calling for students to participate in PE in all schools, 40% of elementary schools, 52% of middle schools, and 60% of high schools allow exemption from PE classes, particularly for students with permanent physical disabilities and those having religious reasons. The National Association of State Boards of Education recommends 150 minutes per week of PE for elementary students and 225 minutes per week for middle and high school students. Unfortunately, these requirements are not being implemented. In a study of 814 third-grade students from 10 different US data-collection sites, the mean duration of PE was 33 minutes twice a week, with only 25 minutes per week at a moderate to vigorous intensity level. In addition, 1991-2003 Youth Risk Behavior Surveillance data showed that although the percentage of high school students enrolled in PE class remained constant (48.9%-55.7%), the percentage of students with daily PE attendance decreased from 41.6% in 1991 to 25.4% in 1995 and remained stable thereafter (25.4%-28.4%).

Management of the Obese Child
The successful treatment of obesity in the pediatric age group has been somewhat obscure to date. Studies have shown that younger children seem to respond better to treatment than adolescents and adults. Reasons given for this include greater motivation, more influence of the family on behavioral change, and the ability to take advantage of longitudinal growth, which allows children to "grow into their weight." Treatment programs that include nutritional intervention in combination with exercise have higher success rates than diet modification alone. Indeed, a research program that included dietary modification, exercise, and family-based behavioral modification demonstrated enhanced weight loss and better maintenance of lost weight over 5 years. Successful activity-related interventions include a reduction in sedentary behavior and an increase in energy expenditure. Improvements in BMI have been shown to occur when television viewing is restricted. In this regard, the American Academy of Pediatrics (AAP) recommends no more than 2 hours of quality television programming per day for children older than 2 years. Lifestyle-related physical activity, as opposed to calisthenics or programmed aerobic exercise, seems to be more important for sustained weight loss. Such treatment programs should be individually tailored to each child, and their success should be measured not just in terms of weight loss but also in terms of the effects of the programs on associated morbidities.

Health Benefits of 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 (9-11 years old) with hypertension to reduce systolic and diastolic blood pressure over 8 months. Resistance training (eg, 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.

Prevention of Overweight in Children and Youth
Given the challenges of reversing existing obesity in the pediatric population, preventive tactics are likely to be the key to success. Unfortunately, controlled prevention trials have been somewhat disappointing to date. In a systematic Cochrane Database review, 3 of 4 long-term studies combining dietary education with physical activity showed no difference in overweight, and 1 long-term physical activity intervention study showed a slight reduction in overweight. However, the randomized control design may not be ideal for the study of most health-promotion interventions. This is because these are typically population-based programs, which tend to be complex, are delivered over long periods of time, and present some difficulties in controlling all variables. Solution-oriented research, which evaluates promising interventions, often in a quasi-experimental manner, may be more appropriate in the long run. It is unlikely, however, that any single strategy will be sufficient to reverse current trends in pediatric obesity. Success is more likely to be achieved by the implementation of sustainable, economically viable, culturally acceptable active-living policies that can be integrated into multiple sectors of society.
Increasing Physical Activity Levels in Children and Youth

Physical activity needs to be promoted at home, in the community, and at school, but school is perhaps the most encompassing way for all children to benefit. As of June 2005, there is a new opportunity for pediatricians to get involved with school districts. Section 204 of the Child Nutrition and WIC [Supplemental Nutrition Program for Women, Infants, and Children] Reauthorization Act of 2004 (Public Law 108-265) requires that every school receiving funding through the National School Lunch and/or Breakfast Program develop a local wellness policy that promotes the health of students, with a particular emphasis on addressing the problem of childhood obesity. By the 2006-2007 school year, each school or school district is required to set goals for healthy nutrition, physical activity, and other strategies to promote student wellness. Parents, students, school personnel, and members of the community are required to be involved in the policy development. Pediatricians can take advantage of this requirement to get involved. In light of the school wellness policy, many schools are looking to modify their present PE programs to improve their physical activity standards.

In past years, PE classes used calisthenics and sport-specific skill acquisition to promote fitness. This approach did not meet the needs of all students, such as those with obesity or physical disabilities. PE curricula and instruction should emphasize the knowledge, attitudes, and motor and behavioral skills required to adopt and maintain lifelong habits of physical activity. Cross-sectional school-based studies have shown modest correlation between physical activity and lower BMI, although long-term follow-up data are lacking. In an observational study of 9751 kindergarten students, an increase in PE instruction time was associated with a significant reduction in BMI among overweight girls. Project SPARK (Sports, Play, and Active Recreation for Kids Curriculum) looked at increasing physical activity through modified PE and classroom-based teaching on health and skill fitness. Physical activity levels increased during PE classes, and fitness levels in girls improved as a result. It is interesting to note that, despite a significant increase in PE class time, there was no interference with academic attainment, and some achievement test results improved. A recent review of the literature suggests that school-based physical activity programs may modestly enhance academic performance in the short-term, but additional research is required to establish any long-term improvements. There does not seem to be sufficient evidence to suggest that daily physical activity detracts from academic success.

An increase in school PE participation alone is not likely to be sufficient to reverse the childhood obesity epidemic. A 2-year study of elementary students showed that those who had enhanced physical activity education as well as modified PE classes to increase lifestyle aerobic activity increased their physical activity inside the classroom, but lower levels were noted outside the classroom in their leisure time, and no improvements on fitness testing or body fat percentage were seen. The PLAY (Promoting Lifestyle Activity for Youth) program, which encourages the accumulation of 30 to 60 minutes of moderate to vigorous physical activity daily beyond school time and during regular school hours outside of PE classes, has been shown to increase the physical activity levels of children, especially girls. Children can increase their physical activity levels in many other ways during school and nonschool hours, including active transportation, unorganized outdoor free play, personal fitness and recreational activities, and organized sports. Parents of children in organized sports should be encouraged to stimulate their children to be physically active on days when they are not participating in these sports and not rely solely on the sports to provide all their away-from-school physical activity. This should include participation in physical activities with the entire family. Communities designed with green spaces and biking trails help provide families the means to enjoy such active lifestyles.

During late childhood and adolescence, strength training may be additionally beneficial. Youth taking part in this type of exercise may gain strength, improve sport performance, and derive long-term health benefits. Obese children often prefer strength training because it does not require agility or aerobic ability, and the benefits become apparent within as little as 2 to 3 weeks. Because of their added body mass, overweight participants also tend to be stronger than their peers, giving them a relative psychological advantage. Recent studies have shown that obese students are more compliant and increase their free fat mass when weight training is added to aerobic exercise or a standardized energy-reduction diet.

Recommended physical activity levels for children and youth vary somewhat in different countries. The Centers for Disease Control and Prevention and the United Kingdom Health Education Authority recommend that children and youth accumulate at least 60 minutes daily of moderate to vigorous physical activity in a variety of enjoyable individual and group activities. Health Canada guidelines recommend increasing physical activity above the current level by at least 30 minutes (10 minutes vigorous) and reducing sedentary activity by the same amount per day. Each month, physical activity should be increased and sedentary behavior should be decreased by 15 minutes until at least 90 minutes more active time and 90 minutes less inactive time are accumulated (www.paguide.com). The Canadian Paediatric Society has endorsed these recommendations and emphasizes a wide variety of activities as part of recreation, transportation, chores, work, and
planned exercise to encourage lifestyle changes that may last a lifetime.49

**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.49 The following are guidelines from the 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.50 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.44

**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 non-competitive 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 recommend that adults accumulate 10 000 steps per day to follow a healthy lifestyle.52 Require-
CONCLUSIONS
The prevalence of pediatric obesity has reached epidemic proportions. It is unlikely that the medical profession alone will be able to solve this serious health problem. The promotion of decreased caloric intake and increased energy expenditure will need to take place within all aspects of society. Among the most difficult but most important challenges for society are making exercise alternatives as attractive, exciting, and enjoyable as video games for children, convincing school boards that alternatives as attractive, exciting, and enjoyable as video games for children, convincing school boards that PE and other school-based physical activity opportunities are as important to long-term productivity as are academics, changing both supplier and consumer attitudes about food selection and portion sizes, and reengineering living environments to promote physical activity.

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. 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 national and state 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 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 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.

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Su Li, MPA

*Lead authors

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Prevention of Pediatric Overweight and Obesity

ABSTRACT. The dramatic increase in the prevalence of childhood overweight and its resultant comorbidities are associated with significant health and financial burdens, warranting strong and comprehensive prevention efforts. This statement proposes strategies for early identification of excessive weight gain by using body mass index, for dietary and physical activity interventions during health supervision encounters, and for advocacy and research.

ABBREVIATION. BMI, mass index.

INTRODUCTION
Prevention is one of the hallmarks of pediatric practice and includes such diverse activities as newborn screenings, immunizations, and promotion of car safety seats and bicycle helmets. Documented trends in increasing prevalence of overweight and inactivity mean that pediatricians must focus preventive efforts on childhood obesity, with its associated comorbid conditions in childhood and likelihood of persistence into adulthood. These trends pose an unprecedented burden in terms of children's health as well as present and future health care costs. A number of statements have been published that address the scope of the problem and treatment strategies.1-6

The intent of this statement is to propose strategies to foster prevention and early identification of overweight and obesity in children. Evidence to support the recommendations for prevention is presented when available, but unfortunately, too few studies on prevention have been performed. The enormity of the epidemic, however, necessitates this call to action for pediatricians using the best information available.

DEFINITIONS AND DESCRIPTION OF THE PROBLEM

Body mass index (BMI) is the ratio of weight in kilograms to the square of height in meters. BMI is widely used to define overweight and obesity, because it correlates well with more accurate measures of body fatness and is derived from commonly available data-weight and height.7 It has also been correlated with obesity-related comorbid conditions in adults and children. Clinical judgment must be used in applying these criteria to a patient, because obesity refers to excess adiposity rather than excess weight, and BMI is a surrogate for adiposity. The pediatric growth charts for the US population now include BMI for age and gender, are readily available online (http://www.cdc.gov/growthcharts), and allow longitudinal tracking of BMI.8

BMI between 85th and 95th percentile for age and sex is considered at risk of overweight, and BMI at or above the 95th percentile is considered overweight or obese.9,10 The prevalence of childhood overweight and obesity is increasing at an alarming rate in the United States as well as in other developed and developing countries. Prevalence among children and adolescents has doubled in the past 2 decades in the United States. Currently, 15.3% of 6- to 11-year-olds and 15.5% of 12- to 19-year-olds are at or above the 95th percentile for BMI on standard growth charts based on reference data from the 1970s, with even higher rates among subpopulations of minority and economically disadvantaged children.10,11 Recent data from the Centers for Disease Control and Prevention also indicate that children younger than 5 years across all ethnic groups have had significant increases in the prevalence of overweight and obesity.12,13 American children and adolescents today are less physically active as a group than were previous generations, and less active children are more likely to be overweight and to have higher blood pressure, insulin and cholesterol concentrations and more abnormal lipid profiles.14,15

Obesity is associated with significant health problems in the pediatric age group and is an important early risk factor for much of adult morbidity and mortality.15,16 Medical problems are common in obese children and adolescents and can affect cardiovascular health (hypercholesterolemia and dyslipidemia, hypertension),14,17,18 the endocrine system (hyperinsulinism, insulin resistance, impaired glucose tolerance, type 2 diabetes mellitus, menstrual irregularity),20,22 and mental health (depression, low self-esteem).23,24 Because of the increasing incidence of type 2 diabetes mellitus among obese adolescents and because diabetes-related morbidities may worsen if diagnosis is delayed, the clinician should be alert to the possibility of type 2 diabetes mellitus in all obese adolescents, especially those with a fami-
ily history of early-onset (younger than 40 years) type 2 diabetes mellitus.25 The psychologic stress of social stigmatization imposed on obese children may be just as damaging as the medical morbidities. The negative images of obesity are so strong that growth failure and pubertal delay have been reported in children practicing self-imposed caloric restriction because of fears of becoming obese.26 Other important complications and associations include pulmonary (asthma, obstructive sleep apnea syndrome, pickwickian syndrome),27,32 orthopedic (genu varum, slipped capital femoral epiphysis),33,34 and gastrointestinal/hepatic (nonalcoholic steatohepatitis)35 complications. All these disturbances are seen at an increased rate in obese individuals and have become more common in the pediatric population. The probability of childhood obesity persisting into adulthood is estimated to increase from approximately 20% at 4 years of age to approximately 80% by adolescence.36 In addition, it is probable that comorbidities will persist into adulthood.16,37 Thus, the potential future health care costs associated with pediatric obesity and its comorbidities are staggering, prompting the surgeon general to predict that preventable complications and mortality associated with obesity may exceed those associated with cigarette smoking.10,38

Although treatment approaches for pediatric obesity may be effective in the short term,39,44 long-term outcome data for successful treatment approaches are limited.45,46 The intractable nature of adult obesity is well known. Therefore, it is incumbent on the pediatric community to take a leadership role in prevention and early recognition of pediatric obesity.

RISK FACTORS

Development of effective prevention strategies mandates that physicians recognize populations and individuals at risk. Interactions between genetic, biological, psychologic, sociocultural, and environmental factors clearly are evident in childhood obesity. Elucidation of hormonal and neurochemical mechanisms that promote the energy imbalance that generates obesity has come from molecular genetics and neurochemistry. Knowledge of the genetic basis of differences in the complex of hormones and neurotransmitters (including growth hormone, leptin, ghrelin, neuropeptide Y, melanocortin, and others) that are responsible for regulating satiety, hunger, lipogenesis, and lipolysis as well as growth and reproductive development will eventually refine our understanding of risk of childhood overweight and obesity and may lead to more effective therapies.47,48

Genetic conditions known to be associated with propensity for obesity include Prader-Willi syndrome, Bardet-Biedl syndrome, and Cohen syndrome. In these conditions, early diagnosis allows collaboration with subspecialists, such as geneticists, endocrinologists, behavioralists, and nutritionists, to optimize growth and development while promoting healthy eating and activity patterns from a young age. For example, data suggest that growth hormone may improve some of the signs of Prader-Willi syndrome.49,51

It has long been recognized that obesity "runs in families"—high birth weight, maternal diabetes, and obesity in family members all are factors—but there are likely to be multiple genes and a strong interaction between genetics and environment that influence the degree of adiposity.49,52,53 For young children, if 1 parent is obese, the odds ratio is approximately 3 for obesity in adulthood, but if both parents are obese, the odds ratio increases to more than 10. Before 3 years of age, parental obesity is a stronger predictor of obesity in adulthood than the child's weight status.54 Such observations have important implications for recognition of risk and routine anticipatory guidance that is directed toward healthy eating and activity patterns in families.

There are critical periods of development for excessive weight gain. Extent and duration of breastfeeding have been found to be inversely associated with risk of obesity in later childhood, possibly mediated by physiologic factors in human milk as well as by the feeding and parenting patterns associated with nursing.55,58 Investigations of dietary factors in infancy, such as high protein intake or the timing of introduction of complementary foods, have not consistently revealed effects on childhood obesity. It has been known for decades that adolescence is another critical period for development of obesity.59 The normal tendency during early puberty for insulin resistance may be a natural cofactor for excessive weight gain as well as various comorbidities of obesity.60 Early menarche is clearly associated with degree of overweight, with a twofold increase in rate of early menarche associated with BMI greater than the 85th percentile.61 The risk of obesity persisting into adulthood is higher among obese adolescents than among younger children.54 The roles of leptin, adiponectin, ghrelin, fat mass, and puberty on development of adolescent obesity are being actively investigated. Data suggest that adolescents who engage in high-risk behaviors, such as smoking, ethanol use, and early sexual experimentation also may be at greater risk of poor dietary and exercise habits.62

Environmental risk factors for overweight and obesity, including family and parental dynamics, are numerous and complicated. Although clinical interventions cannot change these factors directly, they can influence patients' adaptations to them, and the physician can advocate for change at the community level. Food insecurity may contribute to the inverse relation of obesity prevalence with socioeconomic status, but the relationship is a complex one.63 Other barriers low-income families may face are lack of safe places for physical activity and lack of consistent access to healthful food choices, particularly fruits and vegetables. Low cognitive stimulation in the home, low socioeconomic status, and maternal obesity all predict development of obesity.64 In research settings, there is accumulating evidence for the detrimental effects of overcontrolling parental behavior on children's ability to self-regulate energy intake. For example, maternal-child feeding practices, maternal perception of daughter's risk of overweight,65 maternal restraint, verbal prompting to eat at mealtime, attentiveness to noneating behavior, and close parental monitoring66 all may promote undesired
consequences for children's eating behaviors. Parental food choices influence child food preferences, and degree of parental adiposity is a marker for children's fat preferences. Children and adolescents of lower socioeconomic status have been reported to be less likely to eat fruits and vegetables and to have a higher intake of total and saturated fat. Absence of family meals is associated with lower fruit and vegetable consumption as well as consumption of more fried food and carbonated beverages. Although our understanding of the development of eating behaviors is improving, there are not yet good trials to demonstrate effective translation of this knowledge base into clinical practices to prevent obesity. At a minimum, however, pediatricians need to proactively discuss and promote healthy eating behaviors for children at an early age and empower parents to promote children's ability to self-regulate energy intake while providing appropriate structure and boundaries around eating.

Widespread and profound societal changes during the last several decades have affected child rearing, which in turn has affected childhood patterns of physical activity as well as diet. National survey data indicate that children are currently less active than they have been in previous surveys. Leisure activity is increasingly sedentary, with wide availability of entertainment such as television, videos, and computer games. In addition, with increasing urbanization, there has been a decrease in frequency and duration of physical activities of daily living for children, such as walking to school and doing household chores. Changes in availability and requirements of school physical education programs have also generally decreased children's routine physical activity, with the possible exception of children specifically enrolled in athletic programs. All these factors play a potential part in the epidemic of overweight.

National survey data indicate that 20% of US children 8 to 16 years of age reported 2 or fewer bouts of vigorous physical activity per week, and more than 25% watched at least 4 hours of television per day. Children who watched 4 or more hours of television per day had significantly greater BMI, compared with those watching fewer than 2 hours per day. Furthermore, having a television in the bedroom has been reported to be a strong predictor of being overweight, even in preschool-aged children. Some cross-sectional data have found significant correlation between obesity prevalence and television viewing, but others have not. The results of a randomized trial to decrease television viewing for school-aged children has provided the strongest evidence to support the role of limiting television in prevention of obesity. In this study, decreasing "media use" without specifically promoting more active behaviors in the intervention group resulted in a significantly lower increase in BMI at the 1-year follow-up, compared with the control group. Additional support for the importance of decreasing television viewing comes from controlled investigations that demonstrated that obese children who were reinforced for decreasing sedentary activity (and following an energy-restricted diet) had significantly greater weight loss than those who were reinforced for increasing physical activity. These findings have important implications for anticipatory guidance and provide additional support for recommendations to limit television exposure for young children.

**EARLY RECOGNITION**

Routine assessments of eating and activity patterns in children and recognition of excessive weight gain relative to linear growth are essential throughout childhood. At any age, an excessive rate of weight gain relative to linear growth should be recognized, and underlying predisposing factors should be addressed with parents and other caregivers. The Centers for Disease Control and Prevention percentile grids for BMI are important tools for anticipatory guidance and discussion of longitudinal tracking of a child's BMI. Significant changes on growth patterns (eg, upward crossing of weight for age or BMI percentiles) can be recognized and addressed before children are severely overweight. An increase in BMI percentiles should be discussed with parents, some of whom may be overly concerned and some of whom may not recognize or accept potential risk.

Although data are extremely limited, it is likely that anticipatory guidance or treatment intervention before obesity has become severe will be more successful. Discussions to raise parental awareness should be conducted in a nonjudgmental, blame-free manner so that unintended negative impact on the child's self-concept is avoided. Data from adult patient surveys indicate that those who were asked by their physician about diet were more likely to report positive changes. Similarly, the efficacy of physicians discussing physical activity, breastfeeding, and smoking prevention is well documented. Thus, pediatricians are strongly encouraged to incorporate assessment and anticipatory guidance about diet, weight, and physical activity into routine clinical practice, being careful to discuss habits rather than focusing on habitus to avoid stigmatizing the child, adolescent, or family.

**ADVOCACY**

Abundant opportunities exist for pediatricians to take a leadership role in this critical area of child health, including action in the following areas: opportunities for physical activity, the food supply, research, and third-party reimbursement. Change is desperately needed in opportunities for physical activity in child care centers, schools, after-school programs, and other community settings. As leaders in their communities, pediatricians can be effective advocates for health- and fitness-promoting programs and policies. Foods that are nutrient rich and palatable yet low in excess energy from added sugars and fat need to be readily available to parents, school and child care food services, and others responsible for feeding children. Potential affordable sources include community gardens and farmers' market projects. Advertising and promotion of energy-dense, nutrient-poor food products to children may need to be regulated or curtailed. The increase in
carbonated beverage intake has been linked to obesity. Therefore, the sale of such beverages should not be promoted at school. Pediatrists are encouraged to work with school administrators and others in the community on ways to decrease the availability of foods and beverages with little nutritional value and to decrease the dependence on vending machines, snack bars, and school stores for school revenue. Regarding physical activity, advocacy is sorely needed for physical education programs that emphasize and model learning of daily activities for personal fitness (as opposed to physical education limited to a few team sports).

New initiatives for pilot projects to test prevention strategies have been funded by the National Institutes of Health and other organizations, but a long-term commitment of substantial funds from many sources and to many disciplines will be needed to attack this serious, widespread, and potentially intractable problem. Support for development and testing of primary prevention strategies for the primary care setting will be critical. Likewise, investment of substantial resources will be required for development of effective treatment approaches for normalizing or improving body weight and fitness and for determining long-term effects of weight loss on comorbidities of childhood obesity. Collaboration and coalitions with nutrition, behavioral health, physical therapy, and exercise physiology professionals will be needed. Working with communities and schools to develop needed counseling services, physical activity opportunities, and strategies to reinforce the gains made in clinical management is also important.

Pediatric referral centers will need to develop specialized programs for treatment of complex and difficult cases, and for research into etiology and new methods of prevention and treatment. Efforts are needed to ensure adequate healthcare coverage for preventative and treatment services. Even when serious comorbidities are documented, insurance reimbursement is limited. Lack of reimbursement is a disincentive for physicians to develop prevention and treatment programs and presents a significant barrier to families seeking professional care.

SUMMARY/CONCLUSIONS

1. Prevalence of overweight and its significant comorbidities in pediatric populations has rapidly increased and reached epidemic proportions.
2. Prevention of overweight is critical, because long-term outcome data for successful treatment approaches are limited.
3. Genetic, environmental, or combinations of risk factors predisposing children to obesity can and should be identified.
4. Early recognition of excessive weight gain relative to linear growth should become routine in pediatric ambulatory care settings. BMI (kg/m² [see http://www.cdc.gov/growthcharts]) should be calculated and plotted periodically.
5. Families should be educated and empowered through anticipatory guidance to recognize the impact they have on their children's development of lifelong habits of physical activity and nutritious eating.
6. Dietary practices should be fostered that encourage moderation rather than overconsumption, emphasizing healthful choices rather than restrictive eating patterns.
7. Regular physical activity should be consciously promoted, prioritized, and protected within families, schools, and communities.
8. Optimal approaches to prevention need to combine dietary and physical activity interventions.
9. Advocacy is needed in the areas of physical activity and food policy for children; research into pathophysiology, risk factors, and early recognition and management of overweight and obesity; and improved insurance coverage and third-party reimbursement for obesity care.

RECOMMENDATIONS

1. Health supervision
   a. Identify and track patients at risk by virtue of family history, birth weight, or socioeconomic, ethnic, cultural, or environmental factors.
   b. Calculate and plot BMI once a year in all children and adolescents.
   c. Use change in BMI to identify rate of excessive weight gain relative to linear growth.
   d. Encourage, support, and protect breastfeeding.
   e. Encourage parents and caregivers to promote healthy eating patterns by offering nutritious snacks, such as vegetables and fruits, low-fat dairy foods, and whole grains; encouraging children's autonomy in self-regulation of food intake and setting appropriate limits on choices; and modeling healthy food choices.
   f. Routinely promote physical activity, including unstructured play at home, in school, in child care settings, and throughout the community.
   g. Recommend limitation of television and video time to a maximum of 2 hours per day.
   h. Recognize and monitor changes in obesity-associated risk factors for adult chronic disease, such as hypertension, dyslipidemia, hyperinsulinemia, impaired glucose tolerance, and symptoms of obstructive sleep apnea syndrome.

2. Advocacy
   a. Help parents, teachers, coaches, and others who influence youth to discuss health habits, not body habitus, as part of their efforts to control overweight and obesity.
   b. Enlist policy makers from local, state, and national organizations and schools to support a healthful lifestyle for all children, including proper diet and adequate opportunity for regular physical activity.
   c. Encourage organizations that are responsible for health care and health care financing to provide coverage for effective obesity prevention and treatment strategies.
   d. Encourage public and private sources to direct funding toward research into effective strategies to prevent overweight and obesity and to maximize limited family and community re-
sources to achieve healthy outcomes for youth.
e. Support and advocate for social marketing intended to promote healthful food choices and increased physical activity.

COMMITTEE ON NUTRITION, 2002-2003
*Nancy F. Krebs, MD, Chairperson
Robert D. Baker, Jr, MD, PhD
Frank R. Greer, MD
Melvin B. Heyman, MD
Tom Jakic, MD, PhD
Fima Lifshitz, MD
*Marc S. Jacobson, MD
Past Committee Member

LIAISONS
Donna Blum-Kemeler, MS, RD
US Department of Agriculture
Margaret P. Boland, MD
Canadian Paediatric Society
William Dietz, MD, PhD
Centers for Disease Control and Prevention
Van S. Hubbard, MD, PhD
National Institute of Diabetes and Digestive and Kidney Diseases
Elizabeth Yetley, PhD
US Food and Drug Administration

STAFF
Pamela Kanda, MPH

*Lead authors

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ADDITIONAL RESOURCES
American Academy of Pediatrics, Committee on Sports Medicine and Fit-


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National Association for Sports and Physical Activity Web site. Available at: http://www.aahperd.org


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