



Physical Activity and Fitness

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PROGRESS REVIEW



In the 22nd session of the second series of assessments of *Healthy People 2010*, Principal Deputy Assistant Secretary for Health Donald Wright chaired a Progress Review on Physical Activity and Fitness. He was assisted by staff of the co-lead Agencies for this *Healthy People 2010* focus area, the Centers for Disease Control and Prevention (CDC) and the President's Council on Physical Fitness and Sports (PCPFS). Also participating in the review were representatives from other Agencies and offices within the U.S. Department of Health and Human Services (HHS) and from the Office of Safe and Drug-Free Schools/U.S. Department of Education, the National Highway Traffic Safety Administration/U.S. Department of Transportation, the National Park Service/U.S. Department of the Interior, the National Forest Service/U.S. Department of Agriculture, and the U.S. Office of Personnel Management. In his opening remarks, Dr. Wright acknowledged the central role that physical activity has in HHS prevention efforts. Acting Surgeon General ADM Steven Galson's Childhood Overweight and Obesity Prevention initiative focuses on six programs, five of which have a physical activity component. These include the CDC School Health Programs to Prevent Obesity and Overweight, which helps schools reshape social and physical environments to promote healthy lifestyles; the PCPFS President's Challenge, which calls on all Americans to commit to regular physical activity; the National Institutes of Health (NIH) We Can! program, which assists communities in their efforts to encourage children to maintain a healthy weight; the Indian Health Service's Together Raising Awareness for Indian Life, which helps Tribal children and youth make healthy lifestyle choices; and the new Head Start Playground Initiative, a grant program of the Administration for Children and Families to help Head Start programs develop community playgrounds. Dr. Wright emphasized that physical activity and fitness behaviors benefit every generation, from young toddlers learning gross motor skills to frail older adults who need to raise themselves out of chairs.

The complete November 2000 text for the Physical Activity and Fitness focus area of *Healthy People 2010* is available online at www.healthypeople.gov/document/html/volume2/22physical.htm. Revisions to the focus area chapter that were made after the January 2005 Midcourse Review are available at www.healthypeople.gov/data/midcourse/html/focusareas/fa22toc.htm. For comparison with the current state of the focus area, the report on the first-round Progress Review (held on April 14, 2004) is archived at www.healthypeople.gov/data/2010prog/focus22/2004fa22.htm. The meeting agenda, tabulated data for all focus area objectives, charts, and other materials used in the Progress Review can be found at a companion site maintained by the CDC National Center for Health Statistics (NCHS): <http://www.cdc.gov/nchs/about/otheract/hpdata2010/focusareas/fa22-paf2.htm>. That site has a link to wonder.cdc.gov/data2010, which provides access to detailed definitions for the objectives in all 28 *Healthy People 2010* focus areas and periodic updates to their data.

Data Trends

In his overview of data that relate to the focus area, Richard Klein, Chief of the NCHS Health Promotion Statistics Branch, noted that physical activity and fitness regimens confer many benefits. They can decrease the risk of obesity and chronic diseases, including coronary vascular disease, diabetes, and osteoporosis; lead to better control of body weight, blood pressure, blood glucose, and cholesterol; build and maintain healthy bones and lean muscle mass; reduce feelings of depression and anxiety and promote psychological well-being; enhance independent living among older adults; and improve quality of life for people of all ages. Mr. Klein summarized the overall state of the focus area in the following terms. Individual physical activity behaviors for adolescents and adults are essentially unchanged since baselines were established. Physical education requirements levels in middle and junior high schools remain low. Senior high school levels of physical education are very low and have declined. Most high school students do not participate in daily physical education. Disparities among population groups persist. Data collection and analysis for this focus area are hampered by the lack of a standard methodology. Issues include the recall period of survey respondents and the accuracy of their responses; the influence of question order in surveys; the measurement of time and intensity devoted to periods of physical activity; individual perception of terms such as "leisure," "work," and "incidental"; the confidence to be placed in self-reporting; and changes in measurement over time. Nine objectives and subobjectives were highlighted in the Progress Review that relate to individual behaviors of adolescents and adults, organizational policy, and environmental intervention and programs. Mr. Klein provided a more detailed examination of these, as follows:

(Obj. 22-1): The age-adjusted proportion of adults aged 18 years and older who engaged in no leisure-

time physical activity did not change significantly between 1997 (40 percent) and 2006 (39 percent). In general, the proportion of persons who engaged in no leisure-time physical activity was greater the older the adult age group under consideration and the lower the level of educational attainment. By racial and ethnic group for whom data were available, the proportions of adults with no leisure-time physical activity in 2006 were as follows: American Indian/Alaska Native, 34 percent; non-Hispanic white, 35 percent; Asian, 39 percent; non-Hispanic black, 48 percent; and Hispanic, 53 percent. The 2010 target for all population groups is 20 percent.

(Obj. 22-2): The age-adjusted proportion of adults aged 18 years and older who engaged regularly in moderate or vigorous leisure-time physical activity also did not change significantly between 1997 (32 percent) and 2006 (31 percent). In 2006, 29 percent of females engaged regularly in moderate or vigorous leisure-time physical activity, compared with 33 percent of males. Moderate physical activity is carried on 30 minutes or more 5 or more times a week, vigorous physical activity for 20 minutes or more 3 or more times a week. In 2006, as in 1997, the older the adult age group and the lower the level of their educational attainment, the less likely they were to engage regularly in moderate or vigorous leisure-time physical activity. By racial and ethnic group for whom data were available, the proportions of adults who engaged regularly in moderate or vigorous leisure-time physical activity in 2006 were as follows: Hispanic, 23 percent; non-Hispanic black, 25 percent; American Indian/Alaska Native, 29 percent; Asian, 31 percent; and non-Hispanic white, 34 percent. The target for all population groups is 50 percent.

(Obj. 22-7): The proportion of adolescents in grades 9 through 12 who engaged regularly in vigorous physical activity was 64 percent in 2007

(55 percent of females, 73 percent of males), little changed from the 65 percent baseline in 1999. Regular vigorous physical activity is defined as physical activity lasting at least 20 minutes on 3 or more of the previous 7 days that made the student sweat or breathe hard. By racial and ethnic group for whom data were available, the proportions of adolescents engaging regularly in vigorous physical activity in 2007 were as follows: non-Hispanic black, 58 percent; Hispanic, 62 percent; and non-Hispanic white, 66 percent. The target for all population groups is 85 percent.

(Objs. 22-8a, -8b): In 2006, 7.9 percent of middle and junior high schools required their students to participate in daily physical education, compared with 6.4 percent in 2000. The target is 9.4 percent. In 2006, 2.1 percent of senior high schools required daily physical education on the part of their students, compared with 5.8 percent in 2000. The target is 14.5 percent.

(Obj. 22-9): In 2007, high school student participation by grade in daily school physical education was as follows: 9th grade, 40 percent (42 percent in 1999); 10th grade, 31 percent (30 percent in 1999); 11th grade, 24 percent (20 percent in 1999); and 12th grade, 24 percent (20 percent in 1999). Total participation in 2007 for all four grades was 30 percent, compared with 29 percent in 1999. The target for all grades is 50 percent.

(Obj. 22-10): In 2007, 38 percent of students in grades 9 through 12 spent at least 20 minutes of school physical education class time being physically active, the same proportion as in 1999. By grade, the proportion who met the standard in 2007 was as follows: 9th grade, 51 percent (55 percent in 1999); 10th grade, 40 percent (41 percent in 1999); 11th grade, 32 percent (29 percent in 1999); and 12th grade, 28 percent (24 percent in 1999). The target for all grades is 50 percent.

(Obj. 22-11): The proportion of students in grades 9 through 12 who view television for 2 hours or less on a school day increased from 57 percent in 1999 to 65 percent in 2007. By gender and by racial and ethnic group for whom data were available, the proportion of students who met this standard in 2007 was as follows: females, 67 percent; males, 63 percent; non-Hispanic blacks, 37 percent; Hispanics, 57 percent; and non-Hispanic whites, 73 percent. Although relatively low, the non-Hispanic black proportion improved significantly from 1999, when it was 26 percent. The target for all population groups is 75 percent.

(Obj. 22-12): In 2006, 28.8 percent of the Nation's public and private elementary, middle, and junior and senior high schools provided community access to their physical activity spaces and facilities outside of normal school hours, compared with 35 percent in 2000. The decline is not considered statistically significant. The target is 50 percent.

Key Challenges and Current Strategies

Representatives from CDC and PCPFS made presentations on the principal themes of the Progress Review. They included Janet Collins, Director, CDC National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP); David Buchner, Chief, NCCDPHP Physical Activity and Health Branch; and Melissa Johnson, PCPFS Executive Director. Their statements, the discussion that ensued, and Progress

Review briefing materials prepared by an interagency workgroup identified a number of barriers to achieving the objectives, as well as activities under way to meet these challenges, including the following.

Barriers

- Determining physical activity patterns of adults and children is challenging. Many physical activities are

part of the daily routine and, therefore, difficult to recall and report. Children find it particularly hard to estimate frequency and duration of activities, and proxies (usually parents) may not observe the children for much of the day or may overestimate the amount of their activity.

- Evidence consistently identifies as barriers to increased physical activity the following factors—lack of time, low motivation, low self-efficacy, certain climates or seasons, rural residence, and the scant availability of culturally appropriate physical activity venues that are convenient, safe, and affordable. For children, three characteristics of the physical environment are barriers to physical activity—distance to school, traffic speed and density, and living in a neighborhood afflicted by deprivation and crime.
- People with disabilities face a variety of challenges that combine to diminish physical activity participation, including limited research and recommendations for programming activity appropriate for individuals with specific disabilities, and physical barriers, such as lack of access to changing rooms in fitness facilities.
- Although the time high school students spend watching television appears to have declined over the decade, the apparent decrease may have been influenced by an increase in multitasking, such as playing video games, instant messaging, or doing homework while the television is on.
- Changes to the infrastructure and built environment that would serve to promote increased physical activity usually require a considerable investment of time and financial and other resources.

Activities and Outcomes

- Since their introduction in the National Health and Nutrition Examination Survey (NHANES) in 2003, accelerometers (motion detectors) have been used for population assessment. These and

similar technologies provide the opportunity to track population progress in physical activity and fitness measures that augment health surveys. A recent analysis of 2003–2004 NHANES data in which accelerometers were used showed that less than 5 percent of adults aged 20 and older are physically active for at least 30 minutes 5 to 7 days a week.

- In 2001, the Task Force on Community Preventive Services published the first evidence-based strategies for physical activity interventions in the *Guide to Community Preventive Services (Community Guide)*. Two additional strategies were recommended in a 2006 update of the *Community Guide*, for a total of eight. Most of the recommended *Community Guide* interventions address several *Healthy People 2010* objectives, and several recommended interventions can address a single objective. Among the recommendations: increase access to and promote public awareness of suitable locations for physical activity, such as walking or biking trails or recreational facilities.
- One initiative to increase physical activity among adolescents was “VERB™ It’s what you do.” VERB was a national, multicultural, social marketing campaign coordinated by CDC that helped to influence the values of young people aged 9 to 13 years (“tweens”) by encouraging them to be active every day. Begun in 2002 and concluded in 2006, the VERB campaign combined paid advertising, marketing strategies, and partnership efforts to reach the distinct audiences of tweens and adult influencers. It was successful in increasing activity levels among tweens. Any long-term effects should be measurable by the end of this decade or in the decade to come.
- The Healthier Children and Youth Memorandum of Understanding (MOU) between HHS and the U.S. Departments of Agriculture (USDA) and Education synthesizes interagency activities in nutrition and physical activity that target young

- people. The MOU provides an opportunity to tailor physical activity messages to particular audiences, including school officials, parents, and children.
- “I Can Do It, You Can Do It!” is an initiative supported by the HHS Office on Disability, PCPFS, NIH, and numerous community and nonprofit organizations to improve and evaluate the activity and nutrition of people with disabilities.
 - The *National Blueprint: Increasing Physical Activity Among Adults Aged 50 and Older* identifies organizations and strategies to help combat inactivity and improve the quality of life for older Americans.
 - The Public Health and Recreation MOU combines the efforts of the Federal land management agencies within USDA, the U.S. Departments of the Interior and Transportation, U.S. Army Corps of Engineers, and HHS agencies, including CDC and PCPFS. Together, they promote the use of public lands for their health benefits and help ensure that all Americans understand the value of being physically active and the location of public spaces available to them for their active pursuits.
 - In the fall of 2008, HHS is scheduled to release the *Physical Activity Guidelines for Americans*, which are based on a Federal advisory committee report. The *Guidelines*, which are currently in a draft form issued for public comment, will be science-based and include guidance for all population groups, including older adults, children, and people with disabilities. Media messages to accompany the release will be based on new research about how to communicate more effectively with the general public.
 - First authorized and funded through the Department of Transportation in 2005, the State-run *Safe Routes to School* (SRTS) programs use engineering, education, enforcement, and encouragement strategies to increase the number of children who walk and bicycle to school. The authorizing legislation required each State to identify a SRTS coordinator responsible for program management, education, and evaluation, and it encouraged the States to work with local transportation agencies to construct bike lanes, trails, and sidewalks.
 - To highlight its 50th anniversary in 2006, the PCPFS established a partner-based initiative with more than 350 organizations committed to promoting physical activity, fitness, and sports. These advocates agreed to encourage physical activity among their constituents through the implementation or support of the President’s Challenge program.
 - The WOMAN (Women and Girls Out Moving Across the Nation) Challenge, promoted by the HHS Office on Women’s Health, encourages women to walk 10,000 steps a day or exercise for 30 minutes a day over the span of 8 weeks and to track that activity using a Web-based activity tracker. In 2007, 46,000 people registered for the WOMAN Challenge. In 2006, the Office on Women’s Health launched BodyWorks, which empowers parents and caregivers of adolescent girls to serve as role models for healthy eating and physical activity.
 - The U.S. Forest Service launched the *More Kids in the Woods* initiative in 2007 that provides funds to Forest Service offices to facilitate their ability to work with community-based organizations in providing active outdoor experiences to children.

Approaches for Consideration

Participants in the Progress Review made the following suggestions for public health professionals and policymakers to consider as steps to enable further progress toward achieving the objectives for Physical Activity and Fitness:

- Expand efforts to tailor specific community interventions to increase levels of physical activity.
- Encourage media attention to the need to promote the benefits of physical activity and fitness and increase public access to recreational sites.
- Explore the use of tax incentives for employers and organizations that encourage their employees and constituents to be more physically active and provide them with suitable facilities for recreation and fitness training.
- Increase research on the use of technology to motivate physical activity, as in video games that feature “active gaming,” such as Nintendo Wii and Dance Dance Revolution.
- Seek to improve surveillance of the environmental and policy indicators for levels of physical activity—for example, visits to parks and information about sales of sports equipment.
- Increase the use of nontraditional data sources from other sectors to track secular changes related to physical activity, for example, the effects of high gasoline prices and concern about climate change.
- Strengthen research to support surveillance—for example, on the difference between self-reporting and measurement using accelerometers.
- Make greater use of the mentoring model in designing activities to raise fitness levels among children with disabilities.
- Continue and intensify the focus on coordination and planning of programs, the translation of research into practice, the emphasis on addressing

disparities, the use of media approaches to change social norms, and the building of synergies across sectors of society.

- In planning for Healthy People 2020, ensure that appropriate consideration is given to crafting objectives that would lead to an increase in the amount of time that children spend outdoors.

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[Signed September 8, 2008]

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