

# Address Physical Inactivity Before Age 18 Years

BY BRUCE K. DIXON

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CHICAGO — Primary care physicians are well positioned to help reverse the trends of physical inactivity and obesity in all age groups, according to fitness authorities at the Uniformed Services University of the Health Sciences in Bethesda, Md.

Physicians should motivate their patients to engage in regular appropriate exercise and the sooner, the better, Col. Brian K. Unwin, MC, USA, told the annual meeting of the American Academy of Family Physicians.

It's estimated that 66% of adults are overweight or obese and one-half of children and adolescents are overweight or are at risk of becoming overweight, according to the Center for Human Nutrition, Johns Hopkins Bloomberg School of Public Health (Epidemiol. Rev. 2007;29:6-28). By 2015, three-quarters of adults will be overweight or obese, and 41% of children and adolescents will be obese, according to the latest projections.

The optimal time to address the issue with patients is before they reach the age of 18, said Maj. Anthony Beutler, MC, USA, chief of the USU Injury Prevention Research Laboratory. Dr. Beutler and Dr. Unwin are with the university's F. Edward Hébert School of Medicine.

"In certain populations, up to 45% of new diabetes mellitus cases in young people aged 10-19 years are type 2 disease," Dr. Beutler said.

A quarter of obese preschoolers become obese adults, and the remaining three-quarters become normal-weight adults. However, 80% of obese 14-year-olds remain obese as adults, and nearly three-fourths of obese children who lose weight will maintain that loss as adults.

"We have an opportunity to make important changes before this window closes ... between the ages of 14 and 18 years," Dr. Beutler said. "Getting the adults to change can be tremendously difficult and time consuming, but we can look for people who are ready to change or are contemplating being more active. But with children, we can make a huge difference that has a lasting effect."

Many physicians are reluctant to address behavior modification with their patients, often viewing the effort as too time consuming or ineffective, or they may lack confidence in their ability to change patient behavior.



Being physically active and fit can help to reduce the risk of disease, irrespective of one's body mass index.

Dr. Beutler and Dr. Unwin recommend that physicians adopt an action plan first published in 2006 by researchers at the University of California San Francisco (J. Am. Board Med. 2006;19:215-23). The same researchers subsequently applied their plan to helping patients adopt more healthful behaviors (Clinical Diabetes 2007;25:66-70).

They emphasized physician-patient collaboration in working toward behavior modification. "After a patient has agreed on a general goal, the patient and caregivers negotiate a specific action plan to assist in goal attainment," they wrote. For example, if the goal is to get more exercise, the plan may include specific aerobic and resistance training targets. The action plan is available at [www.familymedicine.medschool.ucsf.edu/community\\_service/actionPlan.aspx](http://www.familymedicine.medschool.ucsf.edu/community_service/actionPlan.aspx).

To increase the likelihood that patients will succeed, they're asked to rate the importance of behavior change and exercise, then to estimate how confident they are that they can carry out their action plan, using a scale of 0-10. Doubts about either can be allayed through further discussions that may extend over several patient visits.

Dr. Beutler prefers to think of physical activity more in terms of fitness rather than solely as a means of losing weight. "There's strong evidence from several studies that being fit reduces the risk of disease no matter what your body mass index is," he said.

Before your patient heads for the gym, be sure to as-

sess his baseline fitness so that he can proceed without becoming discouraged or suffering pain or injury, Dr. Beutler explained, adding that the American College of Sports Medicine offers useful guidelines for determining risk and setting reasonable goals.

Healthy men under age 45 and women younger than 55 fall into the low-risk category. Risk increases with age, and also with conditions such as diabetes and cardiac disease. Having an HDL-cholesterol level of 60 mg/dL tends to counteract risk factors, he said.

"Low-risk people don't need a treadmill test before starting to exercise and high-risk patients should always be screened. Testing also is suggested for moderate-risk individuals who plan a vigorous exercise routine. "Always screen patients with signs or symptoms of cardiac disease or known metabolic or pulmonary disease," he said.

In the case of sedentary elderly patients, in whom obesity is much less of an issue, more stress is placed on preserving function and independence, Dr. Unwin said.

The elite or competitive athlete has a high aerobic capacity that begins to decline with age, but always remains higher than that of the average weekend warrior, whose break in aerobic capacity occurs earlier and more dramatically, he explained. "But if we add exercise to the equation, we can help that older person regain a lot of that capacity and start a new curve."

In addition to aerobics, exercise regimens need to include resistance training, static and dynamic balance exercises, and stretching to maintain flexibility. "Sedentary people lose 20%-40% of their muscle mass, or about 6% a decade past age 20. However, walking and running don't address this, and that's why strength-building resistance training is so important as we age," Dr. Unwin said.

With a regular workout program, a sedentary older adult can increase his or her strength anywhere from 40% to 150%, "and that can mean the difference between walking to the mailbox and going up and down stairs, or going directly to assisted living ... or to a nursing home," he said.

It's important that the planned exercise routine be based on the participant's self-perceived level of exertion, rather than on an arbitrarily set regimen. "If we can get our patients to maintain their strength as well as their aerobic capacity, we'll be intervening on these geriatric syndromes of falls, frailty, sarcopenia, and loss of function," he said. ■

## Children Respond to Weight Loss Program in the Short Term

BY ELIZABETH MEHCATIE

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A randomized, controlled trial that followed overweight children who had successfully participated in a university-based weight control clinic found that two different family-based maintenance programs were significantly more effective than the use of no maintenance program at helping sustain their weight loss.

However, the positive effects of the interventions waned over a 2-year follow-up, Denise E. Wilfley, Ph.D., of the department of psychiatry, Washington University, St. Louis, and her associates wrote.

The authors stated that, to the best of their knowledge, this was the first large-scale study to examine the effect of weight loss interventions in overweight children (JAMA 2007;298:1661-73).

A total of 204 healthy 7- to 12-year-olds (mean age of about 10 years), who were 20%-100% above the median body mass index (BMI) for age and sex and had at least one parent with a BMI (kg/m<sup>2</sup>) greater than 25, enrolled in the standard 5-month, family-based weight loss program.

At the program's completion, 150 of the children and at least one of their parents or a guardian were randomized to one of three groups: a control group (n=49), which involved no follow-up, or one of two maintenance programs. The behavioral skills maintenance (BSM) program (n=51) has a cognitive-behavioral approach that emphasizes self-regulation behaviors and relapse-prevention strategies; the social-facilitation maintenance (SFM) program (n=50) involves using techniques to help parents "facilitate child peer networks that support healthy eating and physical activity" and targets factors, such as teasing from peers or body image, that may impede children from engaging in physical activity. The programs lasted for 4 months, for a total of 16 weekly sessions.

At the end of the 4 months, the children in the two maintenance programs had maintained their weight significantly better than did children in the control group, based on the two outcome measures in the study: BMI z score (determined using age-specific and sex-specific median BMI), and the percentage

overweight (percentage above median BMI).

The results of children in the BSM group, of those in the SFM group, and of these two groups combined indicated that these participants maintained their BMI z score and percentage overweight significantly better than did those in the control group.

Over the 2-year follow-up, which was initiated after completion of the active weight-loss program, both outcome measures were significantly higher among participants in the SFM group, and also when the SFM and BSM groups were combined, compared with controls, but the results for the BSM group alone were not significantly different than were those of the controls.

At 2 years, for the percentage overweight measure, the SFM group had better results than did the control group, and these results approached statistical significance. But there were no significant differences between the results of the BSM group or the pooled results, compared with those of controls.

The results in the BSM or the SFM

groups were not significantly different for either of the outcomes measures at any of the time points.

Among participants with a lower level of social problems, long-term weight maintenance was better among those in the two maintenance programs, compared with those in the control group.

Although the investigators acknowledged some limitations to the study, their results indicate that extended contact with either the BSM or SFM approach in a maintenance program "improves weight loss maintenance in a childhood overweight population in comparison with a weight loss program at least in the short-term, with some evidence for sustained long-term efficacy among more socially adept children receiving an SFM treatment," they concluded.

"The general decline in effects following extended treatment suggests the need for the development of continuous care models for children, as in the adult weight loss field, which finds that longer ongoing contact helps maintain initial weight loss and improves health outcomes." ■