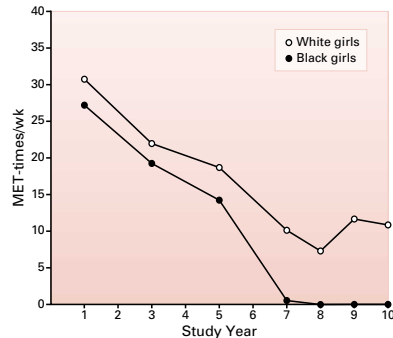




# This Week in the Journal

September 5, 2002

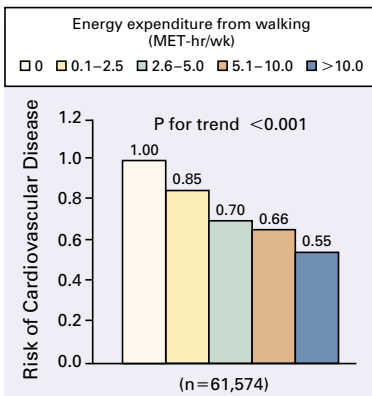


## Decline in Physical Activity in Girls during Adolescence

In this longitudinal study of black girls and white girls, the authors measured habitual levels of recreational activity from the age of 8 or 9 through the age of 18 or 19 years. The level of physical activity declined precipitously over time, so that by the age of 18 or 19, 56 percent of black girls and 31 percent of white girls reported no habitual recreational activity. Predictors of declines in physical activity among black girls, white girls, or both included lower levels of parental education, higher body-mass index, pregnancy, and cigarette smoking.

*This study demonstrates substantial declines in girls' physical activity during adolescence, which are greater for black girls than for white girls. These data suggest the need for interventions to maintain or increase activity levels in adolescence.*

see page 709 (Perspective, page 706; editorial, page 755)



## Walking Compared with Vigorous Exercise for Prevention of Coronary Events in Women

It is generally accepted that physical activity reduces the risk of coronary events. This study focused on whether walking, an activity of only moderate intensity, protects against coronary events in postmenopausal women. Walking was associated with risk reductions similar to those associated with vigorous exercise. The findings applied equally to both white women and black women.

*The findings are important for women's health, because walking is an activity preferred by many women. The study shows that among postmenopausal women, brisk walking for at least 2.5 hours per week is associated with a 30 percent reduction in the risk of coronary events — a finding of considerable public health importance.*

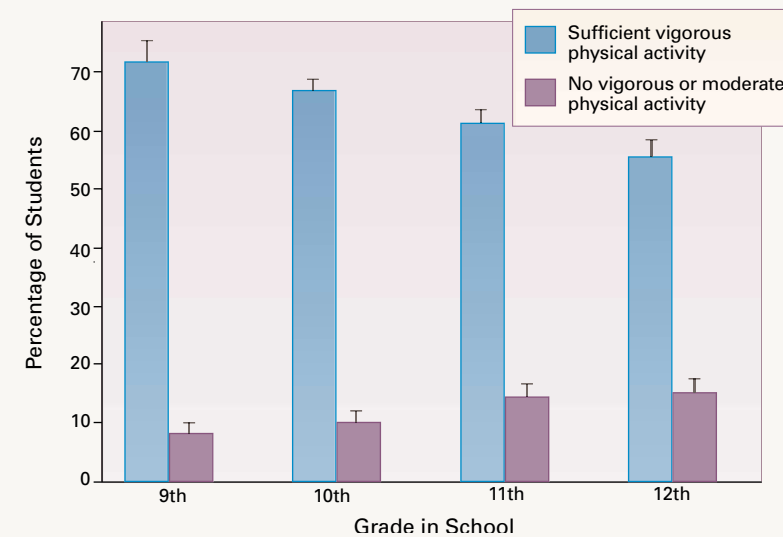
see page 716 (Perspective, page 706; editorial, page 755)

## PERSPECTIVE

## Physical Inactivity among Young People

It is widely recognized that the increasing proportion of overweight children and adolescents in the United States is a serious public health issue. Fifteen percent of young Americans are overweight — up from approximately 5 percent in the early 1970s. This dramatic increase is associated with the emergence of type 2 diabetes mellitus as a growing health problem among children. Black and Hispanic children have both a higher prevalence of overweight and a greater risk of type 2 diabetes than do white children. The rising prevalence of overweight and obesity indicates that, increasingly, young people have an energy intake that exceeds their energy expenditure from metabolism and activity. That is, they have a positive energy balance. Factors affecting energy intake, such as increased numbers of meals away from home, larger portions, and increased consumption of calorically dense fast foods, may contribute to this imbalance. Factors affecting energy expenditure, such as increased availability of labor-saving devices, television, and video games and decreased physical-education time in schools, also have an important role.

Encouraging increased physical activity is one way to aid young people in achieving a balance between energy intake and expenditure and establishing healthy behavior that will continue into adulthood. In addition to contributing to weight control, physical activity helps young people to build and maintain healthy bones and muscles and contributes to psychological well-being. National data and information from smaller stud-



Reported Participation of U.S. High-School Students in Physical Activity.

Data are from the Youth Risk Behavior Survey, 2001. Sufficient vigorous physical activity was defined as activity that made students sweat and breathe hard for more than 20 minutes on more than three of the preceding seven days; students who had not participated in either vigorous physical activity for more than 20 minutes or moderate physical activity for more than 30 minutes on any of the seven days preceding the survey were classified as having no vigorous or moderate physical activity. I bars represent 95 percent confidence intervals.

ies indicate that there is much room for improvement in the level of physical activity among young people.

Since 1991, the Youth Risk Behavior Survey conducted by the Centers for Disease Control and Prevention (CDC) has found lower-than-recommended levels of physical activity among young people in the United States and a significant decline in reported physical activity over the course of the four years of high school (see Figure). Data from the Youth Risk Behavior Survey and other sources of data also consistently show that girls report less physical activity than boys. For example, in the 2001 survey, the rate of participation by girls in sufficient vigorous physical activity was 67 percent in 9th grade and only 45 percent in 12th grade. During the same period, the proportion of girls who participated in neither vigorous nor moderate physical activity was 8 percent in 9th grade

but 15 percent in 12th grade. Another consistent finding is that white students report higher levels of physical activity than students of other racial or ethnic groups. The racial differences in reported activity among students are consistent with the patterns of activity among adults.

In this issue of the *Journal*, Kimm et al. (see pages 709–715) report on a study that tracked changes in leisure-time physical activity among white girls and black girls from 9 or 10 years of age to 18 or 19 years of age — a critical period in the development of health behavior. By 16 or 17 years of age, 56 percent of black girls and 31 percent of white girls reported that they did not engage in any leisure-time physical activity. The authors went beyond reporting changes in behavior over time to explore factors associated with the observed declines in the level of physical activ-



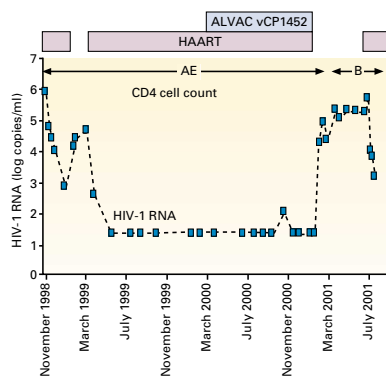
Popliteal Thrombus

## Prevention of Deep-Vein Thrombosis with Reviparin

This randomized, placebo-controlled trial assessed the efficacy and safety of reviparin, a low-molecular-weight heparin, in reducing the risk of deep-vein thrombosis in patients requiring prolonged immobilization after a leg fracture or rupture of the Achilles tendon. Deep-vein thrombosis (in a distal segment, in most cases) was documented by venography in 19 percent of the patients in the placebo group and 9 percent of those in the reviparin group, indicating that active therapy halved the risk. The incidence of bleeding and other adverse events did not differ significantly between the groups.

*Deep-vein thrombosis is common after leg injury requiring prolonged immobilization, and its occurrence is reduced by reviparin therapy. Whether such therapy is warranted routinely requires further study.*

see page 726



## Brief Report: A Patient with HIV-1 Superinfection

An HIV-1–infected patient had a rebound in viremia when antiviral therapy was discontinued as part of a vaccine research protocol. Careful studies showed that this patient was infected initially with subtype AE of the virus but then became infected with subtype B. There was no evidence of dual infection, so the data indicate that this is a case of superinfection with a different strain of HIV-1. Natural infection does not necessarily produce cross-clade protection, a finding that may have implications for the development of a vaccine against HIV-1.

see page 731 (editorial, page 756)

ity. They found that both socio-demographic and behavioral factors were associated with the degree of decline in physical activity with age.

The prevalences of obesity, type 2 diabetes mellitus, and inactivity are higher among black women than among white women. Kimm et al. observe that these differences in weight and activity status are already evident as early as 9 or 10 years of age.

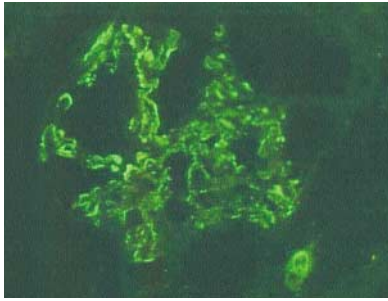
The CDC and other governmental and nongovernmental organizations have developed programs that aim to increase physical activity through education and the promotion of policy changes. Many of these programs focus on incorpo-

rating additional moderate-intensity activities — such as walking or choosing to take the stairs rather than the elevator — into the daily routine. As the Diabetes Prevention Program Research Group previously reported (N Engl J Med 2002; 346:393–403), a lifestyle intervention that incorporated increased physical activity and moderate weight loss reduced the incidence of type 2 diabetes mellitus more effectively than metformin, a frequently prescribed oral antihyperglycemic agent. Manson et al. report in this issue of the *Journal* (see pages 716–725) that among postmenopausal women, the magnitude of the reduction in the risk of car-

diovascular events achieved with walking was similar to that achieved with vigorous exercise. The results were similar in black women and white women. These articles and others illustrate the importance of increasing physical activity among young people in general and among black girls in particular. They also remind us that physical activity can be increased with routine daily activities as simple as walking and that better health does not necessarily require special clothing, equipment, or facilities.

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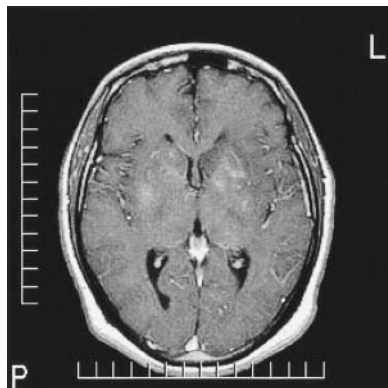
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### Medical Progress: **IgA Nephropathy**

IgA nephropathy is the most common form of primary glomerulonephritis in the world and is also the most common cause of end-stage renal disease in patients with primary glomerulopathy. This article discusses current views on the pathogenesis, pathophysiology, clinical course, and treatment of this important glomerular disease. Although clinical trials have suggested that therapies such as glucocorticoids, n-3 fatty acids, and angiotensin-converting-enzyme inhibitors are efficacious, more definitive treatment is being sought.

see page 738



### Clinical Problem-Solving: **Out of Africa**

A 42-year-old man who had been a human-rights leader in the Democratic Republic of Congo presented with emotional distress and difficulty coping. He had been tortured while imprisoned during the recent civil war and was having personal and financial difficulties. A mental-status examination revealed delusional thinking. Physical examination was normal, and routine laboratory testing was remarkable only for a normochromic, normocytic anemia.

see page 749

*“Appropriate management depends on the ethical standards and moral sensitivity of individual investigators, research mentors, IRBs, and institutional leaders.”*

### Sounding Board: **Nonfinancial Conflicts of Interest**

The dramatic growth in associations between investigators and industry has raised appropriate concern about financial conflicts of interest. Investigators are also faced with potent nonfinancial conflicts of interest. Because career advancement in academic medicine depends on grant awards and research publications, investigators have strong personal interests in the successful completion of their research studies, which often involve human subjects. In this essay, the author explores how nonfinancial interests of investigators can be at odds with the interests of research subjects and outlines an approach to better management of nonfinancial conflicts of interest.

see page 759