

Further evidence for the benefits of walking^{1,2}

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How much physical activity is necessary for long-term weight maintenance? This is one of the key questions addressed by the Physical Activity Guidelines Advisory Committee as it met over the last year to develop the nation's first Physical Activity Guidelines for Americans (released October 7, 2008; <http://www.health.gov/PAGuidelines>). The committee, which I (MEN) was privileged to serve on, was charged with conducting a thorough review of the literature on the health benefits of physical activity and producing a report with the findings (<http://www.health.gov/PAGuidelines/committeereport.aspx>). With regard to energy balance, we found that there is a large body of research on physical activity and weight loss, as well as short-term weight maintenance after weight loss, but little on the amount of exercise needed for long-term weight maintenance.

Part of the reason that so few studies exist to answer this question is because of the study design challenges that are involved. It is difficult to devise an experimental design to examine no weight change (weight maintenance) over time. The committee discovered 9 prospective trials that examined the influence of physical activity on body weight, 6 of which monitored subjects for >6 y (1). All 9 trials showed favorable associations between physical activity and weight-related outcomes. The committee also identified 3 randomized controlled intervention studies that are partially related to this question (1). In these studies there was clear evidence for a dose-response relation for weight loss: those subjects performing the greatest amount of physical activity achieved greater weight loss. With regard to weight maintenance, a dose of physical activity in the range of 13–26 MET-h/wk (equivalent to walking at a 4-mile/h pace for 150 min/wk) resulted in a modest 1–3% weight loss, which was consistent with weight stability over time. None of these trials evaluated the effects of walking alone on either weight loss or maintenance.

The study by Gordon-Larsen et al (2) in this issue of the Journal is the first study to examine the independent effects of walking on long-term weight control. This is of great interest to public health, because walking is inexpensive, accessible, and well accepted among adults. This prospective cohort study monitored young adult men and women for 15 y into middle adulthood. Other types and amounts of physical activity and dietary intake were controlled for in the analysis.

Results indicate that walking attenuates weight gain over the 15-y period. The greatest benefit was seen for women with the heaviest baseline weight. For these women, those with the highest walking levels resulted in weight gain < 8 kg over 15 y. Furthermore, there appears to be a dose effect, with 2 h of walking per week being better than none, and 4 h of walking better

than 2. Although not as substantial, the authors also report an association between walking and weight change in women in other weight categories and in men. In addition, they found that for all subjects, higher walking levels were associated with a higher likelihood of weight loss and maintenance.

To our knowledge, this study is the first to demonstrate that walking has an independent protective effect on weight gain. It has a number of strengths, including its length and size (≈5000 young adults). It lays the groundwork for future studies, which will help answer how much walking or physical activity in total is needed to maintain body weight over time.

The 2008 Physical Activity Guidelines for Americans state that “Adults should strongly consider walking as one good way to get aerobic physical activity. Many studies show that walking has health benefits and low risk of injury. It can be done year-round and in many settings” (3). The results of Gordon-Larsen et al’s trial further support this as being a sound public health guideline. The key now is to figure out how to get more Americans walking. Leisure activity in adults has remained low over the past decade, whereas sedentary activities have risen (4). Less than 5% of adults get the recommended 2.5 h of moderate intensity activity (of any type) per week (5). The most widely accepted mode of physical activity is walking (6), but many factors have converged to make it difficult to walk; these include the way we commute and work and the way our communities are built (4). It is hoped that the inaugural Physical Activity Guidelines for Americans, along with continued research findings such as those of Gordon-Larsen et al, will provide the public with more motivation to walk and guidance for developing sound policies that promote overall physical activity, especially walking. If we can increase walking participation by Americans, the evidence is strong that we will improve not only weight control but overall public health.

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