

September 2004 - Papers of the month

- Paper 1:** Wessel TR., Arant CB., Olsen MB., et al. Relationship of physical fitness vs body mass index with coronary artery disease and cardiovascular events in women. JAMA 2004; 292(10):1179-1187.
- Paper 2:** Weinstein AR., Sesso HD., Lee IM., et al. Relationship of physical activity vs body mass index with Type 2 diabetes in women. JAMA 2004; 292(10):1188-1194.
- Paper 3** (Editorial): Blair SN., Church TS. The fitness, obesity, and health equation. Is physical activity the common denominator? JAMA 2004; 292(10):1232-1234.

Summary of main findings

In the same issue of the JAMA two groups of researchers present conflicting results on the relative contribution of physical activity/fitness and BMI to cardiovascular diseases and incident Type 2 diabetes. In a study with a mean follow-up of 3.9 years, Wessel and colleagues reported that women with higher fitness level had lower CVD risk outcomes than women with low self-reported fitness scores. The authors found that BMI was not independently associated with CVD risk and concluded that physical fitness may be more important than BMI for predicting CVD outcomes in women. Weinstein and colleagues reported differing results indicating that BMI was a stronger predictor than physical activity for incident Type 2 diabetes in women and that physical activity has minimal effect on the BMI-diabetes relation. The readers are referred to the accompanying editorial by Blair and Church which provides an appraisal and commentary on these two somewhat divergent but intriguing results. Briefly, the authors suggested that the differing methods, study populations and health outcomes may explain the contradictory findings of the two studies.

Implications for policy and practice

The studies adds to the longstanding debate about the relative importance of lack of fitness or obesity as a predictor of mortality, and the public health implication of whether programs and messages should include greater emphasis on reducing weight or on increasing physical activity. A legitimate question for public health practitioners is what is the best course of action for at least half of the general public considered to be overweight or obese?

- In general practice, public health messages should clearly encourage regular physical activity independent of body size and health problems, with the accumulation of 30 minutes a day of moderate-intensity activity at least 5 days of the week.
- In adolescent population, focusing on physical activity rather than body weight should be the primary public health message.
- In clinical settings, communicating the importance of physical activity for health improvement among clinically obese patients as part of an overall lifestyle intervention is essential. Since many health benefits can be effectively treated independently of weight loss (ie., blood pressure, cholesterol, insulin resistance), assessing indices of health-related physical fitness rather than adiposity should be part of the focus of lifestyle interventions monitoring and evaluation.
- In clinical treatment of those with specific health conditions, ie. Type 2 diabetes, clearly both physical activity and weight reduction play important roles in managing this health condition. Current evidence suggests that the benefits gained by increasing physical activity as well as achieving weight loss for Type 2 diabetic patients would substantially reduce the risk of diabetes far more than an intervention that simply focuses on encouraging obese patients to lose weight as a primary goal.

Blair and Church stress: "Although the debate may never be fully resolved, the relative contribution of fitness and obesity to overall health and risk actually may be a trivial matter becauseIn essence, physical activity is the common denominator for the clinical treatment of low fitness and excess weight..." and suggest that more attention be given to: "...on how to get sedentary individuals to become more active".