



# Men, women respond differently to exercise

We all know that a regular exercise program provides many health benefits. What is not so clear is whether exercise plays a role in reducing body fat.

**QUESTION:** Isn't fat loss just a matter of eating less and exercising more?

**ANSWER:** On the surface, it seems that losing weight (or more specifically losing fat) should be this simple. However, some key factors can work against this basic formula. Researchers Barry Braun at the University of Massachusetts-Amherst and Todd Hagobian at California Polytechnic State University have studied the effects of exercise on appetite and calorie intake in men and women. Their work has identified some very interesting gender differences that ultimately affect the impact of exercise on changing body fat levels.

You could say their research indicates that "life is not fair" -- to women in this case. In a review of their own work and that of other researchers, Braun and Hagobian explain that hormonal responses to increased physical activity are different in women than in men. The result is that women tend to increase the calories they consume to match their increased exercise calorie needs. Men, on the other hand, do not increase their calorie

intake. This results in women being much less likely than men to lose body fat in response to an exercise program.

It is not completely clear why women respond to exercise differently than men, but the basic gender differences in hormonal responses to exercise ultimately affect the brain's appetite control center. It actually makes sense that women are better than men at protecting their body's energy supply. When a woman's body fat gets too low, hormonal changes take place that reduce her ability to become pregnant and to support a successful pregnancy.

This ability of women to protect their body's energy supply has been important for the reproductive success of our species. However, it does make things challenging in an environment that favors sedentary life and widely available high calorie foods.

**Q:** Does this mean that exercise is less important for women than men?

**A:** Exercise appears to have the same substantial health benefits for women and men. But women who need to lose fat may need to pay more conscious attention to their food intake than men for exercise to help. Certainly, exercise allows both men and women to eat more

calories without gaining weight.

**Q:** Are there other gender differences that can affect the role of exercise in attempts to lose body fat?

**A:** Women require a little more than twice as much iron as men. When the body runs low on iron, exercise becomes much more difficult and, eventually, impossible. Some iron is lost in sweat, so women who exercise heavily can have greater iron needs than less active women, putting them at even greater risk of iron deficiency.

Meeting protein needs also can be an issue during attempts to lose weight. Both increased exercise and cutting calories increase protein needs. As a consequence, in the process of keeping calorie intake down, care should be taken to not cut back on high protein foods. Any calorie cutting should focus on foods high in carbohydrate and fat -- not protein.

Exercise can still play a role in weight control for women. Overall, exercise helps the body maintain more metabolically active muscle tissue and increases calorie needs, making it easier to meet nutrient needs with foods.

---

Joannie Dobbs, PhD, CNS and Alan Titchenal, PhD, CNS  
are nutritionists in the Department of Human Nutrition, Food and Animal Sciences,  
College of Tropical Agriculture and Human Resources, UH-Manoa.  
Dr. Dobbs also works with the University Health Service