



Nutrition for Family Living

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April, 2007 Topics

Body Size Now a Factor at MyPyramid.gov
How Exercise Affects Appetite and Body Fatness

Body Size Now a Factor at MyPyramid.gov

By Amy Rettammel

The personalized eating patterns recommended at MyPyramid.gov just got even more personalized. Until recently, you could enter your age, gender, and physical activity level, click a button, and get a personalized calorie level recommended for you, along with an eating pattern to match that calorie level. While partially personalized, this calculation was missing two important factors – height and weight.

Height and weight have now been added to the formula used at MyPyramid.gov to provide personalized calorie recommendations. You also have the option to say you'd like a calorie level that helps you lose some weight. For example:

For a 37-year-old, 5'4" female weighing 135 pounds (a healthy weight) and getting less than 30 minutes of physical activity daily, MyPyramid recommends 6 ounces of grains, 2 ½ cups of vegetables, 1 ½ cups of fruit, 3 cups of milk, and 5 ounces of meat and beans (1800 calories total).

For the same female, who weighs 180 pounds (obese), MyPyramid notes that this is an unhealthy weight that can lead to health problems and advises losing weight. Then 2 options are provided: a recommended eating pattern based on current weight, or an eating pattern based on gradually moving to a healthier weight. The former turns out to be a 2000 calorie eating pattern; the latter is an 1800 calorie eating pattern.

Implications for Extension Education: This is a very nice addition to the way that recommended eating patterns are calculated by MyPyramid.gov. It gives educators an option for referring learners who are interested in weight loss, especially if they are otherwise turning to fad diets to do so. This very personalized eating pattern for gradual weight loss could be an attractive feature for many learners, one that will have them logging on to MyPyramid.gov to take steps to a healthier weight.



How Exercise Affects Appetite and Body Fatness

By Susan Nitzke

In January of this year, two experts from USDA's Human Nutrition Research Center on Aging at Tufts University published an article reviewing what research has shown - - and what we still don't know - about how exercise influences the two major determinants of body fatness, i.e., energy IN (food intake, appetite, hunger) and energy OUT (energy used for storage, body movement, heat, etc.).

Hunger and appetite. Most, but not all, of the studies on hunger and calorie intake show that exercise either reduces or delays self-reported feelings of hunger, at least for a few hours. Studies have been very inconsistent on whether exercise needs to be intense to have such an effect on hunger and how long the effect lasts. If there are long-term decreases in hunger, they are probably associated with improvements in insulin sensitivity. Studies tended to find either an increase or no change in food palatability during or after exercise; whether this has any practical importance is not clear. Some researchers have hypothesized that exercise changes a person's tendency to eat foods high in certain macronutrients (e.g., more fat and protein and less carbohydrates), but studies have not shown any consistent effect on the balance of protein/carbohydrate/fat in foods that people select after exercising.

Energy balance. Overall, exercise appears to cause a negative energy balance (meaning more calories are burned than taken in as food/beverages). People may eat the same or a little more when they are active, but the overall increase is less than the amount of calories they are burning with exercise. Thus, exercise helps in avoiding weight gain or losing excess body weight. The authors point out that exercise alone does not guarantee significant weight loss if a person is not also restricting his/her intake of calories; the combination of exercise and dietary restriction is needed to achieve substantial body fat loss.

Overall. Exercise has many long-term health benefits, including reduced body fatness and reduced risk of diabetes (partly by helping the body maintain insulin sensitivity). Exercise increases the amount of energy used by the body (energy OUT increases; energy IN doesn't increase as much). However, it is still not clear whether exercise affects people's food preferences, taste perceptions, or macronutrient selection.

Implications for Extension Educators. This study confirms the advice in the Dietary Guidelines: "Becoming a healthier you isn't just about eating healthy - it's also about physical activity. Regular physical activity ... helps you control body weight by balancing the calories you take in as food with the calories you expend each day." At this time, there is no clear evidence for the additional benefits that some people claim to observe or experience with activity/exercise, such as changing a person's taste for certain types of food.

References:

Elder SJ, Roberts SB. The effects of exercise on food intake and body fatness: A summary of published studies. *Nutrition Reviews* 2007;65:1-19.

Dietary Guidelines Advisory Committee Report 2005 section on energy, including an analysis of "How is physical activity related to body weight and other nutrition-related aspects of health?" available at: http://www.health.gov/dietaryguidelines/dga2005/report/HTML/D2_Energy.htm.