

Bartley Center Wellness News – 63 - March 14, 2006

1. **Energy Balance**
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Wellness News quiz:

1. Energy Balance is the complex interaction of diet, physical activity, and genetics. True/False
2. Surgeon General's "Call to Action" regarding disabilities encourages health care providers to see and treat the whole person, not just the disability. True/False
3. According to the Framingham Heart Study, you can drastically reduce your risk for cardiovascular disease and add 10 years to your life by not smoking, maintaining a healthy weight and warding off diabetes, high blood pressure, and high cholesterol. True/False
4. Who said - "Do not fear the winds of adversity. Remember: A kite rises against the wind rather than with it."

Answers are below in the reading material.

1. Energy Balance

Energy Balance is the complex interaction of diet, physical activity, and genetics - the "energy in/energy out" formula applies: your weight is directly influenced by your calorie consumption relative to your calories burned. When calories consumed equal calories burned, the result is **energy balance**.

Most of us understand that weight management depends upon the **energy balance equation**; the amount of energy you put into your body (food calories) versus the amount of energy you expend (activity). There is an **energy imbalance** - when the number of calories consumed is not equal to the number of calories used. **Genetics and the environment may increase the risk of personal weight gain.** However, the choices a person makes in eating and physical activity also contribute to overweight and obesity. "Despite obesity having strong genetic determinants, the genetic composition of the human race does not change rapidly." Therefore, the large increase in obesity in America must reflect major changes in non-genetic factors. **Behavior can increase a person's risk for gaining weight.** But, how do you know how many calories *your* body needs to reach or maintain a certain weight?

Understanding your body's energy requirements can help guide you when making nutritional choices. Any weight management plan usually starts with how many calories you burn in a day; your total daily energy expenditure requirements. Below are two ways to determine your energy requirements: (1) the accurate way and (2) the easy way.

(a) The Accurate Way

There are three primary components that make up your body's energy expenditure. Adding these three components together, *basal metabolic rate, energy expended during physical activity, and the thermic effect of food* is the most accurate way of determining how many calories your body requires each day.

- **Basal Metabolic Rate (BMR):** Most of the body's energy, about 60-70%, goes to supporting the ongoing metabolic work of the body's cells. This includes such activities as heart beat, respiration and maintaining body temperature. To determine your BMR:

For adult males - Multiply the body weight by 10; add double the body weight to this value. [*i.e., for a 150 lb male, $1,500 + (2 \times 150) = 1,800$ cal/day BMR*]

For adult females - Multiply body weight by 10; add the body weight to this value.
[i.e., for a 120 lb female, $1,200 + 120 = 1,320$ cal/day BMR]

- **Energy Expended During Physical Activity:** The second component of the equation depends upon your level of physical activity. Physical activity has a profound effect on human energy expenditure and contributes 20-30% to the body's total energy output. One of the most reliable methods in calculating calories burned during physical activity is the Metabolic Energy (MET) Method.
- **Thermic Effect of Food:** The last component to calculate has to do with your body's management of food. The increase in energy required to digest food is referred to as the thermic effect of food (TEF) and it's simple to determine:

TEF = total kcals consumed x 10%
[i.e., 2,000 kcals consumed/day x 0.10 = 200 kcals expended for TEF]

(b) The Easy Way

If all of those calculations seem too confusing or tedious, you can "roughly" estimate your daily calorie requirements using this simple formula: For those who are too heavy or too light these "easy calculations" may be too high or too low.

- **For sedentary people:** Weight x 14 = estimated cal/day
- **For moderately active people:** Weight x 17 = estimated cal/day
- **For active people:** Weight x 20 = estimated cal/day

Note: Moderately Active is defined as 3-4 aerobic sessions per week. Active is defined as 5-7 aerobic sessions per week.

Looking back at the energy balance scale, weight gain is a result of extra calorie consumption, decreased calories used (reduced physical activity) or both. **Personal choices concerning calorie consumption and physical activity can lead to energy imbalance.**

2. The Surgeon General's Call to Action:

To Improve the Health and Wellness of Persons with Disabilities

Four Goals of the Call to Action: The *Surgeon General's Call to Action to Improve the Health and Wellness of Persons with Disabilities* identifies four specific goals for the nation to improve the health and wellness of persons with disabilities.

GOAL 1: People nationwide understand that persons with disabilities can lead long, healthy, productive lives.

GOAL 2: Health care providers have the knowledge and tools to screen, diagnose and treat the whole person with a disability with dignity.

GOAL 3: Persons with disabilities can promote their own good health by developing and maintaining healthy lifestyles.

GOAL 4: Accessible health care and support services promote independence for persons with disabilities.

"This Call to Action encourages health care providers to see and treat the whole person, not just the disability; educators to teach about disability; a public to see an individual's abilities, not just his or her disability; and a community to ensure accessible health care and wellness services for persons with disabilities." **Surgeon General Richard H. Carmona, M.D., M.P.H., FACS**

3. Wellness Facts

New Goal for Healthy Aging

Results of the Framingham Heart Study begun in 1948 suggest a new approach for those striving to live a long and healthy life. The approach is to reach age 50 with as few risk factors for heart disease and stroke as possible. According to the study, you can drastically reduce your risk for cardiovascular disease and add 10 years to your life by not smoking, maintaining a healthy weight and warding off diabetes, high blood pressure, and high cholesterol. Source: *Circulation*, February 14, 2006.

New Free Resource Can Help You Shape Your Family's Health

The new Shaping America's Health Family Health E-Newsletter provides valuable information and tips on how you can help your family get and stay healthy. It can show you how to prepare healthy meals with ease, avoid common stress pitfalls, and find time for exercise. To subscribe to the e-newsletter, go to the American Diabetes Association. Select "Sign up for E-newsletters."

Cancer Deaths in U.S. Decline First Time in Over 70 Years

The American Cancer Society reports that the number of cancer deaths in the United States dropped slightly in 2003. This is the first decline in more than 70 years. Lifestyle changes, such as quitting smoking, and advances in prevention, early detection, and improved treatment have contributed to the decline. Source: *2006 Cancer Facts and Figures*, American Cancer Society.

Low-Fat Diets No Effect on Risk for Breast and Colon Cancer or Heart Disease in Postmenopausal Women

Results of the Women's Health Initiative (WHI) Study, suggest that a diet low in fat and high in fruits, vegetables, and grains does not reduce a postmenopausal woman's risk for developing breast cancer, colorectal cancer or cardiovascular disease. The WHI study involved nearly 50,000 postmenopausal women. The WHI results do suggest, however, that women who achieved greater reductions in saturated fat or trans fat in their diet and higher intakes of fruits and vegetables, might experience a reduced risk of heart attacks. Overall, the researchers reported that the WHI low-fat diet is consistent with the USDA Dietary Guidelines for Americans 2005 and remains a healthy option for postmenopausal women in general. Source: *Journal of the American Medical Association*, Feb. 8, 2006.

Secondhand Smoke Takes Its Toll

An analysis of 29 studies has found that the effects of exposure to secondhand smoke can have almost the same effect as active smoking. The negative effect it has on cardiovascular health is greater than that of outdoor air pollution. Source: *Circulation*, May 24, 2005.

Nine States Ban Smoking in Public Places - including Massachusetts

Nine states now ban smoking in public space and most workplaces, including restaurants and bars. These include California, Connecticut, Delaware, Maine, Massachusetts, New York, Rhode Island, Vermont, and Washington. In 2005, Maine became the first state to receive an "A" in each of the four categories of the American Lung Association's annual *State of Tobacco Control 2005* report card: tobacco prevention spending, cigarette tax, smoke-free air and youth access. The American Lung Association challenges all states to become smoke-free by 2010.

Source: *State of Tobacco Control 2005*. American Lung Association.

President's Council on Physical Fitness and Sports Celebrates 50th Anniversary

The President's Council on Physical Fitness and Sports (PCPFS) is celebrating its 50th anniversary during 2006. The council is an advisory committee of volunteers appointed by the President. It promotes health, physical activity, fitness, and enjoyment for people of all ages. For information on the PCPFS President's Challenge program encouraging physical activity for all ages, as well as to download free council publications on how to get more physically active and eat healthier, see the council website at fitness.gov.

Best Way to Attack Plaque for a Healthier Smile

Removing plaque from your teeth by toothbrushing helps prevent gingivitis (gum inflammation). A review of forty-two studies has found that rotation oscillation electric toothbrushes (brush heads rotate in one direction and then the other) are better than manual toothbrushes at removing plaque and reducing gum inflammation. The Academy of General Dentistry recommends you brush your teeth at least three minutes twice a day. Source: "Manual versus powered toothbrushing for oral health," PG Robinson, et al., *The Cochrane Database of Systematic Reviews*, April 18, 2005.

Healthier Choices Driving Food Industry

Researchers say that health is the No. 1 driver of the food industry worldwide. This trend is showing up on supermarket shelves and on restaurant menus. No- and low-fat food items make up the largest segment of healthy foods. The growing health-conscious Boomers are avoiding foods with saturated fat, cholesterol, fat and trans fat and looking for foods to add more fiber, vitamins, and minerals to their diet. Source: "What, When, and Where America Eats," A.E. Sloan, *Food Technology*, Jan. 6, 2006.

4. Quotes:

"Never be afraid to laugh at yourself, after all, you could be missing out on the joke of the century." - Dame Edna Everage

"Do not fear the winds of adversity. Remember: A kite rises against the wind rather than with it." - Anonymous

Contrasting cultural values:

"The early bird gets the worm." vs. "The lead bird in the flock is the first to be shot."

- American Proverb

- Chinese proverb

"Don't just sit there; do something." vs. "Don't just do something; sit there."

- Protestant value

- Zen value

"The greatness of a community is most accurately measured by the compassionate actions of its members, ... a heart of grace and a soul generated by love." - Coretta Scott King

"If your ship doesn't come in, swim out to it!" - Jonathan Winters

"It is amazing how much crisper the general experience of life becomes when your body is given the chance to develop a little strength." - Frank Duff

"What a child doesn't receive he or she can seldom later give." - P.D. James

"When I let go of what I am, I become what I might be." - Lao Tzu

"What's another word for Thesaurus?" - Steven Wright

"I write down everything I want to remember. That way, instead of spending a lot of time trying to remember what it is I wrote down, I spend the time looking for the paper I wrote it down on." - Beryl Pfizer

5. A Wellness Challenge - keep it simple: find and preserve the simplicity in well-being, live healthy by eating healthy and participating in regular, meaningful physical exercise. Not only does it sound simple, it is simple.