

eat less to live longer?



At a time when everything from sport utility vehicles to hamburgers comes “supersized,” the notion that less is more may seem out-of-date to some Americans. But when it comes to calories, eating fewer just might be a prescription for a longer, healthier life. Learn about the theory and research behind calorie restriction from Jenna A. Bell-Wilson, PhD, RD, LD, and assistant professor of medical dietetics at Ohio State University.

[1] The Secret to Longevity?
Researchers were fascinated to learn that the island of Okinawa in Japan is home to the highest percentage of centenarians (those aged 100 or older) in the world; 39.5 for every 100,000 people, compared to about 10 in every 100,000 Americans, according to a *Newsweek* article (Takayama 2003). The Okinawa islanders consume a high-quality diet—mainly homegrown vegetables, tofu and seaweed; they also tend to live low-stress, active lives. Interestingly,

while most Okinawans have protein and fat intakes similar to those of fellow citizens, the Okinawans’ *calorie levels* are 20 percent lower than the Japanese national average (Heilbronn & Ravussin 2003).

[2] Longevity and Calorie Restriction
So, is eating fewer calories—without being undernourished—the answer to longevity? In animals placed on low-calorie, optimal diets, the typical signs of aging—such as declines in immune function and loss of functional capacity—slowed down (Roth, Ingram & Lane 1999).

Unfortunately, research on the effect of calorie restriction in humans is limited.

In the Biosphere 2 experiment, participants living in a self-contained ecological space outside of Tucson, Arizona, had to eat a low-calorie diet after experiencing problems with crop cultivation (Walford et al. 1999). Originally meant to eat 2,500 calories per day, the subjects averaged only 1,800 calories a day for the

first 6 months, then switched to about 2,000 calories daily for the remaining 18 months. The diet consisted primarily of vegetables, fruits, nuts and grains and modest amounts of dairy, eggs and meat. At the end of 2 years, participants had not only lost weight but also reduced their blood pressure, blood glucose, insulin, total cholesterol, low-density lipoprotein (“bad” cholesterol) and triglyceride levels, all of which—when elevated—are linked to the development of chronic disease (Walford et al. 2002).

[3] The Bottom Line
Calorie restriction without undernutrition *may* turn out to be a prescription for a longer and healthier life. However, more studies are needed before conclusions can be drawn. In the meantime, you can take small steps toward healthy lifestyle changes (see “Living Long, Not Large”). ■

References

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living long, not large

Here are some strategies you can use to reduce unnecessary calorie consumption without creating nutrient deficiencies:

- Make nutrient-dense foods, such as fruits, vegetables, beans and legumes, the mainstays of your diet.
- Eat meat occasionally but focus on the leaner cuts. Try to include fish as a regular source of protein.
- Avoid foods that are high in trans fatty acids and partially hydrogenated oils, found in margarines and many processed foods. Minimize consumption of butter, palm and coconut oils, and fried foods.
- Include some essential fats in your diet. Good sources include unsalted nuts (e.g., pecans, walnuts and almonds) and plant oils, such as canola and olive oils.
- Check food labels for ingredients, serving sizes and fat content, so you know what you are eating.
- When evaluating calorie intake, don’t forget the “hidden” calories found in many beverages and condiments.
- To get the best results, combine any reduction in calories with an increase in physical activity. But don’t overdo it, especially if you are new to exercise.

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Coach Ken Johnson
www.3-fitness.com
coachken@3-fitness.com

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