



# Health Connections

LINKING NUTRITION RESEARCH TO PRACTICE

## HEALTHY AGING

# Optimal Health Throughout the Life Span

### Introduction

The quest for agelessness and the desire to live as long as possible (preferably in good health) is top of mind for the one in eight Americans over the age of 65—perhaps even more so for those aged 45–55 joining the “silver tsunami” within one to two decades. This issue of *Health Connections* discusses aging so health professionals can communicate the good news that older adults want to hear about nutrition: It is never too late and that even small changes can make a difference at any age.

### Background—“New Age” Aging

Aging is not a passive activity, but rather a complex process of accumulation of molecular, cellular and organ changes leading to loss of function and increased vulnerability to disease.<sup>1</sup> Profiles of those who survive, delay and escape age-related diseases reflect different underlying interactions between genes, lifestyle and environmental influences.<sup>2</sup> Individualization of nutrition recommendations takes on increased importance in older adults as the interaction of genetics and nutrition tends to make us more heterogeneous as we age. Nutrient needs of those over 70 are now a separate category with Dietary Reference Intakes, different from those aged 51–70 for some nutrients.

The goal of “new age” aging is not merely to extend life span, but to experience the benefits of more healthful years of independence and compressed morbidity in later years. Although it is a commonly held belief that the older a person gets, the sicker he or she becomes—a more enabling view might be: the older an individual gets, the healthier he or she has been.<sup>2</sup>

Older Americans fiercely prize their independence, and for this reason they fear dependence even more.<sup>3</sup> Most centenarians remain functionally independent into their early 90s. The prevention

aspects of nutrition help prolong this independence. Even if past nutritional and lifestyle practices were not optimal, much can be done to preserve existing health status and forestall the onset of disability.<sup>4</sup>

### Changes in Body Composition, Weight and Mobility

Profound changes in body composition occur with aging, even at a stable weight. These include the loss of lean body mass—primarily muscle and bone—and an increase in body fat.<sup>5</sup> Sarcopenia of aging, the involuntary progressive loss of muscle mass with subsequent reduction in muscle strength, is associated with lowered mobility and increased risk of falls. (See *Health Connections* Spring 2009 at [http://www.dairycouncilofca.org/PDFs/hc\\_Spring\\_09.pdf](http://www.dairycouncilofca.org/PDFs/hc_Spring_09.pdf).)

Major weight gain or weight loss reduces life expectancy for older adults. It is important to distinguish if weight loss is intentional to achieve a healthy body weight, a result of calorie restriction to extend lifespan (see Side Bar) or unintentional. Unintentional weight loss may indicate underlying chronic disease, including cancer and frailty, and can increase risk of osteoporosis, a major cause of fracture and disability among older adults.

Weight-loss goals for obese older adults (BMI >30) generally combine caloric reduction with regular  
*continued on page 2*



Mary Jo Feeney, MS, RD, FADA

### HEALTH CONNECTIONS EDITOR

Mary Jo Feeney specializes in nutrition communications and marketing. With over 30 years experience in public health nutrition and education, she currently is a leading consultant to the food, agriculture and health care industries. A charter Fellow of the American Dietetic Association, Mary Jo served on the Board of Directors of both the American Dietetic Association (ADA) and its Foundation (ADAF) and received the association's Medallion Award in 1996.

## REFERENCES

- <sup>1</sup> Fontana L, et al Science; 2010; 328; 321-326.
- <sup>2</sup> Perls TT. Am J Clin Nutr 2006;83:484S-487S.
- <sup>3</sup> Wellman NS. Am J Clin Nutr. 2010; 91:1151-2.
- <sup>4</sup> Rivlin RS. Am J Clin Nutr 2007; 86:1572-6S.
- <sup>5</sup> Villarreal DR et al. Am J Clin Nutr 2005; 82:923-34.
- <sup>6</sup> Evans WJ. J Am Coll Nutr; 2004; 23:601S-609Sus. www.nfpa-food.org.
- <sup>7</sup> International Osteoporosis Foundation. <http://www.iofbonehealth.org/news/news-detail.html?newsID=327>.
- <sup>8</sup> Lichtenstein AH et al. J. Nutr. 2008;138:5-11.
- <sup>9</sup> <http://www.cdc.gov/nchs/data/ad/ad395.pdf>.
- <sup>10</sup> Levy BR et al. J Pers Soc Psychol. 2002; 83(2):261-70.
- <sup>11</sup> Wellman NS. J Am Diet Assoc; 2007:741-43.
- <sup>12</sup> Kamp B, Wellman NS, Russell: Position Statement of the American Dietetic Association, American Society for Nutrition, and Society for Nutrition Education. J Am Diet Assoc. 2010; 110:463-472 and J Nutr Educ Behav. 2010; 42(2):72-82.
- <sup>13</sup> Speakman J. Aging 2010 Symposium, Experimental Biology April 24, 2010.
- <sup>14</sup> Speakman JR and Hambly C. J. Nutr. 2007; 137:1078-1086.
- <sup>15</sup> Poulain M. et al. Experimental Gerontology 2004; 39:1423-1429.
- <sup>16</sup> Buettner D. The Blue Zones: Lessons for living from the peoples who've lived the longest." www.bluezones.com.

physical activity—particularly strength or resistance training—to attenuate weight loss-induced bone loss and improve physical function.<sup>5</sup> Demonstrating that it is never too late, a group of nursing home residents ranging in age from 87 to 96 improved their muscle strength by almost 180 percent after just eight weeks of strength training. Even frail, older adults can improve their balance, quicken their walking pace and maintain a higher quality of life.<sup>6</sup>

### Nutrient Density Critical

A nutrient-dense diet is critical to support healthy aging when activity and energy levels decline. In addition, vitamin and mineral needs either remain constant or increase due to biological changes, such as the limited absorption of vitamin B12 and reduced synthesis of vitamin D in the skin. Although the Institute of Medicine has yet to issue revised recommendations for vitamin D and calcium, the International Osteoporosis Foundation recommends 800–1000 IU of vitamin D a day for older adults for bone and muscle development, function and preservation.<sup>7</sup>

The shortfall nutrients in diets of older adults—calcium, vitamins D, E, K, potassium and fiber—range in mean intake from 33 percent to 50 percent of the RDA or AI.<sup>8</sup> According to the Healthy Eating Index (HEI), which measures diet quality based on standards derived from the 2005 Dietary Guidelines and the MyPyramid food guidance system, less than one-third meet the recommended servings for any of the five food groups.<sup>9</sup> A Modified MyPyramid for Older Adults emphasizes nutrient-dense food choices, the importance of fluid balance and regular activity, with additional guidance about forms of foods to meet some of the unique dietary needs of older adults.<sup>8</sup> In addition, high-quality protein choices, including low-fat dairy products, lean meats, nuts and beans, are important when energy levels are low and help minimize risk of sarcopenia.

## Practice Points When Working With Older Adults

*Provided by Dr. Wellman*

- Keep current on the research on the role of nutrition and aging.
- Provide realistic guidance on easy-to-prepare, easy-to-eat foods, meals and snacks.
- Emphasize options that are convenient, tasty and healthy within each of the food groups. That's especially easy to do for dairy foods. Yet, we haven't targeted older adults with the 3-a-Day message. In our studies, we've found them ready and eager to drink more milk once they hear why it's important to their health. Those struggling to keep their weight up or to re-gain weight they've unintentionally lost have been pleased to hear that milk can be an easy, healthful solution. Milk teamed with a whole-grain cereal helps older adults increase their fiber intake—which they consider important for digestive health.
- Snacking is an important source of calories for older adults.<sup>11</sup> Eating healthful snacks such as low-fat yogurt with vitamin D can help increase energy intake and provide needed nutrients.
- Connect older adults with nutrition assistance programs such as Meals on Wheels, Senior Dining Centers, SNAP electronic benefit cards (formerly called food stamps) and other resources in their communities—especially important for those at greater nutrition risk because of acute illness, chronic disease, limited income, functional limitations, living alone and/or in rural areas.
- The social aspect of eating takes on renewed importance in the older population. Encourage clients to involve parents, older relatives and friends in generational meals that represent a variety of flavors and textures from all food groups.
- For more on food, fitness and friendships as the foundation for successful aging among community-residing persons, read the recent joint-position paper on that topic, available at <http://www.eatright.org/About/Content.aspx?id=6442451115>.<sup>12</sup>

## Interview — Nancy S. Wellman, Ph.D., R.D., F.A.D.A., Friedman School of Nutrition Science and Policy, Tufts University, Boston; recently retired, Director, National Resource Center on Nutrition, Physical Activity and Aging, Florida International University, Miami.



Nancy S. Wellman

### Q. Is “healthy aging” an oxymoron or truly achievable?

A. Successful aging or healthier aging are ways to talk about aging in a positive fashion. We live in one of the world’s most youth-worshipping and death-denying nations. Yet, older adults and those coming to face aging as inevitable want to hear good news. Older people in the United States today are indeed living longer, healthier, more functionally fit lives than ever before. Women who reach age 65 can expect to live about 20 more years and men slightly less than 20 more years! Some consider those in their 90s to be today’s “new old.”

Research shows that a positive attitude toward aging can actually increase life by over 7 years! Positive self-perceptions of aging have more impact than gender, socioeconomic status, loneliness or functional health.<sup>10</sup> We need to update our thinking and be positive when counseling older clients. Whatever the individual situation, a goal is to enable clients to think positively and to “bother” to eat healthier. For example, those with little appetite have often been eating too few calories for too long. Once they start eating more, their appetites generally increase.

### Q. What is the relationship between food, nutrition and functional independence?

A. Many studies show that quality of life and functionality are food issues. Common diseases of aging—heart disease, diabetes, osteoporosis, and cancer—compromise functional fitness, yet health professionals may not always connect them to independence and functionality. For example, poorly controlled diabetes, a leading cause of amputations and blindness, reduces independence. In addition, someone who is bed-bound can neither get to the kitchen nor to a grocery store; those who are easily fatigued may have difficulty shopping and cooking, with their food intake becoming limited in quantity (calories) and/or quality (nutrients). Fractures and falls have a food connection, as does recovery time from infections and wound healing. Cognition and mental health are affected by nutrition and hydration.

### Q. What is the greatest change you have seen or would like to see so consumers can truly experience “healthy aging?”

A. Boomers are changing the face of aging in America and bringing more attention to it. Our age wave, together with our obesity epidemic, is now driving the food industry to re-formulate and/or create healthier products.

We need to generate more respect for the importance of healthful diets for aging well. That means universal access to quality nutrition services; reimbursement for nutrition education to promote health and lessen the risk of food-borne illness; and individualized nutrition counseling. If we are to put our national slogans emphasizing prevention into practice, nutrition and healthier diets deserve center stage as health care reform rolls out.

## Side Bar: Hot Topics in the Aging Field

### Life Extension Through Calorie Restriction

The effect of caloric restriction (CR) without malnutrition on longevity, discovered decades ago in rats, has emerged again in scientific journals<sup>1</sup> and symposia.<sup>13</sup> Food restriction in many species has increased longevity by up to 50 percent because CR attenuates the onset of many age-related diseases, primarily cancer.<sup>14</sup> Some individuals have already started to voluntarily restrict themselves in the hope to slow their rate of aging (<http://www.cron-web.org>). Questions remain about the amount, duration and feasibility of CR in a society where food intake has functions beyond intake of sufficient calories and nutrients to survive, and CR’s potential detrimental health effects such as osteoporosis, sacropenia and lower immune function.<sup>14</sup>

### “Blue Zone” Living

“Blue zones” are geographic areas, longevity hot spots, where people commonly live active lives past the age of 100. Demographers initially studying centenarians in Sardinia (Italy)<sup>15</sup> highlighted locations on a map with a blue marker. Lifestyle characteristics include walking/moderate physical activity; having a positive outlook; knowing how to relax; not eating too much and eating a Mediterranean-type diet; having a social network; and making families a priority.<sup>16</sup>