

Challenges of elderly nutrition

Nutritional needs do not change significantly with age, though with less food intake comes less nutrient intake.

The challenge, says MANNY STERN, is to pack more nutrients in a food matrix that older people will eat

To a large degree, we all reap what we have sowed during our lifetime. The environment we have created during the first 50 years sets the stage for how we will experience ageing. We exit middle age becoming suddenly conscious of time's potential effects on our mind and body.

Four health concerns in particular loom larger: heart, bones, cancer and mind. Fortunately, accumulating science lends credence to the idea that a combination of exercise and nutritional intervention can improve the odds for a healthier old age.¹

The degree to which a given nutrient benefits each of the health conditions under consideration is rather astounding. Let us take a look at some of the key nutrients for older adults as defined by the Institute of Medicine. Note how all of the nutrients in the chart (page 23) play a role in the four major chronic health issues.

Also evident is the fact that nutritional needs do not change significantly with age and are only marginally different for men and women, as evidenced in the Dietary Reference Intake for older adults established by the Food and Nutrition Board of the National Academy of Sciences.

With lower levels of food consumption and decreased caloric needs among the ageing population, getting the proper amounts of nutrients becomes a greater challenge. Clearly, many of the vitamins and minerals our bodies crave derive from nature's bounty. However, modern farming and preparation all conspire to corrupt the nutrient contents. With advancing years,

people consume less food, hence proportionally diminishing the vital nutrients just at the stage in life when they are most needed.

Jeffrey Blumberg, PhD, professor of nutrition at Tufts University, has determined that the dietary intakes of a large percentage of older adults fall significantly below the Recommended Daily Allowance. On average, ageing persons are at a major risk for ingesting less than two-thirds of the RDA.

A study conducted by the Boston University School of Public Health, which surveyed 1,156 people over 70 years old, concluded that nutritional policies and interventions for older adults should take into consideration demographic and lifestyle characteristics. Recommendations were made suggesting that different RDAs be advised for certain conditions.

PACKING IN NUTRIENTS

How do we get the aged to eat better? They profess to have no appetite, can't taste food, can't prepare it properly and don't care to eat. Yet, we find that the elderly do respond to certain food stimuli. As a group



they tend to like sweets. They like soups and easily digested puddings. They drink beverages that can be made to reflect their tastes. They respond to aggressively seasoned (not necessarily spicy) foods that overcome their reduced taste sensitivity.

What may be needed to stimulate tired and bored palates are unit servings of foods that are easy to consume, require minimum preparation and contain proper nutrients. Moreover, by delivering the nutrients in a food matrix, conditions are optimised for their absorption. The author has spent many years in the creation of nutritionally tailored products for a variety of nutritionally challenged audiences. A muffin weigh-

Dietary reference intake (DRI) for older individuals²⁻¹¹

Nutrient or mineral	Ages 51 to 70		Ages 70+		Function
	Females	Males	Females	Males	
Calcium (mg)	1200	1200	1200	1200	Bones and teeth; muscle contraction; nerve function; normal blood clotting; may lower blood pressure
Vitamin E (mg)	15	15	15	15	Coronary heart disease; nervous system disorders; Alzheimer's; Parkinson's; macular degeneration
Vitamin C (mg)	90	90	75	75	Antioxidant; protects against cancer, cognitive impairment, decreased function; wound healing
Magnesium (mg)	420	420	320	320	Muscle contraction; nerve function; may lower blood pressure; energy utilisation
Vitamin D (mcg)	10	15	20	15	Aids calcium absorption; bone mineral fracture risk; muscle strength
Thiamine (mg)	1.2	1.2	1.1	1.1	Enhances circulation; carbohydrate metabolism; blood formation; nerve function
Riboflavin (mg)	1.3	1.3	1.1	1.1	Activates B-6; carbohydrate, amino acid and fatty metabolism
Niacin (mg)	16	16	14	14	Cell respiration; carb, fat and protein metabolism; circulation; nervous system; normal secretion of bile and stomach fluids
Vitamin B6 (mg)	1.7	1.7	1.5	1.5	Lowers total homocysteine; nerve function, Alzheimer's; may help prevent vascular and heart disease
Folate (mcg)	400	400	400	400	Red blood cell formation; cell growth and division; may help prevent heart disease
Vitamin B12 (mcg)	2.4	2.4	2.4	2.4	Cell growth and division; red blood cell formation; nerve function; may help prevent heart disease

ing 100g can be made to deliver 1g of calcium, 10-12g of protein, and a number of critical micronutrients, in particular vitamins C and E and all the B vitamins. The same can be accomplished with a serving of rice or tapioca pudding. In both examples, one needs to bury 2-3g of nutrients in a 100g food matrix – a challenge, to be sure, but one that can be met.

Cookies can also be made to deliver protein, calcium, B vitamins and several other desirable micronutrients. This can be done without sacrificing taste.

Soups are another category of favourite elder products that can attain similar results. James Duke, MD, with the US Department of Agriculture, stated: "An old-fashioned vegetable soup, without any enhancement, is a more powerful anti-carcinogen than any known medicine." A highly flavoured Tuscan bean soup can be

made to incorporate all the desired nutrients in a satisfying vehicle.

The author has experimented with numerous soups, prepared foods and a variety of baked products designed to meet specific nutritional targets for this population. In all cases, the food matrix is large compared to the nutrient content, making it relatively easy to mask the offensive taste of some of the vitamins.

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