

Table 3. NUTRIENTS AND THEIR THERAPEUTIC PROPERTIES

Nutrient	Functions	Notes	Sources	Related CPG Recommendation
Calories	Supply energy, prevent weight loss, preserve lean body mass		Carbohydrate, protein, and fat; carbohydrate and fat are preferred	4.6, 4.8, 4.9, 4.10
Carbohydrates	Glucose supports cell growth, fibroblasts, and leukocytes	Delivers energy; energy needs must be met to spare protein from being used for energy	Grains, fruits, and vegetables; complex carbohydrates are preferred	
Protein	Immune support; binding of skin, cartilage, and muscle	Contains nitrogen, which is essential for wound healing. Arginine becomes a conditionally indispensable amino acid during times of physiologic stress	Meats, fish, poultry, eggs, legumes, milk, and dairy products; favor lean meat and reduced- or low-fat dairy products	4.5-4.10
Fat	Carries fat-soluble vitamins, provides insulation under the skin and padding of bony prominences, helps modulate inflammation and the immune response	Most concentrated energy source	Meats, eggs, dairy products, and vegetable oils	
Fluids/water	Solvent for minerals and vitamins, amino acids, and glucose; helps maintain body temperature; transports materials to cells and waste products from cells; maintains skin integrity		Water, juices, beverages; fruits and vegetables contain approximately 95% water. Most supplements are 75% water	4.13
Vitamin A	Protein synthesis, collagen formation, maintenance of epithelium, immune function	May delay healing in older adults on corticosteroids UL is 3,000 µg; DRI females aged >70 y is 700 µg, males aged >70 y is 900 µg	Beef liver, milk, dark green and yellow vegetables (carrots, sweet potatoes, broccoli, spinach, apricots)	
Vitamin C	Collagen formation, enhances activation of leukocytes and macrophages to wounds, improves tensile strength, aids in iron absorption	Water-soluble, noncaloric organic nutrient	Citrus fruits and juices, tomatoes, potatoes, broccoli	
Vitamin E	Fat metabolism, collagen synthesis, cell membrane stabilization	Antioxidant	Vegetable oils, sweet potatoes	
Copper	Red blood cell formation, responsible for collagen cross-linking and erythropoiesis	Inorganic, noncaloric nutrient UL is 10,000 µg. DRI females and males aged ≥70 y is 900 µg.	Nuts, dried fruit, organ meats, dried beans, whole-grain cereal	
Iron	Transports oxygen to the cells as a component of hemoglobin, important in collagen formation, creates energy from cells		Heme iron: meats, poultry, and fish Nonheme iron: vegetables, grains, eggs, meat, fish	
Zinc	Cofactor for collagen formation, metabolizes protein, assists in immune function, liberates vitamin A from the liver, interacts with platelets in blood clotting	Inorganic, noncaloric nutrient Mega doses of zinc may inhibit healing and cause copper deficiency UL is 40 mg DRI females aged ≥70 y is 8 mg, males aged ≥70 y is 11 mg.	Meats, liver, eggs, and seafood	

Abbreviations: CPG, EPUAP/NPIAP/PPPIA Clinical Practice Guideline; DRI, dietary reference intake; UL, tolerable upper intake level. Adapted with permission from Bernstein M, Munoz N. Nutrition for the Older Adult. 3rd ed. Burlington, MA: Jones and Bartlett Learning; 2020.