

LBMI: VERY IMPORTANT!

Help your client plan how she or he will maintain or increase Lean Body Mass Index (LBMI) * so it stays greater than 16 for women or greater than 18 for men.

Break-Proof Bones

Nutrient		What It Does	Optimal Amount	Sources
Calcium	↑	Bone formation, growth and maintenance	1,200 mg/day	Low-fat dairy products, bony fish, fortified orange juice & cereal
Vitamin D	↑	Promotes calcium absorption	19-24: 10 mcg 25-50: 5 mcg	Fortified dairy products, salmon & other fatty fish
Magnesium	↑	Lowers blood acidity: prevent bone loss	19-29: 310 mg ≥30:320 mg	Vegetables, seafood, nuts, bananas, orange juice, potatoes, low-fat milk, whole grains
Potassium	↑	Lowers blood acidity: prevent bone loss	2,000-3,500 mg	Fruits, vegetables, low-fat milk, whole grains
Vitamin K	↑	Helps transport calcium to bones	19-24: 60 mcg 25-50: 65 mcg	Spinach, swiss chard, collard greens, bok choy, kale, broccoli
Protein	—	Excess may increase calcium excretion. However, normal amounts are needed for calcium absorption	45-50 mg/day or 0.8 gm/kg body weight/day	Egg whites, lean meat, poultry, fish, nuts, low-fat dairy products, beans, tofu
Alcohol	↓	Interferes with absorption of nutrients and reduces bone formation and remodeling	2 or fewer per day, always with meals	Beer, wine, liquor
Caffeine	↓	Increase calcium loss in urine	No more than 2-3 cups per day	Coffee, tea, soft drinks, chocolate
Smoking	X	Affects ovarian function, causing early menopause or reduces bone formation and remodeling	NO SMOKE	Cigarettes
Physical Activity				
Exercise	↑	Increases bone density, muscle tone, connective tissue	≥4 days/week	Exercise, sports, manual labor, gardening

* Lean Body Mass Index (LBMI) is also called Fat Free Mass Index (FFMI) in the research literature. There are high correlations between LBMI (FFMI) and bone mineral density. High LBMI means high bone mineral density which is related to lower risk and incidence of osteoporosis and fractures.