

*Module 3, Lesson 3 Handout:*

**Calcium & Vitamin D Recommendations For Bone Health**

**Calcium** is an important mineral in the body for a multitude of reasons. It plays a role in muscle contraction, blood clotting, nerve impulses, heartbeat regulation and fluid balance within cells. And, of course, building strong bones and teeth. It's the most abundant mineral found in the body. As you may know, 99% of this calcium is stored in your bones and if you're not consuming enough calcium in your diet, blood will draw calcium from your bones making them weak and susceptible to fracture. This can be eye opening information for many of your clients, especially those who are older and naturally have weaker bones and muscles.

**Calcium Recommendations**

	1-3 years old	4-8 years old	9-13 years old	14-18 years old	19-50 years old	51-70 years old	71+ years old
Calcium, Milligrams (mg) (RDA*)	700mg	1,000mg	1,300mg	1,300mg	1,000mg	1,000mg	1,200mg

\*RDA= *Recommended Dietary Allowance*

Insufficient calcium intake or a deficiency in calcium, known as hypocalcemia, may have severe long term effects including osteopenia which may lead to osteoporosis. The populations most at risk for negative health effects due to insufficient calcium intake are postmenopausal women, women with amenhorrea, people with lactose intolerance or an allergy to cow's milk and vegetarians.

**Calcium in the Diet**

Most of us know dairy products made with cow's milk are a great source of calcium, but calcium is also found in dark leafy greens, almonds, sesame seeds, fish with bones such as salmon and sardines and many types of beans. Refer to the Sources of Calcium in the Diet tool in this lesson when working with clients to increase their intake of calcium.

**Vitamin D**, actually considered a hormone, is another important nutrient for bone health and most people just aren't getting enough of it. In fact, about 42% of Americans are vitamin D deficient - that's why the FDA has added it as a mandatory nutrient on the nutrition facts label. Vitamin D helps increase the absorption of calcium in the gut to be stored in the bones and regulates blood calcium and phosphate levels. You may already be recommending your clients get outside and soak up some vitamin D because the body can produce its own vitamin D when exposed to ultraviolet rays. In addition to being a key player in bone health, vitamin D has many other important roles in the body including being anti-inflammatory, supporting the immune system and mood and even weight control.

### Vitamin D Recommendations

	14-18 years old	19-50 years old	51-70 years old	70+ years old
Vitamin D, Micrograms (mcg) (RDA*)	600mcg	600mcg	600mcg	800mcg

\*RDA= *Recommended Dietary Allowance*

Insufficient vitamin D intake can also lead to weak bones that are susceptible to fracture. The populations most at risk of vitamin D deficiency are the elderly, those who are homebound and spend little time outside, those with darker skin and people who are obese.

### Vitamin D in the Diet

Vitamin D is scarcely found in the diet, but there are a few foods like fatty fish, yeast, egg yolks and some mushrooms that contain decent amounts of vitamin D. This is why we see so many products fortified with Vitamin D, because it's not naturally found in most foods. Refer to the Sources of Vitamin D in the Diet tool in this lesson when working with clients to increase their intake of vitamin D.