

Potassium Recommendation Fact Sheet

Dairy foods are among the greatest food sources of potassium in the American diet.



What is the Function of Potassium?

Potassium is a mineral that helps regulate fluid and mineral balance and is needed for muscle contractions and transmission of nerve impulses¹. It also helps regulate blood pressure; an important role considering one in three American adults is living with hypertension².

Potassium plays such an important role in blood pressure regulation and stroke prevention that the Food and Drug Administration has authorized the use of the health claim "diets containing foods that are good sources of potassium and low in sodium may reduce the risk of high blood pressure and stroke," for foods that are naturally low in sodium, fat, saturated fat, and cholesterol, and provide at least 350 mg of potassium per serving, such as fat-free milk and some yogurts³.

How Much Potassium is Needed?

Prior to 2004, no official recommendation for potassium intake existed, although many health professionals recommended 2 grams a day. But in February of 2004, after an extensive review of scientific literature, the Institute of Medicine (IOM) set the Adequate Intake of potassium for adults at 4.7 grams a day - more than double previous estimates⁴. Inadequate dietary potassium intake may increase risk for cardiovascular disease, particularly stroke⁴.

Dietary Reference Intake For Potassium ⁴	
Males & Female	Adequate Intake, mg/day
1-3 years	3000
4-8 years	3800
9-13 years	4500
14-50 years	4700
>50 years	4700

No single age group of Americans is meeting these IOM recommendations⁵. However, researchers have recently found that mean potassium intakes were significantly higher in people who met dairy food intake recommendations of three servings a day, compared to those who did not⁵.

What are the Effects of Potassium Deficiency?

Potassium deficiency is defined as a serum potassium level of less than 3.5 mmol/L. Moderate potassium deficiency may be characterized by increased blood pressure, increased salt sensitivity, increased risk of kidney stones and increased bone turnover. Severe potassium deficiency, or hypokalemia, can lead to cardiac arrhythmias, muscle weakness, and glucose intolerance.

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What Foods Provide Potassium?

According to nationwide food consumption surveys, milk is the number one food source of potassium for Americans in all age groups⁶. An 8 oz serving of low-fat milk provides about 366 mg of potassium; an 8 oz serving of low-fat, fruit yogurt provides about 490 mg of potassium. Three servings of low-fat milk a day provides 1,098 mg of potassium, close to a fourth of the potassium recommendation⁷. Other common sources of potassium include fruits, vegetables, whole grains, nuts, seeds and dried beans.

Following the Dietary Approaches to Stop Hypertension (DASH) eating plan could help people meet recommended potassium levels⁶. Research shows the DASH eating plan, a balanced eating plan that includes two to three servings of low-fat dairy foods and eight to ten servings of fruits and vegetables, may help lower blood pressure^{8,9}.

Sources of Potassium ⁷	
Medium baked potato with skin (173 g)	926 mg
8 oz yogurt	490 mg
1/2 cup pasta sauce	404 mg
8 oz low-fat milk	366 mg
6 inch banana	362 mg
1 oz almonds	200 mg
Small orange (2-3/8")	174 mg
1/2 cup cottage cheese, 4% milkfat	118 mg

Recommend 3 daily servings of dairy to help your patients get potassium, protein and other important nutrients.

Sources:

- 1 Insel P, Turner RE, Ross D, eds. *Nutrition*, 2002 Update. Boston: Jones and Bartlett Publishers; 2002.
- 2 American Heart Association. High Blood Pressure Statistics. 2009. Available at: <http://www.americanheart.org/presenter.jhtml?identifier=2139>. Accessed August 12, 2009.
- 3 U.S. Food and Drug Administration. Health claim notification for potassium-containing foods. 2000. Available at: <http://vm.cfsan.fda.gov/~dms/hclm-k.html>. Accessed August 14, 2009.
- 4 Institute of Medicine. Dietary Reference Intakes for Water, Potassium, Sodium, Chloride, and Sulfate. Washington, DC: National Academy Press; 2004.
- 5 McGill CR, Fulgoni VL, DiRienzo D, Huth PJ, Kurilich AC, Miller GD. Contribution of Dairy Products to Dietary Potassium Intake in the United States Population. *Journal of the American College of Nutrition*. 2008; 27: 44–50.
- 6 Rafferty K, Heaney RP. Nutrient effects on the calcium economy: emphasizing the potassium controversy. *Journal of Nutrition* 2008;138:166S-171S.
- 7 U.S. Department of Agriculture, Agricultural Research Service. 2008. USDA National Nutrient Database for Standard Reference, Release 21. Nutrient Data Laboratory Home Page Available at: <http://www.nal.usda.gov/fnic/foodcomp> (Milk, low-fat, fluid, 1% milkfat, with added vitamin A NDB No: 01082; Potato, baked, flesh and skin, without salt NDB No: 11674; Yogurt, fruit, low fat, 11 grams protein per 8 ounce NDB No: 01122, Nuts, almonds NDB No: 12061, Oranges, raw, all commercial varieties NDB No: 09200, Sauce, pasta, spaghetti/marinara, ready-to-serve NDB No: 06931, Bananas, raw NDB No: 09040, Cheese, cottage, lowfat, 4% milkfat NDB No 01012). Accessed August 14, 2009.
- 8 Sacks FM, Svetkey LP, Vollmer WM et al. Effects on blood pressure of reduced dietary sodium and the Dietary Approaches to Stop Hypertension (DASH) diet. *N Engl J Med*. 2001;344:3-10.
- 9 Appel LJ, Moore TJ, Obarzanek E, Vollmer WM, Svetkey LP, Sacks FM, Bray GA, Vogt, TM, Cutler JA, Mindhauser MM, Lin PH, Karanja N. A trial of the effects of dietary patterns on blood pressure. *N Engl J of Med*. 1997;336:1117-1124.



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