HEALTH

Potassium and Health no. 9.355

by J. Anderson, L. Young and E. Long [1] (8/08)

Quick Facts...

A diet low in potassium and high in sodium may be one of the factors that leads to high blood pressure.

Eating equal amounts of sodium and potassium is recommended.

Athletes involved in hard exercise may require larger quantities of potassium-rich foods.

Potassium is found in meats, milk, fruits and vegetables.

Role in Health

Many people know that high sodium intake may lead to hypertension. Approximately 10 percent of people with high blood pressure are sensitive to dietary salt (or sodium). A reduction in sodium helps lower blood pressure in all people with hypertension.

Newer evidence suggests that dietary potassium may play a role in decreasing blood pressure. Potassium is involved in nerve function, muscle control and blood pressure. A diet low in potassium and high in sodium may be a factor in high blood pressure. Increasing potassium in the diet may protect against hypertension in people who are sensitive to high levels of sodium.

For people who have hypertension, following an overall eating plan called DASH (Dietary Approaches to Stop Hypertension) may be useful for lowering blood pressure. The DASH diet is higher in potassium, magnesium, and calcium, and lower in total fat, saturated fat, and sodium than the typical American diet. For more information about the DASH eating plan, see fact sheet 9.374, *DASHing to Lower Blood Pressure,* or for information about hypertension in general, refer to fact sheet 9.318, *Diet and Hypertension*.

However, taking potassium supplements is generally not recommended for people with high blood pressure. Instead, a variety of potassium-rich foods should be eaten daily.

Athletes also may need more potassium to replace that lost from muscle during exercise and the smaller amount lost in sweat. Low potassium can cause muscle cramping and cardiovascular irregularities. Eating foods high in potassium can prevent these symptoms. One cup of orange juice, a banana or a potato is sufficient to replace the potassium lost during one to two hours of hard exercise. Sport drinks are poor sources of potassium.

What Does it Do?

Potassium works with sodium to maintain the body's water balance. One possible explanation for potassium's protective effect against hypertension is that increased potassium may increase the amount of sodium excreted from the body.

The kidneys regulate the level of potassium in the body. Potassium deficiency is not common but may result from excessive losses due to severe diarrhea, poor diabetic control, low-calorie diets (less than 800 calories per day), chronic alcoholism, hard exercise, or some diuretics and laxatives.

Although their purpose is to eliminate excess sodium from the body, certain diuretics may increase potassium losses, while others retain potassium. If you take certain diuretics, you may need more or less potassium. Ask your physician about the type of diuretic drug you take and whether you require additional potassium. Some people who take diuretics may be prescribed a

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potassium supplement to help replace potassium loss.

Sport drinks are poor sources of potassium.

How Much Potassium?

Most Americans do not get enough potassium in their diets. The recommended daily potassium intake is 4.7 grams a day. Athletes involved in prolonged, hard exercise may require more potassium a day.

Food Sources

Potassium is found in many foods, especially meat, milk, fruits and vegetables (see Table 1). Eat a variety of foods to get the recommended amount.

While sodium is added to most highly processed foods, potassium is not. Eating more fresh and frozen foods, which are usually lower in sodium, may be helpful. (See fact sheet 9.354, *Sodium in the Diet.*)

Potassium is essential for good nutrition and health. Meeting the minimum requirement is not difficult if you eat a variety of foods. Maintaining the recommended sodium-to-potassium ratio, however, may be more difficult. Eat more fruits and vegetables and fewer processed foods. A moderate increase in dietary potassium, in addition to a reduction of excess sodium, may be beneficial, especially for people at risk for hypertension.

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References

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Table 1: Where's the potassium?

Very good sources (300 mg or more)		Fair sources (200-300 mg)		Poor sources (less than 100 mg)	
Source	**Serving size**	**Source**	**Serving size**	**Source**	**Serving size**
Breads and Cereals					
None		None		Bread	1 slice
				Breakfast cereal	1/2 cup
				Pasta	3/4 cup
Dairy					
*Buttermilk	1 cup	Ice cream	1 cup	*American cheese	1 ounce
Milk	1 cup			Natural cheese	1 ounce
Yogurt	1 cup			Eggs	1
Fruit					
Apricots	3	Apples	1 large	Applesauce	1/2 cup
Avocado	1/4	Grapefruit juice	1/2 cup	Blueberries	1/2 cup
Banana	1 medium	Orange	1 medium	Grapes	10 medium
Cantaloupe	1 cup	Orange juice	1/2 cup		
Dates	10 medium	Peaches	1 medium		
Honeydew melon	1 cup	Strawberries	1 cup		
Nectarines	1 large				
Prunes	10 medium				
Raisins	1/4 cup				
Meat					
Chicken	3 ounces	Beef	3 ounces	*Bacon	3 slices
Fish	3 ounces	*Ham	3 ounces	*Bologna	1 slice
*Canned salmon, tuna	3 ounces	Lamb	3 ounces	*Corned beef	3 ounces
Turkey	3 ounces	Pork, fresh	3 ounces	*Frankfurter	1
Vegetables[1]					
Carrot	1 large	Broccoli	1/2 cup	Corn	1/2 cup
Celery	1 stalk	Beets	1/2 cup	*Olives	10
Dry beans, cooked	1/2 cup	Peas	1/2 cup		
Greens, cooked	1/2 cup				
Potato, baked	1 medium				
Spinach	1/2 cup				
Squash, winter	1/2 cup				
Sweet potato	1 large				
Tomato	1 large				
*Tomato juice	1 cup				
Other					
Molasses	2 tablespoons	*Dill pickle	1	Butter	1 tablespoon
Nuts, unsalted	1/2 cup	Peanut butter	2 tablespoons	Salad dressing	1 tablespoon

*These foods have a high sodium content (greater than 300 mg per serving).

[1]Canned vegetables have a much higher sodium content than fresh or frozen vegetables.

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