



HEALTH

Potassium and Health

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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. Research suggests that the ratio of sodium to potassium in the diet may be more important than the specific amounts of sodium or potassium. The American Heart Association recommends a sodium-to-potassium ratio of one-to-one, or equal amounts of sodium and potassium. 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.

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 potassium supplement to help replace potassium loss.

Also ask your physician if you can use salt substitutes. Potassium excess can be very dangerous, but it is not a problem except as a complication of kidney failure or during severe dehydration.

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How Much Potassium?

The exact requirements for potassium are unknown. A recommendation of 1,600 to 3,500 milligrams (mg) per day has been established. Athletes involved in prolonged, hard exercise may require up to 6,000 mg of potassium.

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. This makes it difficult to get the desired one-to-one ratio of sodium to potassium if you eat a lot of processed foods. 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
Vegetables¹					
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).

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