

From our friends at Back To Herbs

## News You Can Use

### Potassium

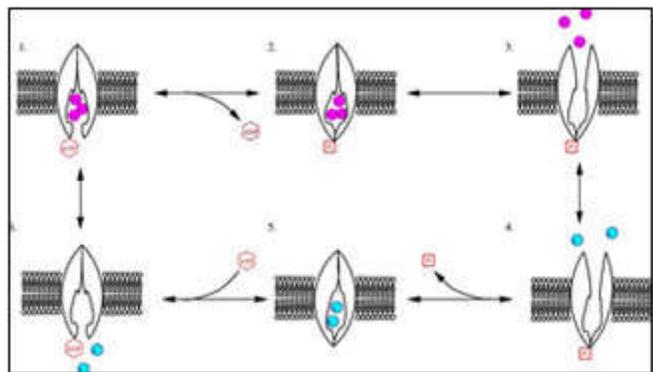
Potassium is a very important mineral found inside the cells of the body. It plays an important role in smooth muscular and cellular functioning, cardiovascular functioning, muscle contractions, nerve transmission, in conversion of glucose into glycogen, and muscle building. Potassium is necessary to monitor and regulate aldosterone (a hormone). It also plays an important role as a catalyst for many types of enzymatic actions within the body; it helps ignite many essential chemical reactions.

Potassium is called a natural diuretic because the body easily absorbs it and almost 85-90% of it is excreted from our bowels and kidneys (urine). Because of its alkaline properties it is a very important mineral which helps pH levels balanced and also helps to maintain proper level of water inside body. Also important in the functioning of potassium is to keep blood pressure under control and to help in intra-cellular nutrient transfer.

Potassium, sodium and chloride comprise the electrolyte family of minerals. Called electrolytes because they conduct electricity when dissolved in water, these minerals work together closely. About 95% of potassium in the body is stored within cells, while sodium and chloride are predominantly located outside the cell.

Potassium is especially important in regulating the activity of muscles and nerves. The frequency and degree to which our muscles contract, and the degree, to which our nerves become excitable, both depend heavily on the presence of potassium in the right amount.

Through a mechanism known as the "sodium-potassium" pump, sodium and potassium work together closely to initiate muscle contraction and nerve transmission, and to maintain the body's normal distribution of fluid. Most of the potassium in your body is stored inside of your cells, while most of the sodium in your body is stored in the fluid that surrounds your cells.



During muscle contraction and nerve transmission, potassium leaves the cell and sodium enters the cell via the "sodium-potassium pump." This transfer causes a change in electrical charge within the cell, which initiates the muscle contraction or the nerve impulse. Because sodium attracts water, once the muscle contraction or nerve impulse is initiated, the sodium is immediately pumped out of the cell to prevent water from entering the cell and causing the cell to swell or burst, and potassium is pumped back into the cell.

Potassium is known to decrease the excretion of calcium. As a result, increasing the amount of potassium-containing foods in your diet may be helpful in maintaining the density and strength of your bones.

Potassium plays an important role in muscle contraction and nerve transmission. When the movement of potassium is blocked, or when potassium is deficient in the diet, activity of both muscles and nerves can become compromised.

Potassium is involved in the storage of carbohydrates for use by muscles as fuel. It is also important in maintaining the body's proper electrolyte and acid-base (pH) balance. Potassium may also counteract the increased urinary calcium loss caused by the high-salt diets typical of most Americans, thus helping to prevent bones from thinning out at a fast rate.

### **Too little potassium.**

Early symptoms of *hypokalemia*, or potassium deficiency, include dry skin, muscle weakness, fatigue and slow reflexes. If the deficiency develops rapidly, heart problems may result. Left unchecked, a condition known as hypokalemic paralysis may develop, in which the entire body goes stiff. This is a very serious condition requiring immediate medical attention.

Hyperthyroidism is also known to cause potassium deficiency. It may be caused by an imbalance in other minerals similar to potassium such as magnesium, sodium and calcium.

Medications known to increase the likelihood of potassium deficiency include diuretics, cortisones, and drugs for controlling high blood pressure.

In rare cases, habitual consumption of large amounts of black licorice has resulted in hypokalemia.

### **Conditions that increase the risk of hypokalemia:**

- The use of potassium-wasting diuretics
- Alcoholism
- Severe vomiting or diarrhea
- Overuse or abuse of laxatives
- Anorexia nervosa or bulimia
- Magnesium depletion
- Congestive heart failure (CHF)

**Symptoms can indicate a need for more high-potassium foods:**

- Muscle weakness
- Confusion
- Irritability
- Fatigue
- Heart problems
- Chronic diarrhea
- Regular, intense exercise
- Use of certain diuretics

While the typical American diet, which is high in sodium-containing processed foods and low in fruits and vegetables, contains about two times more sodium than potassium, many health experts recommend taking in at least five times more potassium than sodium. Potassium losses from cooking of high-potassium foods can be significant.

In addition to poor dietary intake, overuse of muscles, which may occur in excessive physical activity, is a factor that can increase a person's need for potassium. Any events that draw excessive fluid out of the body - including excessive sweating, diarrhea, overuse of diuretics (including caffeine-containing beverages), poor water intake, or adherence to a high protein/low carbohydrate diet - can increase the need for potassium. Persons with high blood pressure also need higher amounts of potassium.

**Potassium may play a role in the prevention and/or treatment of the following health conditions:**

- Atherosclerosis
- Cataracts
- Dehydration
- Diabetes
- Hepatitis
- High blood pressure
- Inflammatory bowel disease
- Osteoporosis
- Potassium depletion due to excessive fluid loss from diarrhea, vomiting, or sweating

People who get a lot of potassium through diet have a lower risk of stroke.

Many medications -- such as diuretics, laxatives, and steroids -- can cause a loss of potassium, which occasionally may be very severe. You should have your blood levels of potassium checked from time to time if you take any of these medicines. Diuretics are probably the most common cause of hypokalemia. A variety of conditions can cause potassium loss from the body. The most common are vomiting and diarrhea.

Medications may cause an increase in blood levels of potassium. Excessive potassium in the blood has been linked to kidney problems.

## Adverse reactions to potassium supplements

Gastrointestinal symptoms are the most common side effects of potassium supplements.



Nature's Sunshine has several different formulas that feature potassium. You can go to our Nature's Sunshine website <http://www.mynsp.com/naturesbetterway/index.aspx> for more information about these and other quality herbal and nutritional products.

**Yours in Good Health!**

Sincerely,

Chris Ritchason  
Dr. Jack & Verlyn Ritchason, Founders  
The Back to Herbs Team

### References

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