



What Is Hyperkalemia (High Potassium)?

Hyperkalemia is a higher than normal potassium level in the blood. For most people, their potassium level should be between 3.5 and 5.0 millimoles per liter (mmol/L). Hyperkalemia is a potassium level of greater than 5.5.

Mild cases may not produce symptoms and may be easy to treat. But severe cases left untreated can lead to fatal arrhythmias (abnormal heart rhythms).



Am I at risk for hyperkalemia?

You may be at risk for high potassium due to:

- Chronic kidney disease
- Diabetes
- Congestive heart failure
- Taking medications that disrupt potassium balance, such as certain drugs to treat heart failure or lower blood pressure including diuretics, beta-blockers and ACE inhibitors

Less common causes can include:

- Massive injury resulting in muscle damage
- Burns over large parts of the body
- High-volume blood transfusions
- HIV and other infections
- Alcoholism or heavy drug use that breaks down muscle fibers, releasing potassium

In some cases, multiple factors may be involved or the cause is never clearly identified.

How does high potassium affect the body?

Potassium is needed for normal cell function, including heart muscle cells. The body gets potassium through food.

The kidneys maintain the body's total potassium content by balancing potassium intake with potassium excretion. If intake of potassium outweighs the

kidneys' ability to remove it, or if kidney function decreases, hyperkalemia may occur.

Potassium plays a key role in electric signal functioning of the heart's middle thick muscle layer, known as the myocardium. Too much potassium can lead to different types of heart arrhythmias.

How is it diagnosed?

High potassium can be difficult to diagnose. Many times there are no symptoms. When there are symptoms they may include:

- Nausea
- Slow, weak or irregular pulse
- Sudden collapse, if the heartbeat slows or stops
- Irritability
- Numbness, usually felt in the hands, arms, legs, or feet
- Muscle weakness
- Diarrhea or abdominal cramping

Other ways to diagnose:

- Clinical information, such as a history of kidney failure
- Known use of medicines that can cause hyperkalemia
- Lab data, electrocardiograms

(continued)



Can it be prevented?

Dietary changes can help prevent and treat high potassium levels. Talk to your doctor to understand any risk you might have for hyperkalemia. Your doctor may recommend foods that you may need to limit or avoid. These may include:

- Asparagus, avocados, potatoes, tomatoes or tomato sauce, winter squash, pumpkin, cooked spinach
- Oranges and orange juice, nectarines, kiwifruit, bananas, cantaloupe, honeydew, prunes, raisins or other dried fruit

Also, if you are on a low-salt diet, avoid taking salt substitutes.

How is high potassium treated?

Emergency treatment may be needed if your potassium level is very high or if there are changes in an electrocardiogram. Treatment may involve administering calcium through an IV to treat muscles and the heart or supplying glucose and insulin through an IV to decrease potassium levels long enough to correct the cause.



Treatment may also include:

- Kidney dialysis if kidney function is deteriorating
- Medication to remove potassium from intestines before it is absorbed
- Sodium bicarbonate if acidosis is the cause
- Water pills (diuretics)

A doctor may also advise stopping or reducing potassium supplements and stopping or changing the doses of certain medicines for heart disease and high blood pressure. Always follow your health care provider's instructions when taking or stopping medicines.

HOW CAN I LEARN MORE?

- 1 Call **1-800-AHA-USA1** (1-800-242-8721), or visit **heart.org** to learn more about heart disease and stroke.
- 2 Sign up to get *Heart Insight*, a free magazine for heart patients and their families, at **heartinsight.org**.
- 3 Connect with others sharing similar journeys with heart disease and stroke by joining our Support Network at **heart.org/supportnetwork**.

Do you have questions for the doctor or nurse?

Take a few minutes to write your questions for the next time you see your healthcare provider.

For example:

Are there medications I'm taking that can cause high potassium?

Are there certain potassium-rich foods I should avoid?

My Questions:

We have many other fact sheets to help you make healthier choices to reduce your risk, manage disease or care for a loved one. Visit **heart.org/answersbyheart** to learn more.