

# Potassium and Chronic Kidney Disease

## What is potassium and what does it do in the body?

Potassium is a mineral that controls nerve and muscle function. The heart beats at a normal rhythm because of potassium. Potassium is also necessary for maintaining fluid and electrolyte balance and pH level.

In order for potassium to perform these functions, blood levels must be kept between 3.5 and 5.5 mEq/L. The kidneys help keep potassium at a normal level.

## When is potassium too low or too high?

### Low potassium

Potassium comes from the foods we eat. Healthy kidneys remove excess potassium in the urine to help maintain normal levels in the blood.

Because most foods have potassium, low potassium (hypokalemia) is uncommon in people who eat a healthy diet.

Some of the effects of low potassium include muscle weakness, cramping and fatigue.

### High potassium

When kidneys fail they can no longer remove excess potassium, so the level builds up in the body. High potassium in the blood is called hyperkalemia, which may

occur in people with advanced stages of chronic kidney disease (CKD). Some of the effects of high potassium are nausea, weakness, numbness and slow pulse.

For people with stage 5 CKD (also known as end stage renal disease or ESRD), dialysis is necessary to help regulate potassium. Between dialysis treatments, however, potassium levels rise and high-potassium foods must be limited.

Have your potassium levels checked regularly and ask your renal dietitian or doctor about your potassium results.

## How to prevent potassium levels from getting too high

**Here are things you can do to keep your potassium at safe levels:**

- Talk to your renal dietitian about creating an eating plan.
- Limit foods that are high in potassium.
- Limit milk and milk products or replace with nondairy substitutes.
- Discard liquids from canned fruits and vegetables.
- Avoid salt substitutes and other seasonings with potassium.
- Read labels on packaged foods and avoid potassium chloride.
- Pay attention to serving size.
- Don't skip dialysis or shorten treatment times.
- Leach high-potassium vegetables to remove some of the potassium. Learn how to do so in this DaVita article.

## What to eat and what to limit

The suggestions and lists below are some high and low potassium foods.

FOOD TYPE	TIP
Fruit	

	<ul style="list-style-type: none"><li>• <b>Choose</b> apples, berries or grapes, <b>instead of</b> bananas, oranges or kiwi.</li><li>• <b>Select</b> watermelon, <b>instead of</b> cantaloupe or honeydew.</li><li>• <b>Eat</b> peaches, plums or pineapple, <b>instead of</b> nectarines, mangos or papaya.</li><li>• <b>Choose</b> dried cranberries, <b>instead of</b> raisins or other dried fruit.</li><li>• <b>Drink</b> apple, cranberry or grape juice, <b>instead of</b> orange juice or prune juice.</li></ul>
Vegetables	<ul style="list-style-type: none"><li>• <b>Choose</b> green beans, wax beans or snow peas, <b>instead of</b> dried beans or peas.</li><li>• <b>Prepare</b> mashed potatoes or hash browns from leached potatoes, <b>instead of</b> eating baked potato or French fries.</li><li>• <b>Use</b> summer squashes like crookneck or zucchini, <b>instead of</b> winter squashes like acorn squash.</li><li>• <b>Cook</b> with onion, bell peppers, mushrooms or garlic, <b>instead of</b> tomatoes, tomato sauce or chili sauce.</li></ul>
Dairy	<ul style="list-style-type: none"><li>• <b>Prepare</b> pudding with nondairy creamer, <b>instead of</b> eating yogurt or pudding made with milk.</li><li>• <b>Enjoy</b> sherbet, sorbet or a Popsicle®, <b>instead of</b> ice cream or frozen yogurt.</li></ul>

Miscellaneous	<ul style="list-style-type: none"> <li>• <b>Choose</b> vanilla- or lemon-flavored desserts, <b>instead of</b> chocolate desserts.</li> <li>• <b>Eat</b> unsalted popcorn or pretzels or rice cakes, <b>instead of</b> nuts or seeds.</li> </ul>
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## High-potassium foods

Limit or avoid high-potassium foods.

FOOD TYPE	HIGH-POTASSIUM FOODS
Fruits	<ul style="list-style-type: none"> <li>• Avocados</li> <li>• Bananas</li> <li>• Cantaloupe</li> <li>• Dried fruits</li> <li>• Honeydew</li> <li>• Kiwi</li> <li>• Mangos</li> <li>• Oranges &amp; orange juice</li> <li>• Papaya</li> <li>• Prune juice</li> </ul>
Vegetables	<ul style="list-style-type: none"> <li>• Artichoke</li> <li>• Dried beans and peas</li> <li>• Pumpkin</li> <li>• Potatoes, French fries</li> <li>• Spinach (cooked)</li> </ul>

	<ul style="list-style-type: none"> <li>• Sweet potatoes</li> <li>• Tomatoes, tomato sauce</li> <li>• Vegetable juices</li> <li>• Winter squash</li> </ul>
Dairy	<ul style="list-style-type: none"> <li>• Ice cream</li> <li>• Milk</li> <li>• Yogurt</li> </ul>
Miscellaneous	<ul style="list-style-type: none"> <li>• Chocolate</li> <li>• Molasses</li> <li>• Salt substitute</li> <li>• Seeds and nuts</li> </ul>

### Low-potassium foods

Ask your dietitian about the amount you can safely eat.

FOOD TYPE	LOW-POTASSIUM FOODS
Fruits	<ul style="list-style-type: none"> <li>• Apples</li> <li>• Berries</li> <li>• Fruit Cocktail</li> <li>• Grapes</li> <li>• Lemon</li> <li>• Peaches</li> </ul>

	<ul style="list-style-type: none"><li>• Canned Pears</li><li>• Pineapple</li><li>• Plums</li><li>• Watermelon</li></ul>
Vegetables	<ul style="list-style-type: none"><li>• Carrots</li><li>• Cabbage</li><li>• Cauliflower</li><li>• Cucumber</li><li>• Eggplant</li><li>• Green beans</li><li>• Lettuce</li><li>• Onion</li><li>• Summer squash</li><li>• Sweet peppers</li></ul>
Dairy substitutes	<ul style="list-style-type: none"><li>• Nondairy creamers</li><li>• Nondairy whipped topping</li><li>• Rice milk (unenriched)</li><li>• Sorbet or Popsicle®</li></ul>
Snacks	<ul style="list-style-type: none"><li>• Jelly Beans</li><li>• Hard candies</li><li>• Plain donuts</li></ul>

- Popcorn (unsalted)
- Pretzels (unsalted)
- Red licorice

**Disclaimer:** The above lists don't include all foods low in potassium. Consult your dietitian and doctor about what to eat based on your individual requirements.

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