

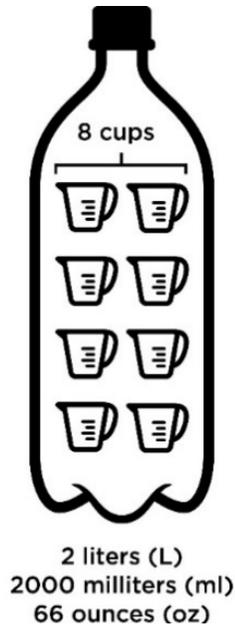
Kidney Stone Diet

A diet for children with kidney stones

Kidney stones can form when there are large amounts of substances such as calcium, oxalate, phosphate and uric acid in your child's pee (urine). Sometimes, following a special diet may be enough to prevent your child from forming more kidney stones. Other times, medicines may be needed.

If your child has had a kidney stone, follow these tips to help prevent new kidney stones.

Drink a lot of water



Drinking water is the most important thing your child can do to prevent kidney stones.

In addition to other fluids like milk and juice, your child should drink 2 liters of water or more per day. Small children may need less water. The amount of water your child needs also depends on the weather and their physical activity level. The goal is to drink enough water to make their urine clear. Ask your child's doctor or dietitian about the right amount of water for your child.

It may be helpful to get a water bottle and have your child drink throughout the day.

Eat less sodium

A diet high in salt (sodium) increases the amount of calcium that gets into the urine. Eating foods with less sodium helps decrease the amount of calcium in the urine. To eat less sodium:

- Limit fast food and processed foods your child eats such as hot dogs, canned foods, luncheon meats and frozen foods.
- Avoid adding salt to foods in cooking or at the table.
- Read nutrition labels and limit your child's intake of foods that have more than 140 mg sodium per serving.
- Limit use of condiments and salad dressings.
- When eating out, ask about the sodium content of foods you order.

For more information, recipes, and how to find the sodium amount in food labels, see our handout called "Low-Sodium Eating" at seattlechildrens.org/pdf/PE386.pdf.

To Learn More

- Nutrition
206-987-4758
- Ask your child's healthcare provider
- seattlechildrens.org

Free Interpreter Services

- In the hospital, ask your nurse.
- From outside the hospital, call the toll-free Family Interpreting Line, 1-866-583-1527. Tell the interpreter the name or extension you need.

Get the right amount of calcium

The most common kinds of kidney stones are made from calcium and oxalate. Oxalate is a compound that is naturally found in some foods. When it combines with calcium in the urine, it may cause a kidney stone. Getting the recommended amount of calcium for your child's age can help prevent more kidney stones. Calcium binds oxalate from food and keeps it from entering the urine. Getting too little calcium can cause oxalate levels in the urine to rise. This increases the risk of kidney stones.

Make sure your child gets the right amount of calcium for their age, using the chart below. It is important not to restrict calcium for normal bone development.

Age	Daily Calcium Requirements	Servings of Dairy
1 to 3 years	700 mg	2 to 3
4 to 8 years	1000 mg	3 to 4
9 to 18 years	1300 mg	4
Over 18 years	1000 mg	3 to 4

(1 serving of dairy = 8 ounces of milk or yogurt or 1 ½ ounces of cheese)

Non-dairy sources of calcium include fortified orange juice; almond, soy, oat and rice milk; and soy, coconut and almond milk yogurt. Please see our handout called "Calcium" at seattlechildrens.org/pdf/PE1211.pdf for more suggestions. If your child cannot get enough calcium in their diet from foods, they may need to take a calcium supplement. Talk with your child's doctor or dietitian about this.

Other tips that may help prevent kidney stones

Citrate

Citrate (citric acid) may help prevent kidney stones because it helps prevent calcium from binding with phosphate and oxalate in the urine. Fresh lemons and limes contain high amounts of citrate. If your child has low amounts of citrate in the urine, eating a variety of fruits and vegetables and drinking fresh lemonade or limeade can help increase the citrate levels in the urine.

- Mix 4 ounces of lemon or lime juice with foods and beverages (including water) daily to increase citrate intake.
- Eat 3 to 5 servings of fruits and vegetables per day.

Animal protein

Eating too much meat or other animal proteins (dairy, eggs, chicken and fish) may increase your child's risk of getting a calcium-oxalate kidney stone.

Meats and other animal proteins also contain large amounts of purines which can increase the amount of uric acid in the urine. If your child has had uric acid stones or high amounts of uric acid in the urine, it is important that they not eat a lot of animal proteins.

Not every patient who has had a kidney stone needs to limit how much protein they eat. Ask your child's dietitian if you do not know how much protein is OK for your child.

Oxalate

Some of the oxalate in the urine is made by the body. Eating certain foods with high levels of oxalate can increase the amount of oxalate in the urine. Examples are spinach, rhubarb, beets, nuts and wheat bran. If your child is getting normal amounts of calcium in their diet and has high levels of oxalate in the urine, it may be important for them to limit oxalate foods.

Vitamin C

Vitamin C can be turned into oxalate by the body. Too much vitamin C can increase the amount of oxalate in the urine and may cause kidney stones. If your child has high amounts of oxalate in the urine or calcium oxalate stones, limit intake from vitamin C supplements to no more than **100 mg** each day. A normal vitamin C intake in the diet is recommended. You do not need to decrease the vitamin C from your child's food.

Diet prescription

Water: _____

Salt: _____

Calcium: _____

Other: _____