

# Basic Steps to Reduce Your Risk of Kidney Stones

1. Most kidney stone formers have to **increase their usual daily fluid intake by one liter** (two water bottles or two tall glasses of water).
  - a. **Make fluid always available by carrying a 1-liter bottle with you.** This makes a big difference in meeting your fluid goals.
  - b. The fluid **does not have to be plain water.**
  - c. One liter is equivalent to about **four 8-oz glasses** or 34 oz.
  - d. Try to drink enough to **keep your urine clear**
  - e. Adding **lemon juice** to your daily normal fluid intake may also help you increase your urinary **citrate**, a natural stone inhibitor.
2. **Keep your salt intake low** (Less than 2300 mg a day or about 1 teaspoon of table salt). A high salt intake can increase your risk of stones by raising calcium and lowering citrate urinary levels.
3. **Eat more healthy foods such as fruits and vegetables and less meat.** (Less than 6-oz a day. This includes beef, poultry, pork, and seafood). Protein intake causes an increase in uric acid, calcium, and oxalate concentrations in urine, all of which can lead to an increase in stone development.
4. **Keep a normal calcium intake.** You don't have to restrict normal dairy intake or stop calcium supplements, especially if you are a woman who is taking them for osteoporosis prevention. Reducing calcium actually increases the risk of stones in most patients.
5. For certain patients, high oxalate from foods increases their risk of stones but **for most patients, a normal amount of these foods is ok.** We generally only recommend reducing oxalate rich foods in patients who are found to have high oxalate levels in their urine on testing. (These foods include spinach, rhubarb, chard, chocolate, nuts, berries, instant coffee, tea, sweet potatoes, and beets)

For more on information on kidney stones and prevention, visit:

**Sodium: We recommend that stone formers aim to follow the FDA's guideline of limiting salt intake to 2300 mg of sodium a day in the general population and 1500 mg of sodium a day in those with hypertension, African Americans, or middle aged and older adults. 2300 mg is equivalent to about 1 teaspoon of table salt.**

The best way to determine the salt content of your food is to read the nutrition label. Processed foods tend to contain higher amounts of salt. Choose low sodium options whenever possible.

- 1 cup of canned chicken noodle soup contains 870 mg of sodium
- A fried chicken drumstick contains 310 mg of sodium
- A serving of shrimp contains 240 mg of sodium
- 2 slices of white bread contains 200 mg of sodium
- 15 potato chips contain 180 mg of sodium
- 1 container of strawberry yogurt contains 85 mg of sodium
- 1 tomato contains 20 mg of sodium
- 1 apple contains 0 mg of sodium

In addition to lowering the risk of stones, a low sodium intake helps to control or prevent high blood pressure, which can lead to heart disease, stroke, heart failure, and kidney disease.

**Protein: We recommend that most stone formers try to reduce their meat intake to 6 oz a day. This includes all types of meat: beef, pork, poultry, and seafood.**

The USDA has recommended a daily allowance of 5-6 oz of protein intake among adults. They also recommend choosing non-meat protein foods such as nuts and beans instead of meat sources. Protein from non-meat sources does not appear to increase the risk of stones.

- A small steak contains about 3-4 oz of protein.
- A quarter pound hamburger with cheese contains 4 oz of protein.
- A chicken breast contains about 5 oz of protein, a chicken thigh about 2.5 oz, a chicken drumstick about 1.5 oz.
- One 5 oz can of tuna contains 5 oz of protein.
- 1 medium egg contains 1 oz of protein.

Lowering your animal protein intake and eating more fruits and vegetables also benefits your overall health by limiting the amount of saturated fats and cholesterol in your diet. This helps to reduce your risk of cardiovascular disease.