



It's often recommended that people with kidney disease limit their protein intake in an effort to slow the decline in kidney function. Research has found that following popular high-protein diets for a prolonged period may harm the kidneys. While recommendations to reduce dietary protein are typically limited to people with moderate-to-severe kidney disease, people with earlier stages of kidney disease may also benefit from eating less protein.

### About protein

We all need protein in our diet every day. Protein is used to build muscle, heal, fight infection, and stay healthy. Protein needs vary based on your age, gender and overall general health. Proteins come from both animal and plant sources.



- **Animal sources of protein** have all the essential amino acids (the building blocks of protein). Animal sources of protein vary in their amount of fat, with fatty cuts of red meat, whole milk dairy products, and egg yolks being the highest in saturated fat (less healthy for the heart). Fish, poultry, and lowfat or fat-free dairy products are lowest in saturated fat.

You may need to eat smaller portions of meat and dairy. This will also help you lower the amount of phosphorus in your diet, because phosphorus is found in meat and dairy foods.

- » **Meat, poultry, and fish:** A cooked portion should be about 2 to 3 ounces or about the size of a deck of cards
- » **Dairy:** A portion is ½ cup of milk or yogurt, or one slice of cheese

- **Plant sources of protein** are low in one or more of the essential amino acids. Plant sources of protein include beans, lentils, nuts, peanut butter, seeds, and whole grains. A plant-based diet can meet your full protein needs with careful planning and eating a variety of plant-based foods. Another bonus with plant proteins is that they are low in saturated fat and high in fiber.

You should continue eating plant proteins. A serving is:

- » ½ cup of cooked beans
- » ¼ cup of nuts
- » 1 slice of bread
- » ½ cup of cooked rice or noodles

There are many good sources of protein for people who do not eat meat or dairy foods. Talk to your dietitian about how to combine plant proteins to be sure you are getting all of the building blocks your body needs.



## Protein and kidney disease

Protein is needed for growth, maintenance, and repair of all parts of the body. When the body breaks down and uses protein, a waste product called urea is made. When the kidneys are not working well, urea is not removed as it should be, causing it to build up inside the body. By decreasing the amount of protein, the kidneys have a lighter workload, with less urea to clean out.

You need protein every day to meet your body's needs, but if you have kidney disease, your body may not be able to remove all the waste from the protein in your diet. Excess protein waste can build up in your blood causing nausea, loss of appetite, weakness, and taste changes.

People with kidney disease  
**STAGES 1-4**  
**LIMIT PROTEIN**

People with kidney disease  
**STAGE 5**  
**INCREASE PROTEIN**



The more protein waste that needs to be removed, the harder the kidneys need to work to get rid of it. This can be stressful for your kidneys, causing them to wear out faster. For people with kidney disease who are not on dialysis, a diet lower in protein is recommended. Many studies suggest that limiting the amount of protein and including more plant-based foods in the diet may help slow the loss of kidney function.



Once a person has started dialysis, a higher amount of protein in the diet is necessary to help maintain blood protein levels and improve health. Dialysis removes protein waste from the blood, so a low protein diet is no longer needed.



*The exact amount of protein you need depends on your body size, your nutritional status, and your type of kidney disease. Since too little protein can lead to malnutrition at any stage of kidney disease, ask your healthcare professional about meeting with a kidney dietitian to find out the amount and type of protein that is right for you. Your healthcare professional will watch your kidney function for any necessary diet or medicine changes.*

**For more information, contact the National Kidney Foundation**

Toll-free help line: **855.NKF.CARES** or email: **nkfcares@kidney.org**