



Sodium and fluid restriction with renal failure:

A low-sodium diet or salt restriction may be used to help prevent or reduce fluid retention in your child's body. The amount of sodium or salt allowed in your child's diet depends on your child's medical condition. Your child's physician or dietitian will determine the amount of sodium allowed in your child's diet. This is usually expressed in milligrams (mg) per day. Some common sodium restrictions include 2,000 or 3,000 mg per day. With most sodium-restricted diets, high-sodium foods are limited and salt is not allowed in food preparation or at the table.

Foods high in sodium:

- Canned foods (vegetables, meats, pasta meals)
- Processed foods (meats such as bologna, pepperoni, salami, hot dogs, sausage)
- Cheese
- Dried pasta and rice mixes
- Soups (canned and dried)
- Snack foods (chips, popcorn, pretzels, cheese puffs, salted nuts, etc.)
- Dips, sauces, and salad dressings

The following seasonings are high in sodium but can be used in limited amounts: **Limit to 1 tablespoon per meal:**

- barbecue sauce
- ketchup
- hot sauce
- steak sauce
- * cocktail sauce
- * mustard
- * low-calorie salad dressing

Foods low in sodium:

- Plain breads, cereals, rice and pasta
- Vegetables and fruits (fresh or frozen)
- Meats (fresh cuts; not processed meats)
- Milk and yogurt (these tend to be moderate in sodium)
- Beverages such as juices, tea, fruit drink/punch, soda, and sports drinks have sodium so these may need to be limited

Low-sodium seasonings: The following low-sodium seasonings may be used freely:

allspice	dill	garlic, fresh	onion, onion powder	oregano
bay leaf	extracts	garlic powder	paprika	pepper
basil	vinegar	ginger	rosemary	sage
chili powder	lemon juice	lime juice	marjoram	mustard
chives	nutmeg	Mrs Dash	tarragon	thyme
cinnamon	cloves	curry powder		

How can I reduce salt intake?

- Do not use salt in cooking or at the table
- Season with low sodium seasonings
- Eat home prepared meals and cut back on processed foods

For questions, contact Annette Garriott Parks, RDN @ 317.944.3200

A Closer Look at Dietary Phosphorus

Phosphorus is a mineral that's found naturally in many foods and also added to many processed foods. When you eat foods that have phosphorus in them, most of the phosphorus goes into your blood. Healthy kidneys remove extra phosphorus from the blood. If your kidneys don't work well, you can develop a high phosphorus level in your blood, putting you at greater risk of heart disease, weak bones, joint pain and can even be fatal.

There are two types of phosphorus in the diet: *organic* phosphorus and *inorganic* phosphorus. Eating certain types of phosphorus foods can help manage your kidney phosphorus levels.

Organic or Inorganic: Which is Better for Phosphorus Control?

The body absorbs less of the phosphorus from organic food sources, which makes organic a better choice.



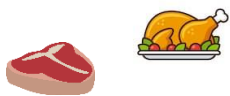





When Making Food Choices...

- Pay attention to the type of phosphorus in the food.
- Always take phosphorus binders (if prescribed) with meals.
- Read the food label ingredients list. Look for any word containing: **phos** (like **phos** phoric acid) and limit these foods.
- Choose fresh foods over processed foods.
- Your meals can have high protein foods from plant sources.
- Work with your dietitian to help choose these foods as some may have high phosphorus
- Eat the correct portion size (typically 1/2 cup).

Organic Phosphorus:

- This is found naturally in animal and plant-based foods.
- Organic phosphorus from animal foods is about 40-60% absorbed in your body.
- Organic phosphorus from plant foods is even less absorbed.
- These foods may be higher in total phosphorus, but not all of the phosphorus is absorbed.






Organic Phosphorus Choices: include organic phosphorus foods as part of your meal. Moderate intake of 1-2 servings/day is usually recommended. These foods will provide you with other nutrients such as iron and protein and are an important food to include in your meal plan.

Meat and Poultry: 	Beans and Legumes: 
Dairy and Eggs: 	Nuts and Seeds: 
Seafood: 	Soy: 

Inorganic Phosphorus

- This type of phosphorus is added to food during processing as an additive or preservative.
- Inorganic phosphorus is almost 100% absorbed.
- Inorganic food sources may be lower in total phosphorus, but almost all of it is absorbed in your body.
- When reading labels, look for “**Phos**” words in the list of ingredients.

Inorganic Phosphorus Choices: Limit Intake: 1-2 times/week

Dark Colas	
Processed Meats	
Fast Foods	
Boxed or Convenience Foods	
Processed Snack Foods	

Although organic sources of phosphorus are not easily absorbed, you may need to limit them based on your kidney function and lab results. Moderate intake of these organic sources is usually tolerated.

If you have any questions, please let me know.
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Phosphorus and Cheese:

Annette Garriott Parks, RDN, LD

The best way to limit phosphorus in your diet is to limit foods highest in phosphorus, including:

- Fast foods, foods sold at gas stations, and other packaged and convenience foods
- Processed cheeses, such as American cheese and cheese spreads
- Fresh or frozen meats that have added flavor or fluids to keep them moist
- Cola and pepper-type sodas, many flavored waters, bottled teas, energy or sports drinks, many powdered drink mixes

Top Twenty List - Highest phosphorus Content per 100g

1. KRAFT VELVEETA LIGHT Reduced Fat Pasteurized Process Cheese Product 1024mg
2. KRAFT CHEEZ WHIZ LIGHT Pasteurized Process Cheese Product 943mg
3. Cheese, pasteurized process, cheddar or American, fat-free 936mg
4. KRAFT FREE Singles American Nonfat Pasteurized Process Cheese Product 923mg
5. Cheese product, pasteurized process, American, vitamin D fortified 855mg
6. Cheese product, pasteurized process, American, reduced fat, fortified with vitamin D 829mg
7. Cheese product, pasteurized process, cheddar, reduced fat 829mg
8. Cheese, pasteurized process, American, low fat 827mg
9. Cheese, pasteurized process, swiss, low fat 827mg
10. Cheese, parmesan, low sodium 807mg
11. KRAFT CHEEZ WHIZ Pasteurized Process Cheese Sauce 806mg
12. Cheese, pasteurized process, swiss 762mg
13. Cheese, romano 760mg
14. Cheese, pasteurized process, cheddar or American, low sodium 745mg
15. Cheese, pasteurized process, pimento 744mg
16. Cheese, parmesan, shredded 735mg
17. Cheese, parmesan, grated 729mg
18. Cheese, goat, hard type 729mg
19. Cheese, american cheddar, imitation 712mg
20. Parmesan cheese topping, fat free 700mg

You will typically not see phosphorus on the cheese label, but do know dairy products are typically high. However, there are varieties on the market that are lower in phosphorus. Cheese varieties with less than 100 mg of phosphorus per serving include:

- Brie (1 oz)
- Cream cheese (2 Tbsp)
- Fontina (1 oz)
- Neufchatel (1 oz)
- * Shredded parmesan (2 Tbsp)
- * Feta (1 oz)
- * Goat (soft, 1 oz)
- * Sharp cheddar (2/3 oz)

Check food labels carefully

Manufacturers may add phosphorus when processing foods to thicken them, improve taste, prevent discoloration or preserve them. Check food labels to see whether any ingredients contain "phos" in the term. When trying to limit phosphorus, look for foods that don't list "phos" among the ingredients.

Examples of phosphorus food additives include:

- Calcium **phosphate**
- Disodium **phosphate**
- **Phosphoric acid**
- Monopotassium **phosphate**
- Sodium acid pyro**phosphate**
- Sodium tripoly**phosphate**

Fast foods, convenience foods, and processed meats and cheeses contain potentially large amounts of phosphorus.



Riley Hospital for Children
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Nutrition after Transplant: What you need to know

Will I have to watch my diet after a transplant?

Yes, your diet still plays a big role after a kidney transplant. It is important to keep a healthy weight and exercise regularly. A healthy, balanced diet will help prevent high blood pressure, high blood sugar, excess weight gain and promote overall wellness and health.

After a kidney transplant, plan to follow a diet low in salt and fats and high in fiber. A balanced diet includes a variety of fresh fruits and vegetables, lean meats, reduced-fat dairy products, whole grains, and plenty of water.

Why do I need to avoid certain foods?

After your kidney transplant, you will need to take special medicines, called “immunosuppressive drugs” or “anti-rejection medicines.” These medicines help lower the chances of your new kidney being rejected by your body. However, these medicines also weaken your body’s ability to fight infection. Taking these medicines increases your risk for getting sick from germs, such as bacteria.

Some germs cause bacterial infections. Some bacterial infections can be picked up from food. You can help lower your chances of infection from food by:

- Handling foods safely, like washing your hands often, especially after touching raw chicken or eggs.
- Being careful when eating out.
- Avoiding certain ‘high-risk’ foods because they are more likely to have bacteria that can cause an infection.

You may also need to take steroids, which can cause increased:

- Appetite, causing unwanted weight gain
- Increased blood fat levels (cholesterol & triglycerides)
- Increased blood sugar levels
- Salt and fluid retention (too much fluid in the body)
- It can also cause a breakdown in muscle and bone tissue

Due to unwanted weight gain, it’s important to make healthy food choices and stick to appropriate portion sizes. It may be good to avoid fatty foods and foods high in simple sugar. Check with your doctor before exercise. Most often, you may need to exercise 3-4 times a week for 20-30 minutes each time.

What are some of the ‘high-risk’ foods to avoid?

It is recommended to avoid foods that are spoiled, moldy or past its “use by” date, as well as avoid the foods listed below. If you have any questions, talk to your healthcare team.

Meat, fish and poultry: Raw or undercooked:

- Meat, poultry and fish
- Prawns or shrimp
- Crayfish

- Crab
- Squid
- Clams, oysters, and mussels
- Sushi

Dairy products

- Unpasteurized milk, cheese or yogurt
- Uncooked or undercooked eggs and any products containing them

Fruits and vegetables

- Grapefruit or grapefruit juice and pomegranate or pomegranate juice; especially if you are taking cyclosporine or prograf (specific immunosuppressive medicines)
- Unwashed raw fruits and damaged fruits
- Unwashed raw vegetables and unwashed salads
- Unpasteurized juices or ciders
- Salad from salad bars or delicatessens
- Sprouts (like alfalfa or bean sprouts)

If you have questions or need more information about a healthy eating plan after your kidney transplant, ask your registered dietitian nutritionist, Annette Garriott Parks, RDN 317.944.3200



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Nutrition Resources

Chronic Kidney Disease and Dialysis:

Annette Garriott Parks, RDN, LD

Basics of the Diet:

<https://www.eatright.org/health/diseases-and-conditions/kidney-disease/kidney-disease-and-diet>

<https://www.kidneyfund.org/kidney-disease/chronic-kidney-disease-ckd/kidney-friendly-diet-for-ckd>

<https://www.davita.com/diet-nutrition/articles/advice>

<https://www.freseniuskidneycare.com/eating-well>

<https://www.niddk.nih.gov/health-information/kidney-disease/chronic-kidney-disease-ckd/eating-nutrition>

<https://www.cdc.gov/diabetes/managing/eat-well/what-to-eat.html>

<https://www.nutrition.gov/topics/diet-and-health-conditions/kidney-disease>

<https://www.niddk.nih.gov/health-information/kidney-disease/children/caring-child-kidney-disease/nutrition-chronic-kidney-disease>

Recipes:

<https://www.kidney.org/recipes>

<https://www.davita.com/diet-nutrition/recipes>

<https://www.freseniuskidneycare.com/eating-well/recipes>

<https://www.nwkidney.org/living-with-kidney-disease/recipes/>

<https://www.americanrenal.com/for-patients-and-caregivers/nutrition-and-wellness/renal-friendly-recipes>