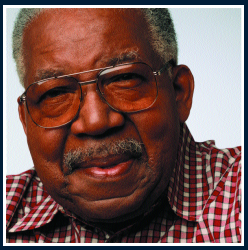
Kidney Failure

EAT RIGHT TO FEEL RIGHT

on Hemodialysis



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EAT RIGHT TO FEEL RIGHT

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NIDDK
National Institutes of Health
National Institute of Diabetes and Digestive and Kidney Diseases

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How to use this booklet

When you start hemodialysis, you must make many changes in your life. Watching the foods you eat will make you healthier. This book will help you choose the right foods.

Use this booklet with a dietitian to help you learn how to eat right to feel right on hemodialysis. Read one section at a time. Then go through the exercise with your dietitian.

Once you have completed every exercise, keep this book to remind yourself of foods you can eat and foods to avoid.

My dietitian's name is

_____

Phone

_____

How does food affect my hemodialysis?

Food gives you energy and helps your body repair itself. Food is broken down in your stomach and intestines. Your blood picks up nutrients from the digested food and carries them to all your body cells. These cells take nutrients from your blood and put waste products back into the bloodstream. When your kidneys were healthy, they worked around the clock to remove wastes from your blood. The wastes left your body when you urinated. Other wastes are removed in bowel movements.

Talk to a dietitian to learn how to eat right on hemodialysis.

Now your kidneys have stopped working. Hemodialysis removes wastes from your blood. But between sessions, wastes can build up in your blood and make you sick. You can reduce the amount of wastes by watching what you eat and drink. A good meal plan can improve your dialysis and your health.

Your clinic has a dietitian to help you plan meals. A dietitian specializes in food and nutrition. A dietitian with special training in care for kidney health is called a renal dietitian.

What do I need to know about fluids?

You already know you need to watch how much you drink. Any food that is liquid at room temperature also contains water. These foods include soup, Jell-O®, and ice cream. Many fruits and vegetables contain lots of water, too. They include melons, grapes, apples, oranges, tomatoes, lettuce, and celery. All of these foods add to your fluid intake.

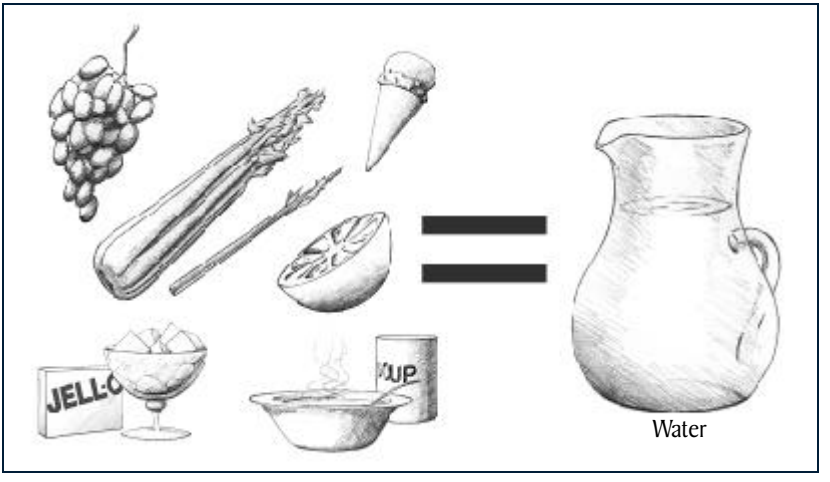
Fluid can build up between dialysis sessions, causing swelling and weight gain. The extra fluid affects your blood pressure and can make your heart work harder. You could get serious heart trouble from overloading your system with fluid.

Control your thirst

You can keep your fluids down by drinking from smaller cups or glasses. Freeze juice in an ice cube tray and eat it like a popsicle. (Do not forget to count the popsicle in your fluid allowance!) The dietitian will be able to give you other tips for managing your thirst.

Your *dry weight* is your weight after a dialysis session when all of the extra fluid in your body has been removed. If you let too much fluid build up between sessions, it is harder to get down to your proper dry weight. Your dry weight may change over a period of 3 to 6 weeks. Talk to your doctor regularly about what your dry weight should be.

My dry weight should be _____.



Many foods contain water.

Talk to a dietitian

Even though you are on hemodialysis, your kidneys may still be able to remove some fluid. Or your kidneys may not remove any fluid at all. That is why every patient has a different daily allowance for fluid. Talk to your dietitian about how much fluid you can have each day.

I can have _____ ounces of fluid each day.

Plan 1 day of fluid servings:

I can have _____ ounce(s) of _____
with breakfast.

I can have _____ ounce(s) of _____
in the morning.

I can have _____ ounce(s) of _____
with lunch.

I can have _____ ounce(s) of _____
in the afternoon.

I can have _____ ounce(s) of _____
with supper.

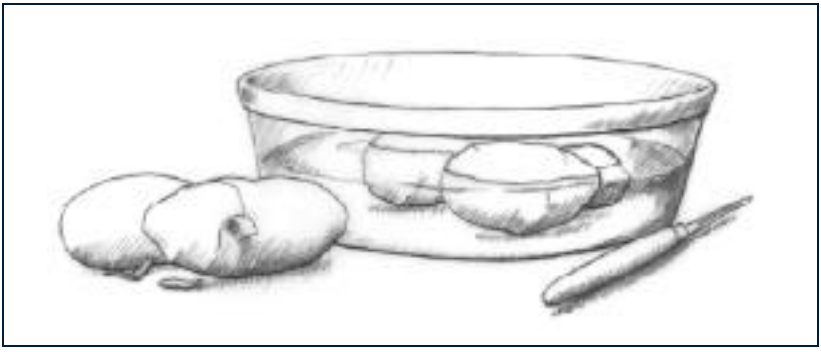
I can have _____ ounce(s) of _____
in the evening.

TOTAL _____ ounces (should equal the allowance written above)

Be careful to keep track of your fluids and other foods.

What do I need to know about potassium?

Potassium is a mineral found in many foods, especially milk, fruits, and vegetables. It affects how steadily your heart beats. Healthy kidneys keep the right amount of potassium in the blood to keep the heart beating at a steady pace. Potassium levels can rise between dialysis sessions and affect your heart-beat. Eating too much potassium can be very dangerous to your heart. It may even cause death.



You can remove some potassium from potatoes by soaking them in water.

To control potassium levels in your blood, avoid foods like avocados, bananas, kiwis, and dried fruit, which are very high in potassium. Also, eat smaller portions of other high-potassium foods. For example, eat half a pear instead of a whole pear. Eat only very small portions of oranges and melons.

Dialyzing potatoes and other vegetables

You can remove some of the potassium from potatoes and other vegetables by peeling them, then soaking them in a large amount of water for several hours. Drain and rinse before cooking. Your dietitian will be giving you more specific information about the potassium content of foods.

Talk to a dietitian

Make a food plan that reduces the potassium in your diet. Start by circling the high-potassium foods (below) that you now eat. A dietitian can help you add other foods that are not on the list.

High-potassium foods:

apricots	kiwi fruit	potatoes
avocados	lima beans	prune juice
bananas	melons	prunes
beets	milk	raisins
brussel sprouts	nectarines	sardines
cantaloupe	orange juice	spinach
clams	oranges	tomatoes
dates	pears (fresh)	winter squash
figs	peanuts	yogurt

Others: _____

_____

Changes:

Talk to a dietitian about foods you can eat instead of high-potassium foods.

Instead of _____, I will eat _____.

Instead of _____, I will eat _____.

Instead of _____, I will eat _____.

Instead of _____, I will eat _____.

What do I need to know about phosphorus?

Phosphorus is a mineral found in many foods. If you have too much phosphorus in your blood, it pulls calcium from your bones. Losing calcium will make your bones weak and likely to break. Also, too much phosphorus may make your skin itch. Foods like milk and cheese, dried beans, peas, colas, nuts, and peanut butter are high in phosphorus. Usually, people on dialysis are limited to 1/2 cup of milk per day. The renal dietitian will give you more specific information regarding phosphorus.

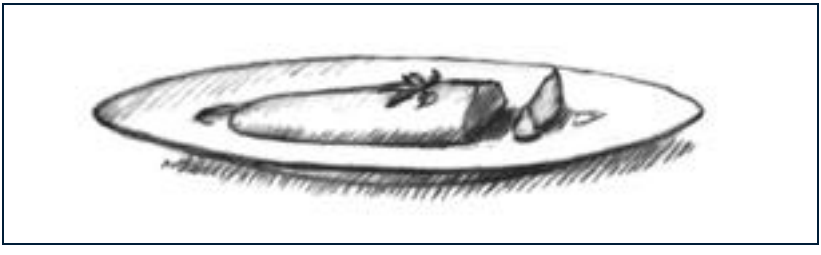
You probably will need to take a phosphate binder like PhosLo, Tums, or calcium carbonate to control the phosphorus in your blood between dialysis sessions. These medications act like sponges to soak up, or bind, phosphorus while it is in the stomach. Because it is bound, the phosphorus does not get into the blood. Instead, it is passed out of the body in the stool.

Taking a phosphate binder helps control phosphorus in your blood.

What do I need to know about protein?

Before you were on dialysis, your doctor may have told you to follow a low-protein diet. This is changed now. Most people on dialysis are encouraged to eat as much high-quality protein as they can. The better nourished you are, the healthier you will be. You will also have greater resistance to infection and recover from surgery more quickly.

Protein helps you keep muscle and repair tissue. In your body, protein breaks down into a waste product called urea. If urea builds up in your blood, you can become very sick. Some sources of protein produce less waste than others. These are called high-quality proteins. High-quality proteins come from meat, fish, poultry, and eggs (especially egg whites). Getting most of your protein from these sources can reduce the amount of urea in your blood.



Poultry and fish dishes, like broiled flounder, are a good source of high-quality protein.

Talk to a dietitian

Meat, fish, and chicken are good sources of protein. Talk to a dietitian about the meats you eat.

I will eat _____ servings of meat each day. A regular serving size is 3 ounces. This is about the size of the palm of your hand or a deck of cards.

Try to stick to lean (low-fat) meats that are also low in phosphorus. If you are a vegetarian, ask about other ways to get your protein.

Low-fat milk is a good source of protein. But milk is high in phosphorus and potassium. And milk adds to your fluid intake. Talk to a dietitian to see if milk fits into your food plan.

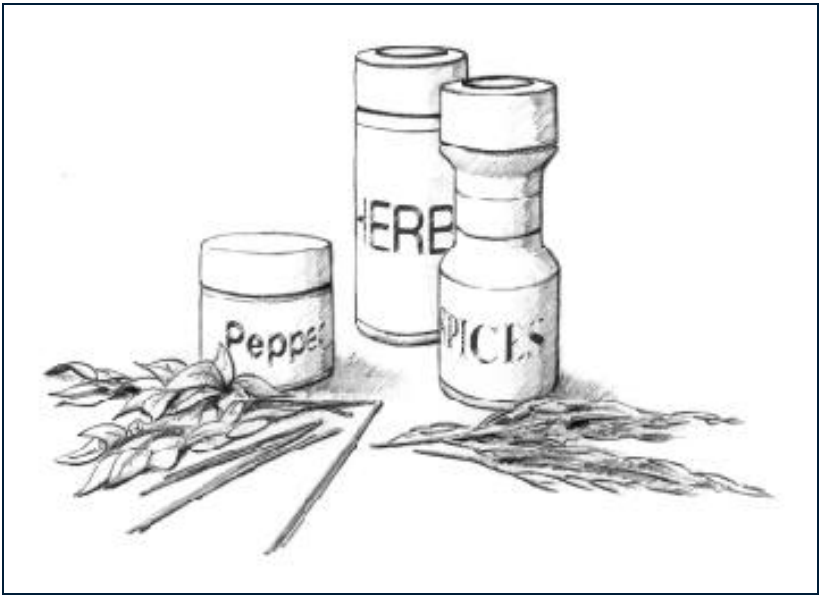
I (will) (will not) drink milk. I will drink _____ cup(s) of milk a day.

What do I need to know about sodium?

Sodium is found in salt and other foods. Most canned foods and frozen dinners contain large amounts of sodium. Too much sodium makes you thirsty. Then, if you drink more fluid, your heart has to work harder to pump the fluid through your body. Over time, this can cause high blood pressure and congestive heart failure.

Try to eat fresh foods that are naturally low in sodium. Look for products labeled *low sodium*.

Do not use salt substitutes because these contain potassium. Talk to a dietitian about other spices for your food. The dietitian can help you find spice blends without sodium or potassium.



Find new ways to spice up your food.

Talk to a dietitian

Talk to a dietitian about spices and other healthy foods you can use to flavor your diet. List them on the lines below.

Spice: _____

Spice: _____

Spice: _____

Food: _____

Food: _____

What do I need to know about calories?

Calories provide energy for your body. If your doctor recommends it, you may need to cut down on the calories you eat. A dietitian can help you plan ways to cut calories in the best possible way.

But some people on dialysis need to gain weight. You may need to find ways to add calories to your diet. Vegetable oils—like olive oil, canola oil, and safflower oil—are good sources of calories. Use them generously on breads, rice, and noodles.

Butter and margarines are rich in calories. But these fatty foods can also clog your arteries. Use these less often. Soft margarine that comes in tubs is better than stick margarine. Vegetable oils are the healthiest way to add fat to your diet if needed.

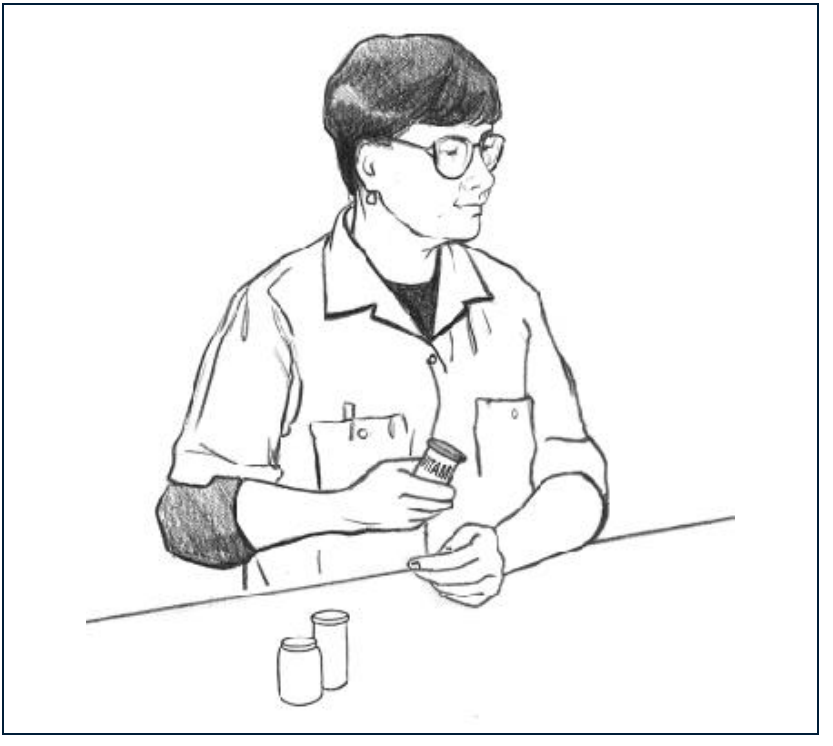
Hard candy, sugar, honey, jam, and jelly provide calories and energy without clogging arteries or adding other things that your body does not need. *If you have diabetes, be very careful about eating sweets. A dietitian's guidance is very important for people with diabetes.*

If you need to get extra calories, vegetable oils like these are a good choice.

Should I take vitamins and minerals?

Vitamins and minerals may be missing from your diet because you have to avoid so many foods. Your doctor may prescribe a vitamin and mineral supplement like Nephrocaps.

Warning: Do not take vitamins that you can buy off the store shelf. These may contain vitamins or minerals that are harmful to you.



Take only vitamins prescribed by your doctor.

Resources

Books

Bowes and Church's Food Values of Portions Commonly Used. Seventeenth Edition. Jean A. T. Pennington. J. P. Lippincott Co. 1997. ISBN: 0–397–55435–4.

The Complete Book of Food Counts. Fourth Edition. Corinne T. Netzer. Dell Publishing Co. 1997. ISBN: 0–440–22110–2.

Brochures

Nutrition and Hemodialysis. National Kidney Foundation. 30 East 33rd Street, New York, NY 10016.
Phone: 1–800–622–9010 or (212) 889–2210.

How To Increase Calories in Your Renal Diet. National Kidney Foundation. 30 East 33rd Street, New York, NY 10016.
Phone: 1–800–622–9010 or (212) 889–2210.

Charts and posters

Kidney HELPER Potassium Guide. (Chart or poster). Available from Consumer MedHelp, 94 New Salem Street, Suite 104, Wakefield, MA 01880–1906.
Phone: 1–800–556–7117 or (617) 246–7700.
Fax: (617) 246–3086.

Kidney HELPER Phosphorus Guide. (Chart or poster). Available from Consumer MedHelp, 94 New Salem Street, Suite 104, Wakefield, MA 01880–1906.
Phone: 1–800–556–7117 or (617) 246–7700.
Fax: (617) 246–3086.

Picture Renal Diet. (Poster). Available from University Hospital, Food and Nutrition Services, 619 South 19th Street, Birmingham, AL 35233.
Phone: (205) 934–8055.

Cookbooks

These cookbooks provide recipes for people on dialysis:

The Renal Gourmet. Mardy Peters. Emenar Inc., 320 Charmille Lane, Wood Dale, IL 60191.
ISBN: 0–9641730–0–X.
Phone: 1–800–445–5653.

Southwest Cookbook for People on Dialysis. Developed by the El Paso Chapter Council on Renal Nutrition and the National Kidney Foundation of Texas, Inc. Published by a grant from Amgen Inc. Cookbooks are available from the National Kidney Foundation of Texas, 13500 Midway Road, Suite 101, Dallas, TX 75244.
Phone: (972) 934–8057.

Creative Cooking for Renal Diets. Cleveland Clinic Foundation. Senay Publishing, P.O. Box 397, Chesterland, OH 44026. ISBN: 0–941511–00–6.
Phone: (440) 256–4435.

Creative Cooking for Renal Diabetic Diets. Cleveland Clinic Foundation. Senay Publishing, P.O. Box 397, Chesterland, OH 44026. ISBN: 0–941511–01–4.
Phone: (440) 256–4435.

Computer Information

The American Association of Kidney Patients provides an online sodium–potassium–phosphorus counter. Go to http://cybermart.com/aakpaz/nakphos.html#top on the Internet.

The National Kidney Foundation offers many fact sheets for patients with kidney disease. Go to www.kidney.org on the Internet.

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Acknowledgments

The individuals listed here provided editorial guidance or facilitated field testing for this publication. The National Kidney and Urologic Diseases Information Clearinghouse (NKUDIC) would like to thank them for their contribution.

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Publications produced by the clearinghouse are carefully reviewed by both NIDDK scientists and outside experts.

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This booklet is also available under “Health Information” at *www.niddk.nih.gov* on the Internet.

About the Kidney Failure Series

You and your doctor will work together to choose a treatment that's best for you. The booklets and fact sheets of the NIDDK Kidney Failure Series can help inform you about the specific issues you will face.

Booklets

- *Kidney Failure: Choosing a Treatment That's Right for You*
- *Treatment Methods for Kidney Failure: Hemodialysis*
- *Treatment Methods for Kidney Failure: Peritoneal Dialysis*
- *Treatment Methods for Kidney Failure: Transplantation*
- *Eat Right To Feel Right on Hemodialysis*
- *Kidney Failure Glossary*

Fact Sheets

- *Vascular Access for Hemodialysis*
- *Hemodialysis Dose and Adequacy*
- *Peritoneal Dialysis Dose and Adequacy*
- *Amyloidosis and Kidney Disease*
- *Anemia in Kidney Disease and Dialysis*
- *Renal Osteodystrophy*
- *Financial Help for Treatment of Kidney Failure*

Learning as much as you can about your treatment will help make you an important member of your health care team.

NIDDK will develop additional materials for this series as needed. Please address any comments about this series and requests for copies to the National Kidney and Urologic Diseases Information Clearinghouse. This series is also on the NIDDK web site at *www.niddk.nih.gov;* click on "Kidney" under Health Information.

U.S. Department of Health and Human Services
National Institutes of Health

NIDDK

National Institute of Diabetes and Digestive and Kidney Diseases
NIH Publication No. 01–4274
May 1999
Reprinted April 2001