

# LEARNING ABOUT KIDNEY DISEASE

DISEASE MANAGEMENT BROCHURE Vol. 3, No. 2, 2008

## ACCESS NURSING SERVICES

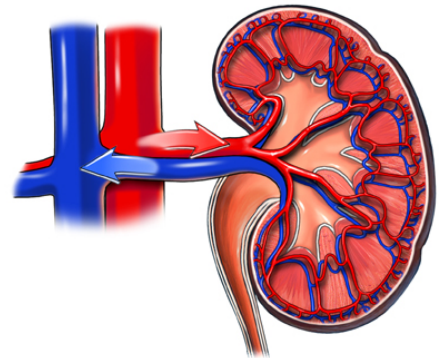


### How do Healthy Kidneys Work?

The kidneys are complicated “trash collectors.” They sift out the “trash” that collects in our blood from the food we eat and from the normal breakdown of muscles. The kidneys sort through this waste, looking for things the body can use-like sodium, potassium, sugar and phosphorous. Everything else is sent to the bladder to be gotten rid of in the urine.

The kidneys are also responsible for releasing three important hormones. These hormones assist the body by

1. Helping to make red blood cells.
2. Regulating blood pressure.
3. Maintaining calcium for the bones.



#### What happens when the kidneys don't work well?

Sometimes the kidneys aren't able to filter out waste product. When this happens, the waste builds up in the blood and damages the body. This is called kidney disease.

### Types of Kidney Disease

#### Acute Renal Failure (ARF)

Sometimes kidney problems happen very quickly. When kidney function stops suddenly, it's called acute renal failure. Surgery, severe burns, losing a lot of blood, drugs, toxins, heat stroke, kidney stones or an accident can cause this to happen.

#### Chronic Renal Failure (CRF)

This type of kidney failure happens slowly and silently. Diabetes is the leading cause of this type of kidney failure and untreated hypertension is the second most common cause.

#### End-Stage Renal Disease (ESRD)

This disease means that the kidneys aren't able to function much at all on their own. Diabetes is the most common cause of ESRD.

#### Kidney Stones

Crystals form in the kidneys making a small, hard stone-like mass that may move through the ureters.

### What Causes Kidney Disease?

#### Diabetes

This disease keeps the body from using sugar properly. The unused sugar damages the nephrons inside the kidneys. Diabetes is the #1 cause of kidney failure in the U.S. each year, about 40% of all new cases of kidney failure are due to diabetes.

#### Hypertension

Also called High Blood Pressure, this condition can damage the small blood vessels in the kidneys.

Overall hypertension is the #2 cause of kidney failure in the United States. But, it's the #1 cause of kidney failure for African

#### Other causes

- Toxins – such as lead and alcohol
- Long-term use of pain medications-such as aspirin, Tylenol, and Motrin,
- Infections in the kidney or in other parts of the body, Injury, Kidney stones, Tumors and kidney cysts, Severe dehydration

## Signs and Symptoms of Kidney Disease

- Frequent headaches
- Fatigue or tiredness
- Unusual itching
- High blood pressure
- Decrease in urination
- Blood in the urine
- Swelling of hands and feet (edema)
- Numbness in hands and feet
- Bleeding in the stomach or intestines
- Abnormal urine tests
- Loss of appetite stomach or intestines
- Nausea or vomiting
- Confusion
- Seizures
- Coma
- Weight loss
- Anemia
- Concentration problems
- Muscle cramps
- Yellowish/brown color to the skin
- Sleep disorders



### Signs and symptoms of kidney stones

- Intense pain that starts in the back or side just below the edge of the ribs
- Bloody, cloudy or foul smelling urine
- Nausea and vomiting
- Frequent and difficult urination
- A burning during urination
- Fever or chills if there is an infection



## How is Kidney Disease Treated?

■ In the early stages of kidney disease, certain medication and special diets can help slow down the disease-making the kidneys last longer.

■ To keep the extra fluids and wastes from building up in the blood, many people must limit what they drink and eat.

### ■ Hemodialysis

This is the most com-

form of dialysis. It removes extra fluids and wastes from the blood by filtering them through a machine. An AV fistula (like a permanent IV) may be surgically inserted into the arm or leg of someone on hemodialysis.

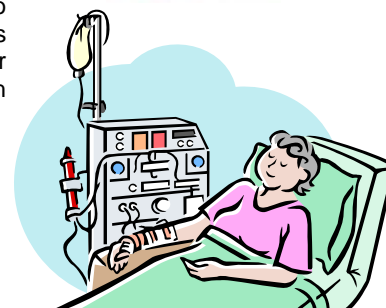
### ■ Peritoneal dialysis

This treatment uses the tiny blood vessels in the abdomen to filter the blood. A fluid is inserted

through a catheter into the abdomen and after a few hours it's drained away.

### ■ Transplant

A donated kidney (either from a living person or from someone who has recently died) is used to give a better life to someone with kidney failure.



## Eating right with Kidney Disease

■ The purpose of the renal diet is to give the body extra nutrients and to lighten the work of the kidneys by eating foods that pass through the kidneys easily

■ Each client on a renal diet will have a special eating plan created just for them based on their weight and how badly their kidneys are damaged

■ In general, a renal diet includes the following:

- Protein. Often, clients are restricted to a small amount of protein every day because it has a lot of waste. This extra waste makes the kidneys work too hard
- Calories. A specific number of calories can be eaten every day

▪ Sodium. Most renal clients need to limit their salt intake so that the body doesn't hold onto fluids and swell up. Salty foods make people thirsty, too.

▪ Fluid. Too much fluid makes the kidneys work overtime. When the kidneys don't work well, extra fluid builds up in the

body. So, most renal clients need to limit how much they drink.

▪ Potassium. A build up of potassium in the blood causes calcium to be "stolen" away from the bones. To keep their bones strong and healthy, renal clients need to limit this mineral in their diet.

## Helping Clients Eat a Renal Diet

■ Anything you drink counts as a fluid. This includes water, soda pop, milk, coffee, tea, beer, wine, and juices

■ If your clients have to limit their fluids, remember that any food that is liquid at room temperature also contains water and it counts as a fluid. These foods include: soups, stews, ice cream, sherbet, popsicles, jell-O, custard, sauces, lettuce, and watery foods like watermelon.

■ Clients who complain about being thirsty-but who have a fluid restriction-might benefit from using smaller cups/glasses and drinking tiny sips.

■ Be sure you know whether your client is supposed to:

- Eat small amounts of protein-usually recommended for people with early kidney disease

- Eat a lot of protein-usually ordered for people on dialysis since dialysis "washes away" protein.

■ Encourage your renal clients to eat high quality protein, which produce less waste than others do. These include meat, fish, poultry, egg whites.

■ If your clients have sodium restrictions, they may be tempted to use a salt substitute to flavor their foods. Remind them that salt substitutes contain potassium and may not be good for them

■ Remember that even if you have several clients on renal diet, each

one of them might be allowed to eat very different foods.

■ If your clients have potassium restrictions, be sure you know which common foods are high in potassium. These include: bananas, dried fruit, oranges, melons, pears, potatoes, sardines, spinach, and tomato products.



*Dialysis sessions are:*

"boring."  
"I never knew time could go so slow."

■ Encourage your clients not to skip their dialysis sessions.

■ Make sure your clients keep their AV fistula access clean. Watch for signs of infection - redness and swelling

■ Encourage them to be careful not to bump or cut their access and not to wear tight clothing or jewelry over it.

■ Remind your clients not to have their blood pressure taken on their access arm.

■ It's important to watch for possible complications.

- Hemodialysis-muscle cramps and hypotension, weakness, dizziness, and nausea

- Peritoneal Dialysis-infection at the catheter

site (redness, swelling around the catheter, fever, stomach pain)



## How Can You Help Your Dialysis Clients...

## Water Does Many Things for the Human Body ?

**INTEREST**

- ⊗ Removes wastes
- ⊗ Cushions your joints
- ⊗ Helps prevent constipation
- ⊗ Regulates body temperature
- ⊗ Carries oxygen and "food" to the body's cells
- ⊗ Helps the kidneys and liver by flushing out some of the toxins



## Tips for Helping Clients with a Kidney Disease

- Remind your clients to take their medications on time.
- Encourage your clients not to take any other medications- even vitamins- without talking to their doctor first.
- If your clients suffer from kidney stones, suggest that they drink lemonade. The citrate in it helps prevent stones from forming.
- It's very important for your clients who receive dialysis not to miss any dialysis sessions. If this happens, the extra water and wastes can build up in the blood causing their kidney function to get worse.
- Many times, clients on dialysis have problems with itching. It has been suggested that drinking spring water instead of tap water will help itching. Tap water may have too many impurities in it, which may cause some of the itching.
- It's important that your client have their pulse checked in their AV fistula access every day.
- Remind your clients not to sleep with their access arm under their head or body.
- Encourage your client not to lift anything heavy or to put too much pressure on that arm.
- Remind your clients to be careful. Infection can happen if there is a problem connecting or disconnecting the dialysis solution bags from the catheter.
- Remind your clients to check dialysis solution to see if it looks cloudy. If it does, it could be a sign of infection and it should be reported immediately
- To help your clients cope with long dialysis sessions, suggest that they: read a book, magazine or newspaper, work on puzzles like word-search and crossword; watch TV; play card games like solitaire; write letters; or listen to music.

Remember that the average person drinks at least 2 liters of fluid every day. Many clients on a Renal Diet are restricted to ONLY 1 Liter a day.



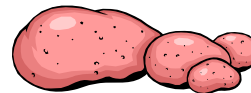
### To Help Control Thirst, Have Your Clients

- Suck on a slice of lemon
- Suck on a few ice chips
- Eat a sour piece of gum
- Rinse the mouth with water, but don't swallow it
- Avoid salty foods



### A Quick Tip

You can remove some of the potassium from potatoes (and other vegetables) by peeling them and soaking them in a large amount of water for several hours. Drain and rinse before cooking.



1.F.2. T.3.T.4.F.5. F.6.F.7.D.8.C9.B.10.B



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## POST TEST

Please circle the best choice and then check your answers with educator. **You may submit this paper to your coordinator or send by mail to office.**

1. True or False

A kidney transplant is the only way to treat kidney failure.

2. True or False

Diabetes is the main cause of Kidney disease.

3. True or False

People in the early stages of kidney disease may not feel sick at all.

4. True or False

Kidney stones must be removed surgically.

5. True or False

Most clients on renal diets are allowed to drink as much fluids as they want one day a week.

6. True or False

All clients with kidney disease have to follow the same renal diet.

7. If your client is on a renal diet, they may have to restrict their \_\_\_\_\_ intake:

- A. Sodium
- B. Fluid
- C. Potassium
- D. All of the above

8. Which of the following is not a symptom of kidney disease?

- A. Edema
- B. High Blood Pressure
- C. Sore Throat
- D. Anemia

9. Mr. Smith is on a restricted potassium diet. Which foods should he avoid?

- A. Bread and pasta
- B. Banana and dried fruit
- C. Crackers and pretzels (Salt-free)
- D. Apples and rice

10. This morning, you notice that Mr. Jones's face was puffy and his legs were swollen. You should:

- A. Massage his feet
- B. Tell your supervisor right away
- C. Give him a cool bath
- D. Ask him what he had to eat



INSERVICE CREDIT: **1 HOUR**

SCORE: \_\_\_\_\_

EMPLOYEE NAME: \_\_\_\_\_

TITLE: \_\_\_\_\_

EDUCATOR SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_