KIDNEY HEALTH COACH

American Kidney Fund®
FIGHTING ON ALL FRONTS

Chronic kidney disease

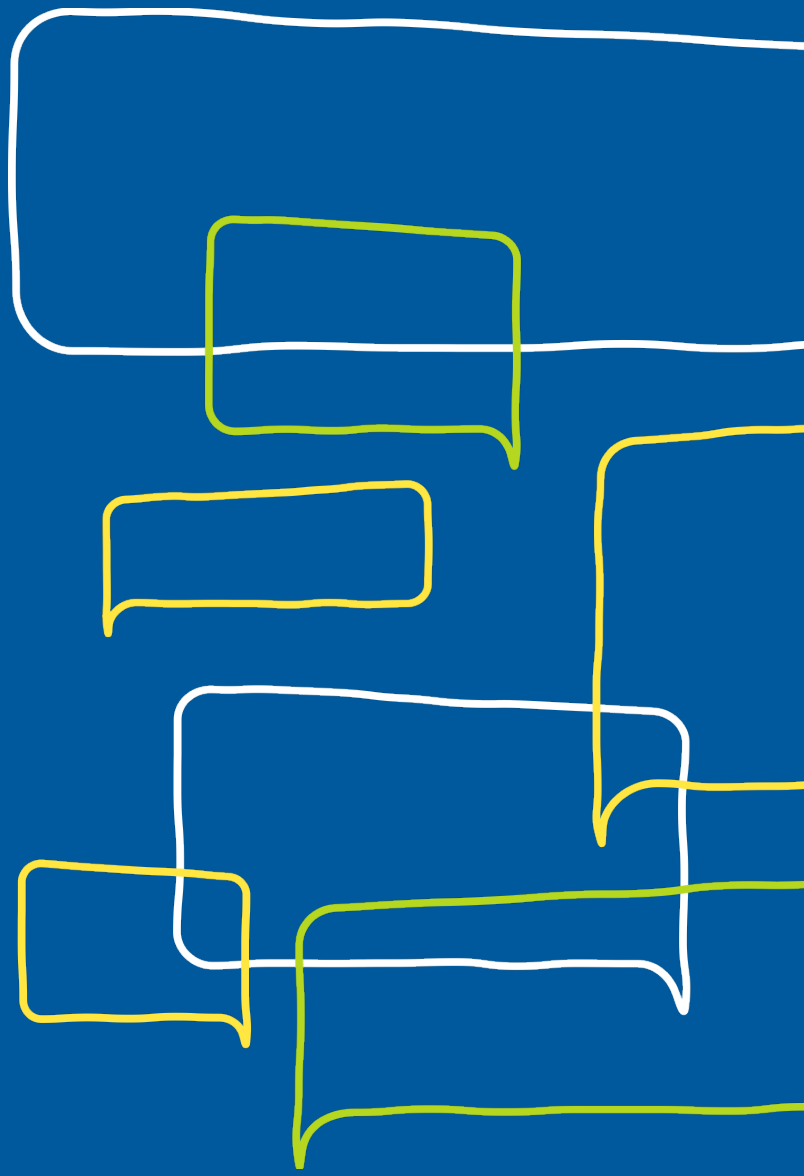
WHAT YOU NEED TO KNOW TO PREVENT AND TREAT IT

Today we will discuss

- What are kidneys and what do they do?
- What is chronic kidney disease (CKD)?
- Ways to prevent CKD and kidney failure
- Treatments for kidney failure

1

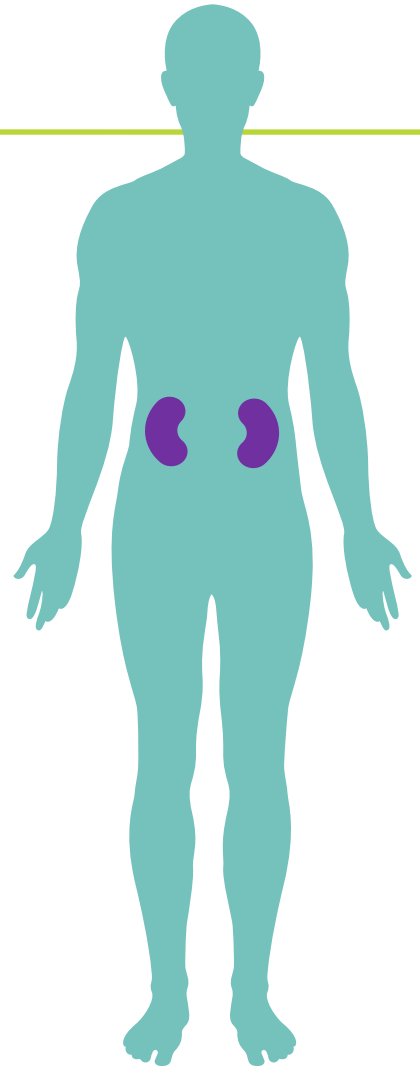
What are kidneys and what do they do?



What are kidneys?

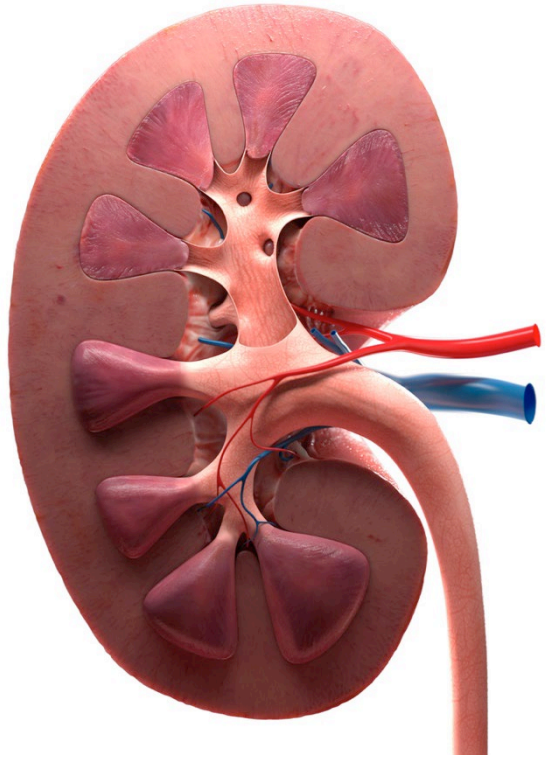
- 2 bean-shaped organs located in your lower back

- Your kidneys are vital organs - you need at least 1 healthy kidney to live



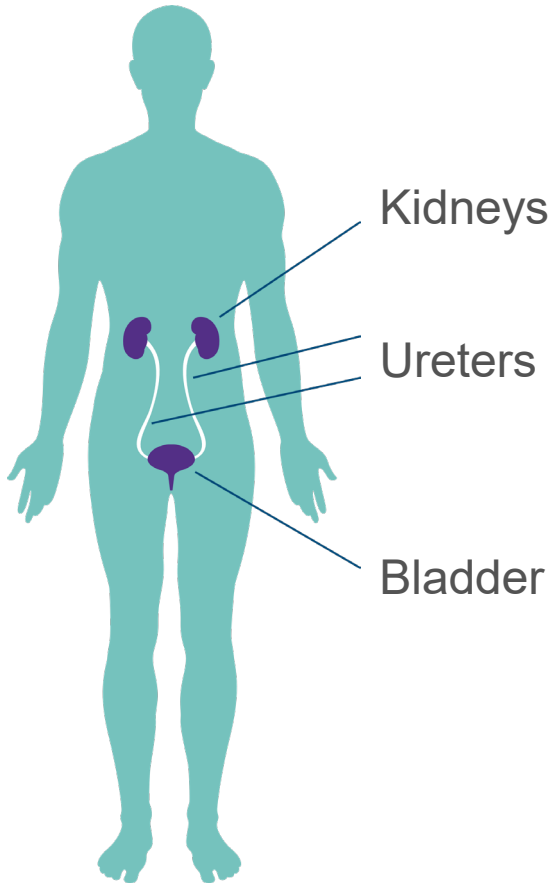
What do your kidneys do?

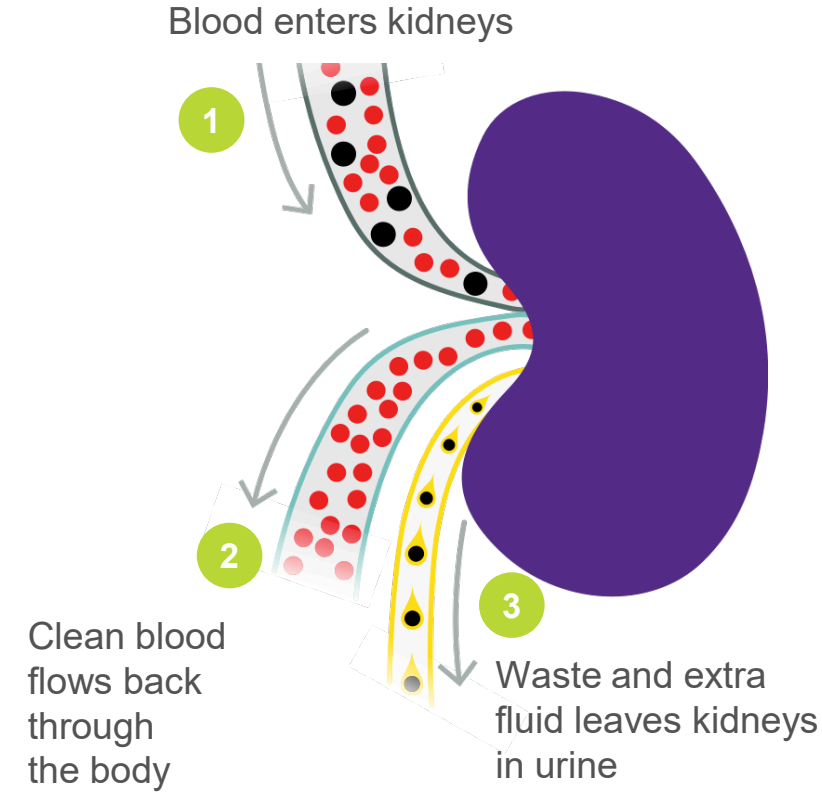
- Filter waste and remove extra fluid out of the blood to make urine
- They also help:
  - Keep bones healthy
  - Make red blood cells
  - Control blood pressure
  - Keep the right amount of minerals in your body



How kidneys work

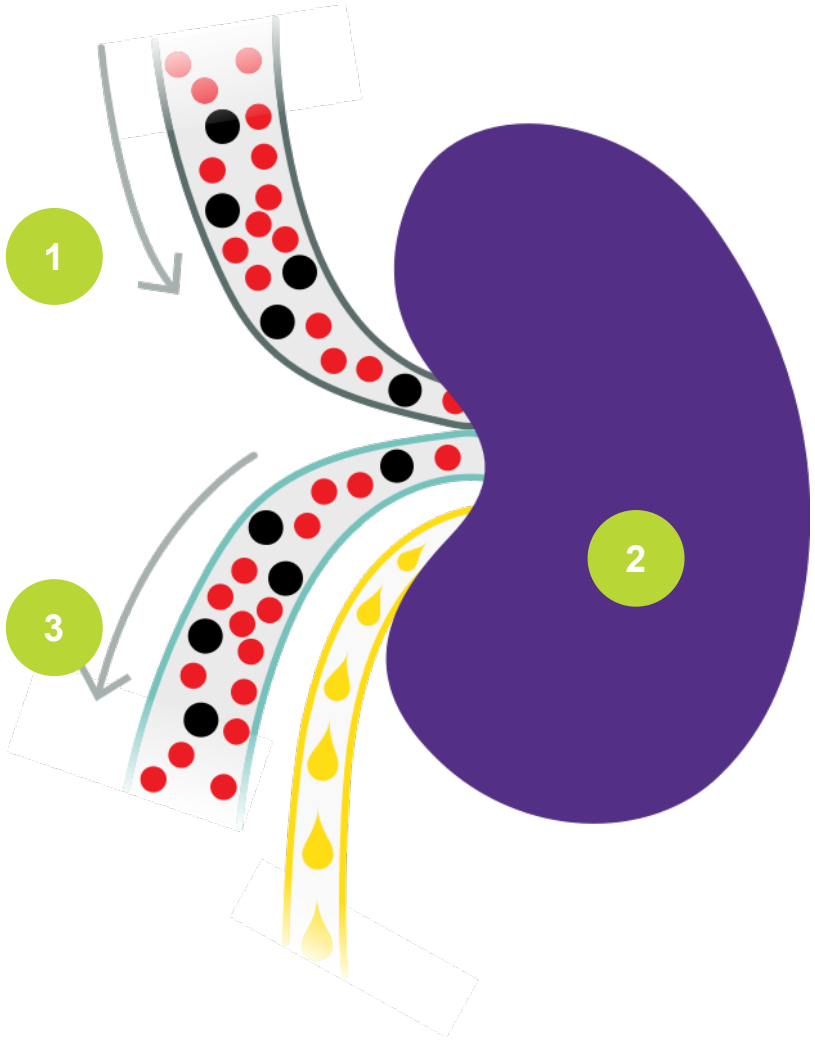
- Your kidneys filter waste and extra fluid to make urine (pee)
- Urine flows from your kidneys to your bladder through 2 thin tubes called ureters





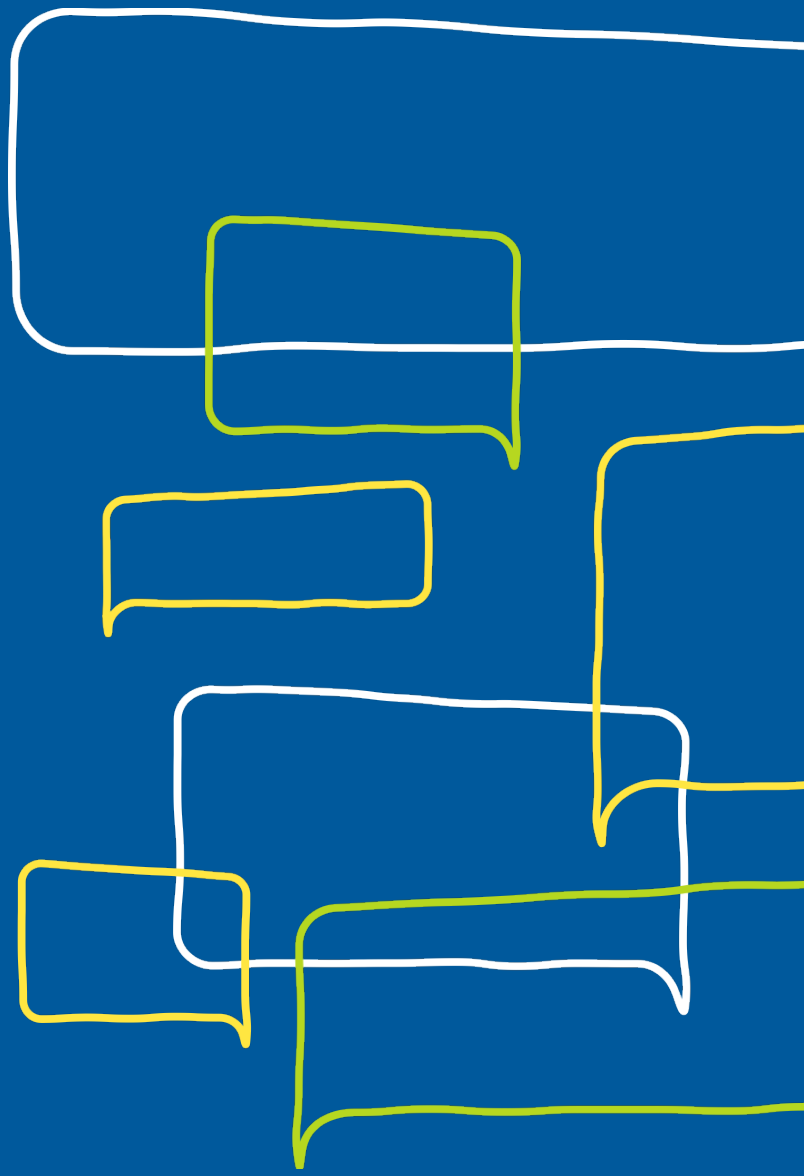
What happens when kidneys are damaged?

- Damage to your kidneys keeps them from working as well as they should
- This means waste and extra fluids stay in your body and can build up
  1. Blood enters the kidneys
  2. Damaged kidneys do not filter waste from the blood as they should
  3. Waste stays in the body instead of being carried out in urine



2

What is chronic kidney disease?



Chronic kidney disease (CKD)

- CKD is permanent damage to your kidneys
- Damage will not go away and can get worse over time
- You may be able to prevent CKD or slow the damage

Do you know?

How many adults in the U.S. have CKD?

A
5%

B
15%

C
50%

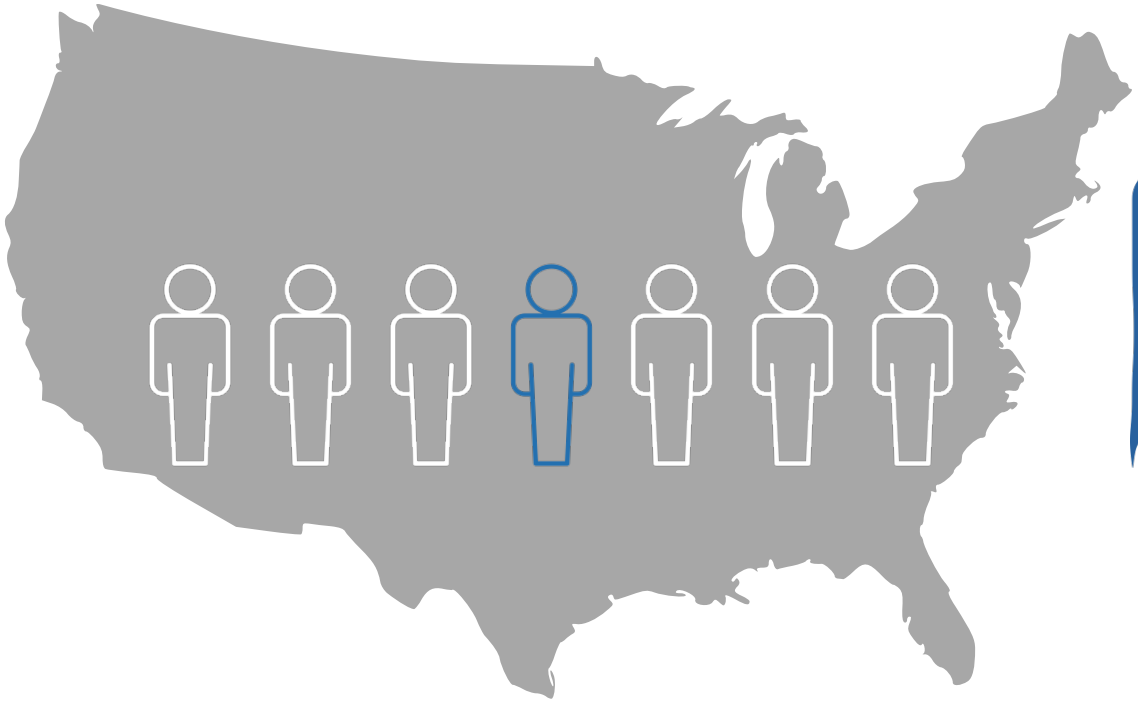
D
75%

Answer

How many adults in the U.S. have CKD?

B

15%



That's about 1 in 7 adults.

Centers for Disease Control and Prevention (CDC), 2020.

5 stages of CKD

Stage of CKD	How much damage	How well the kidneys function (work)
Stage 1	Mild	Normal to slight loss of function
Stage 2	Mild	Mild loss of function
Stage 3a	Mild to moderate	Mild to medium loss of function
Stage 3b	Moderate to severe	Medium to severe loss of function
Stage 4	Severe	Severe loss of function
Stage 5 (kidney failure, ESRD/ESKD)	Most severe	Near total or total loss of function

Kidney failure

- Also called end-stage renal disease (ESRD) or
  end-stage kidney disease (ESKD)
- Kidneys stopped working well enough to keep you alive
- Need dialysis or a kidney transplant to stay alive and live a good quality life

Symptoms of CKD

- CKD gets worse slowly over time
- Most people have no symptoms in early stages (stages 1-3)
- You may not have symptoms until your kidneys are badly damaged, such as in stages 4-5
- The only way to know if you have CKD, is to get tested!

Activity: Symptoms of advanced kidney disease

If your kidneys start to fail, you may have:

Answer: Symptoms of advanced kidney disease

If your kidneys start to fail, you may have:

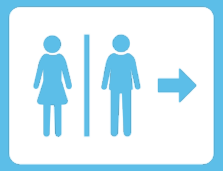
Dry, itchy skin

Muscle cramps

Feeling sick to your stomach and throwing up

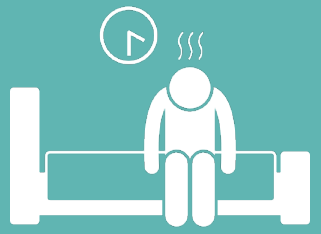
Not feeling hungry

Swelling in your feet and ankles



Decreased urination

Trouble catching your breath



Trouble sleeping

Other health problems may be a sign you have CKD

Anemia:
Not enough red blood cells in your body, which can make you feel tired

Gout:
A type of arthritis that causes pain and swelling in your joints, usually in the big toe

High potassium (hyperkalemia):
Too much potassium in your blood

If you find out you have CKD early, you may be able to stop kidney damage from getting worse

- Damage to your kidneys is usually permanent
- It is important to get tested to find CKD early, such as in stages 1-3, especially if you have high blood pressure or diabetes
- You can take steps to stop kidney damage from getting worse and keep your kidneys healthy as long as possible

Who can get CKD?

Anyone can get CKD. You may be more likely (at risk) to get CKD if you:

Have diabetes

Have high blood pressure

Have heart disease

Have a family member with kidney disease

Are Black, Hispanic, Native American, or Asian Pacific Islander

Are over 60 years old

Centers for Disease Control and Prevention (CDC), 2020.

Do you know?

What is the #1 cause of CKD?

A
Age

B
Alcohol

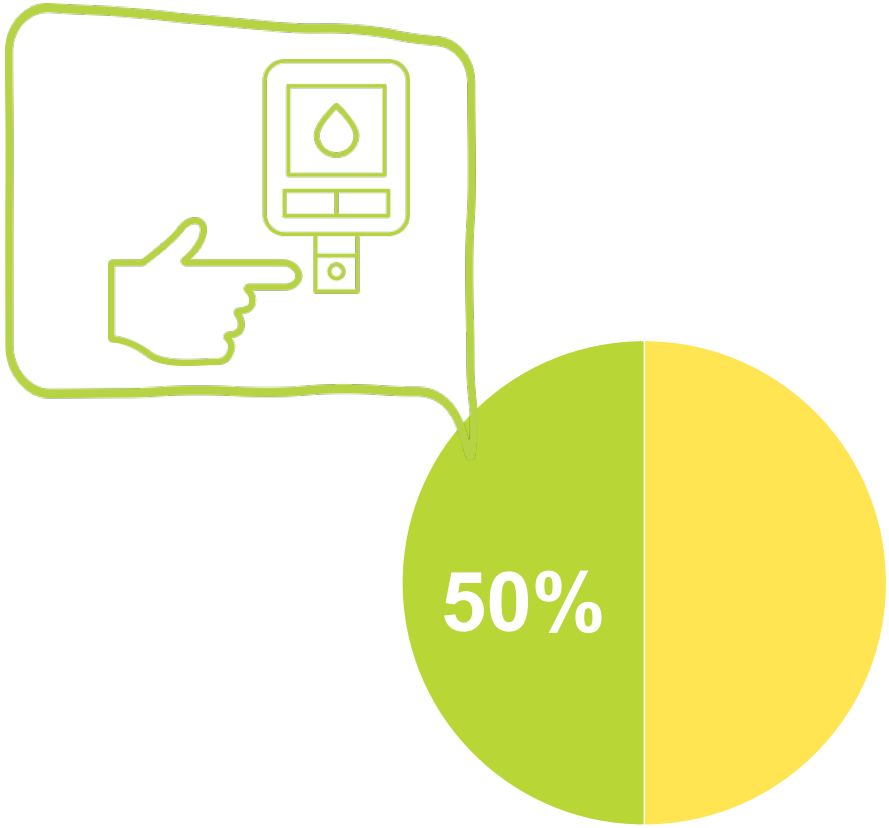
C
Diabetes

D
High blood pressure

Answer

What is the #1 cause of CKD?

C
Diabetes



Diabetes and CKD

- Diabetes is a disease in which you have too much sugar (glucose) in your blood
- Over time, high blood sugar can damage small blood vessels in your kidneys and cause CKD

Diagnosing diabetes	Fasting blood glucose	A1C test result
Normal	Less than 100 mg/dL	Less than 5.7%
Pre-diabetes	100-125 mg/dL	5.7% - 6.4%
Diabetes	126 mg/dL or higher	6.5% or higher

American Diabetes Association, 2020.

Do you know?

What is the #2 cause of CKD?

A
Age

B
Alcohol

C
Diabetes

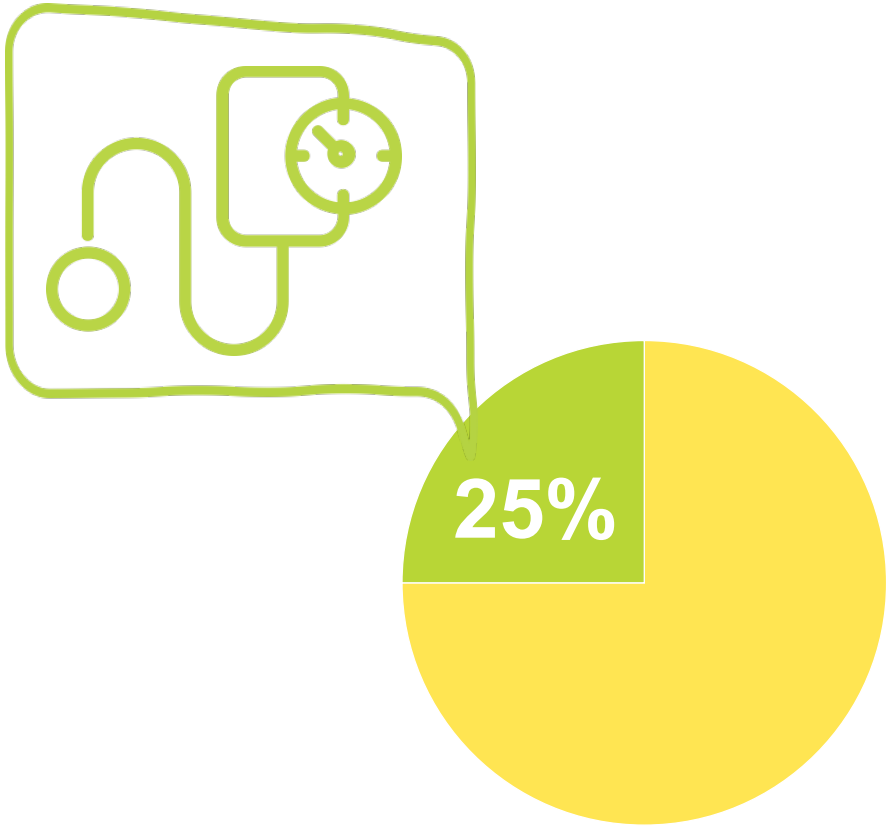
D
High blood pressure

Answer

What is the #2 cause of CKD?

D

High blood pressure



High blood pressure and CKD

- High blood pressure means your heart is working too hard to pump your blood
- Blood flows through your arteries, veins, and blood vessels with too much force or pressure
- This can damage the blood vessels in your kidneys and cause CKD
- CKD can also cause high blood pressure

Blood pressure stages	Systolic (top number)		Diastolic (bottom number)
Normal	Less than 120	and	Less than 80
Pre-high	120-129	and	Less than 80
High — Stage 1	130-139	or	80-89
High — Stage 2	140 or higher	or	90 or higher

Centers for Disease Control and Prevention (CDC), 2021.

Tests for kidney disease

The only way to know if you have CKD is to get tested.

Urine test

- Checks for protein in the urine
- Helps detect damage to your kidneys
- Having protein in your urine for 3 months or more can mean you have CKD

Tests for kidney disease

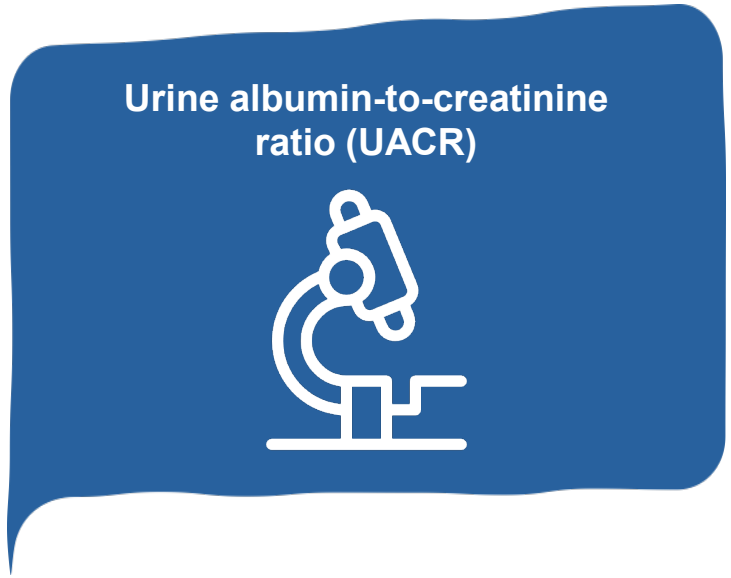
Urine test: urine albumin-to-creatinine ratio (UACR)

Uses a microscope to look at urine in a lab

Shows how much of these are in your urine:

- Albumin: a type of protein
- Creatinine: a waste product in the blood

UACR result (mg/g)	What it means
Less than 30	Normal
30 – 300	High
300 and over	Very high



Tests for kidney disease

Blood test: eGFR – estimated Glomerular Filtration Rate

- Based on your blood test and other factors
- Tells how well your kidneys are working
- A doctor will look at your eGFR over 3 months to decide if you have kidney disease
- The stages of CKD are based eGFR

eGFR results and stages of CKD

Stage of CKD	Ranges of eGFR	How much damage
Stage 1	90 or more	Kidney function is almost normal
Stage 2	60–89	Kidney function is slightly less than normal
Stage 3a	45–59	Mild to moderate damage to the kidneys
Stage 3b	30–44	Moderate to severe damage to the kidneys
Stage 4	15–29	Serious damage to the kidneys
Stage 5 (kidney failure, ESRD/ESKD)	Less than 15	Kidney failure

Know your numbers

Keep track of your numbers. Ask your doctor about these tests and your results. Here's how often each test should be done:

Test	Who should get it	How often
Blood sugar	People with diabetes	Every day at home
A1C	People with diabetes or CKD	Every 3 months
Blood pressure	People with high blood pressure	Every day at home
eGFR	People at risk of or with CKD	Every 6 to 12 months
Urine test/UACR	People at risk of or with CKD	At least every 12 months

National Kidney Foundation, 2020.

KIDNEY HEALTH COACH

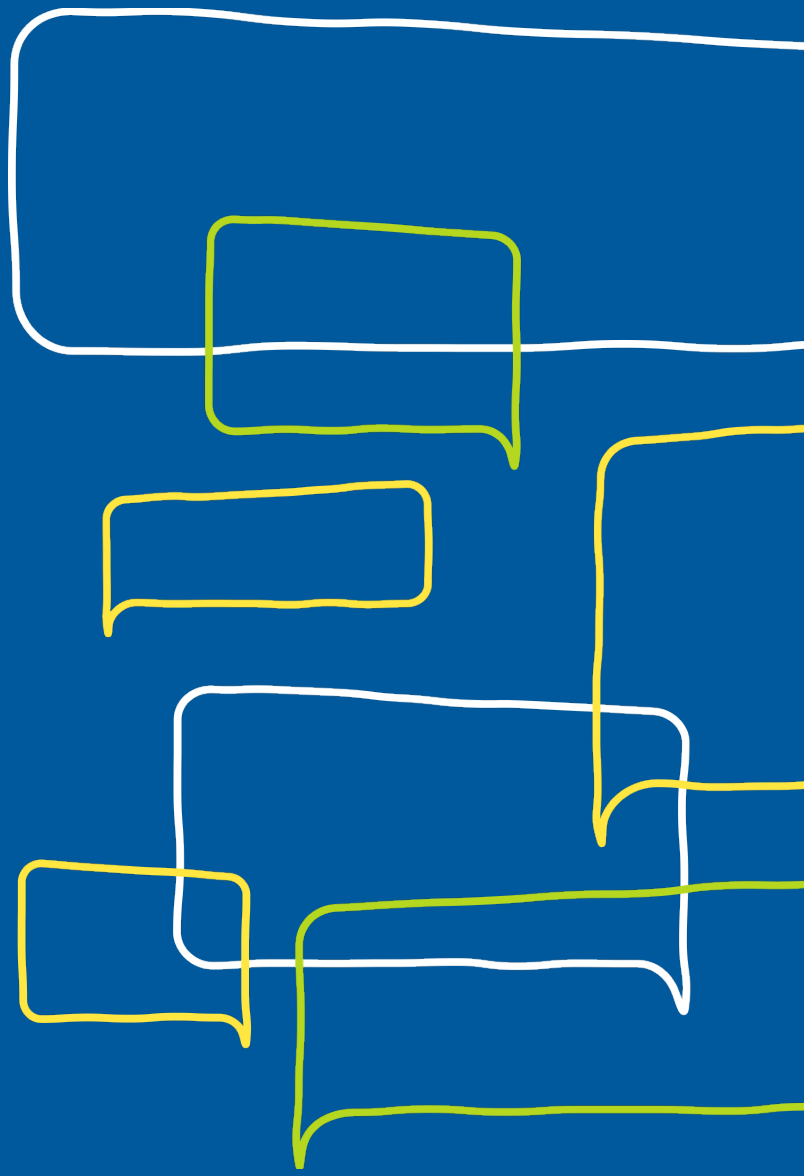
American Kidney Fund®
FIGHTING ON ALL FRONTS

What next steps will you take?

- ☐ Ask my doctor to test my blood sugar level for diabetes
- ☐ Check my blood pressure
- ☐ Ask my doctor to test me for kidney disease
- ☐ Talk to my doctor about ways to prevent CKD

3

Ways to prevent CKD and kidney failure



It is often possible to prevent CKD or slow it from becoming kidney failure

Control your blood sugar if you have diabetes

Control your blood pressure if you have high blood pressure

Eat healthy

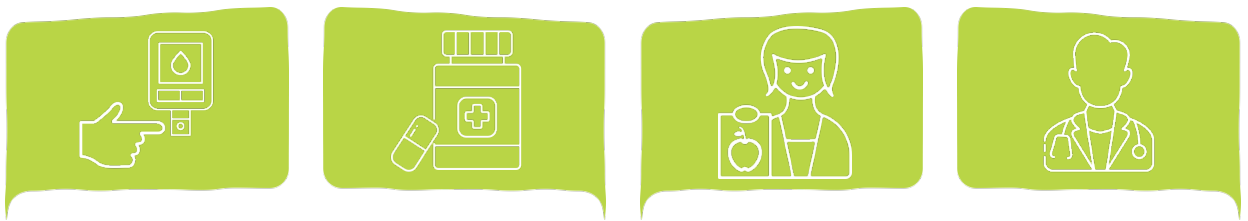
Be active

Ways to manage your diabetes

- Take your medicine as your doctor instructed
- Check your blood sugar level often and track it. Aim to keep it in a healthy range:

70-130	Less than 180	90-150
Before eating a meal	2 hours after start of a meal	At bedtime

- Go to all your doctor visits
- Meet with a dietitian who can help you make a healthy eating plan that is right for you



American Diabetes Association, 2020.

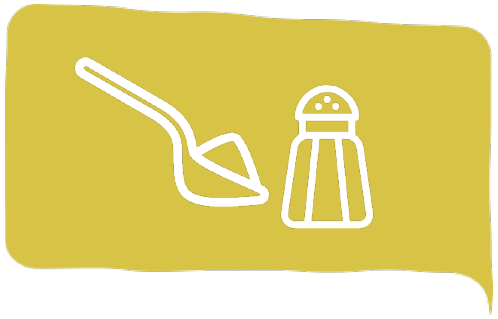
Ways to control high blood pressure

- Take your medicine every day as your doctor instructed
- Check your blood pressure at home
- Go to all your regular doctor visits
- Eat a heart-healthy meal plan, such as:
  - Limit sodium to 2,300 mg or less a day (1 teaspoon)
  - Eat healthy fats and lean proteins
- Be active and keep a healthy weight

Eat healthy

To prevent CKD, diabetes, and high blood pressure:

- Limit your intake of salt and sugar
- Choose healthy fats
- Eat more fruits, vegetables, and whole grains
- Control portion sizes




Limit sodium to 2,300 mg or less a day

- Limit foods and meals that have added salt, such as frozen dinners, fast food, canned and jarred foods, packaged snacks, processed meats, and bakery items
- Eat fresh or frozen vegetables, or choose canned foods that say “no salt added” on the package
- Use fresh or dried herbs, lemon juice, or other spices to add flavor to your dishes
- Drink water instead of sports drinks or soda

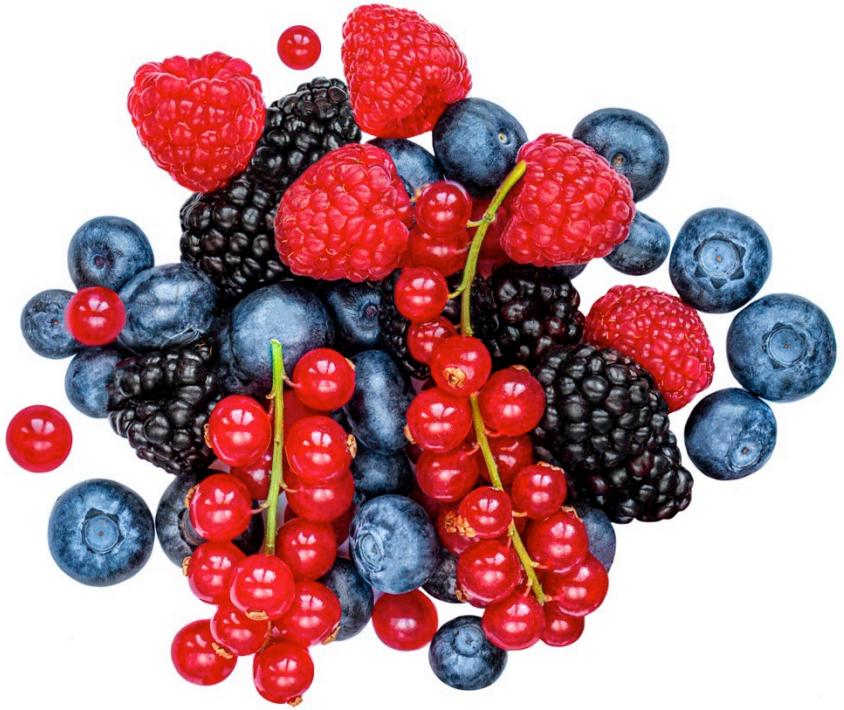
Read the food label for sodium

- Low sodium foods have 5% or less Daily Value
- High sodium foods have 20% or more Daily Value

Source: FDA, 2021

Limit sugar

- Choose foods with natural sugar, like fruit, instead of sweets, such as cookies, cakes, and candies
- Avoid processed, packaged foods that have added sugars
  - Even foods like granola bars, cereals, and yogurts can have high sugar
- Avoid sugary drinks like sodas, and sweetened teas or coffee drinks
- Limit drinking fruit juices, even those which are “unsweetened”



Read food labels for sugar

- 4 grams (g) of sugar = 1 teaspoon
- Low in added sugar is 5% of less Daily Value
- High in added sugar is 20% or more Daily value

Nutrition Facts

8 servings per container

Serving size **8 fl oz (240mL)**

Amount per serving

Calories **110**

	% Daily Value*
Total Fat 0g	**0%**
Saturated Fat 0g	**0%**
Trans Fat 0g	
Cholesterol 0mg	
Sodium 5mg	
Total Carbohydrate 27g	**1**
Dietary Fiber 0g	**0%**
Total Sugars 25g	
Includes 23g Added Sugars	**46%**
Protein 0g	
Vitamin D 0mcg	0%
Calcium 0mg	0%
Iron 0mg	0%
Potassium 40mg	0%

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

% Daily Value for added sugar

Source: FDA, 2021

Choose healthy fats

- Choose lean meats or fish
- Try beans, lentils, or quinoa instead of meat

Learn about the 3 types of fats:

- Choose **unsaturated fats**: liquid at room temperature like olive or canola oil and heart-healthy, like avocados and nuts
- Limit **saturated fat**: solid at room temperature like butter or the skin on chicken
- Avoid **trans fats**: man-made fats, like hydrogenated oil

Eat more fruits, vegetables, and whole grains

- Fill your plate with more fruits and vegetables
- Choose whole grains like whole-grain pasta, whole-wheat bread, oatmeal

Control your serving sizes

- Eat slowly (about 20 minutes) and stop when full
- Check the nutrition label to find the serving size
- Measure or estimate food for the correct serving size:

A small fist is 1 cup

A cupped hand is ½ cup

3 ounces of lean meat is about the size of your palm

1 teaspoon is about the size of the tip of your index finger

1 tablespoon of oil is about the size of the top half of your thumb

How to plan a kidney-friendly meal

Fill your plate with:

- A ⅓ to ½ palm-sized serving of protein
- Cupped hand of fruit
- Cupped hand of bread or grains
- Cupped hand of dairy
- Fist-size of vegetables
- ½ thumb-size of healthy fat

How to plan a kidney-friendly meal

Fill your plate with:

- A ⅓ to ½ palm-sized serving of protein
- Cupped hand of fruit
- Cupped hand of bread or grains
- Cupped hand of dairy
- Fist-size of vegetables
- ½ thumb-size of healthy fat

Activity: What foods fit into each food group?

Name the:

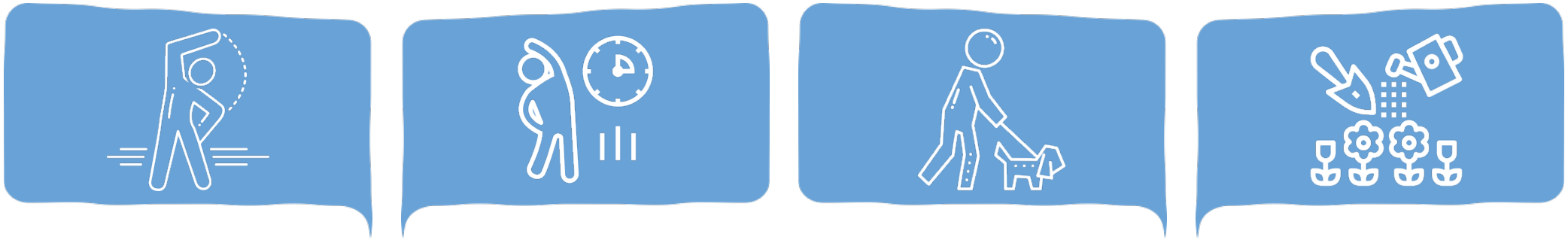
- Protein
- Fruit
- Bread or grains
- Dairy
- Vegetables
- Healthy fat

Kidney Kitchen®

kitchen.kidneyfund.org

Be active

- Being active can help control blood pressure and diabetes and keep a healthy weight
- Set a goal to be active for 30 minutes a day, 5 days per week
- Start slowly – add an extra activity into your routine, such as a walk after a meal
- Find activities you enjoy, like walking, dancing, gardening, or playing a sport



Other ways to prevent CKD

Quit smoking

Limit alcohol

Talk with your doctor

KIDNEY HEALTH COACH

American Kidney Fund®
FIGHTING ON ALL FRONTS

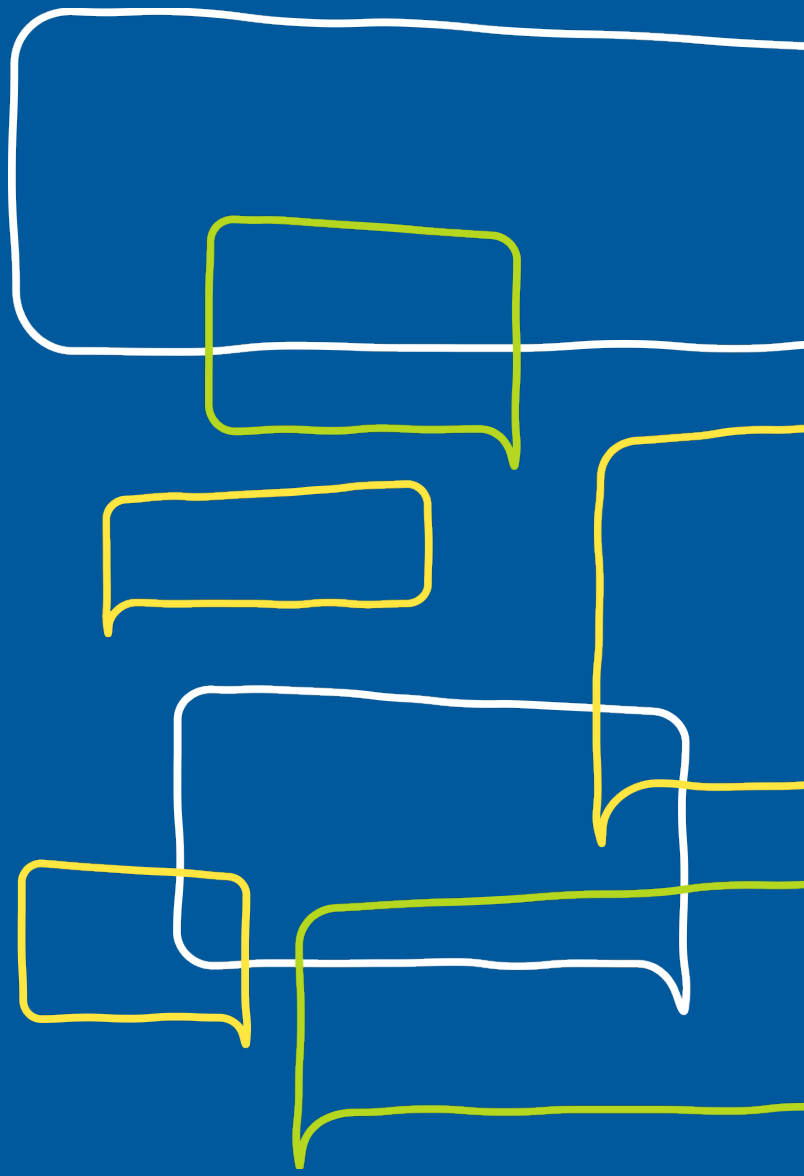
Write down 3 things you'll do to prevent CKD

- ☐ Take steps to manage my diabetes
- ☐ Take steps to control my high blood pressure
- ☐ Make this change to eat healthy
- ☐ Take steps to be more active
- ☐ Other

American Kidney Fund®
FIGHTING ON ALL FRONTS

4

Treatments for kidney failure



Main treatments for kidney failure

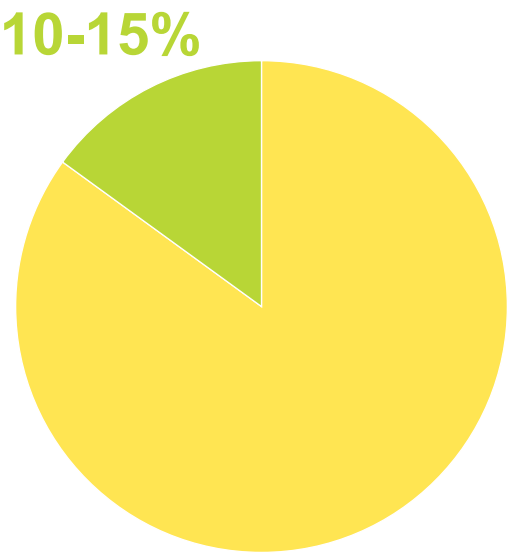
Dialysis

Kidney transplant

Medical management

What is dialysis?

- A treatment to clean the blood when the kidneys are not able to
- It does some of the work that the kidneys did when they were healthy – but it can only do **10-15%** of what a normal kidney does
- There are 2 types:

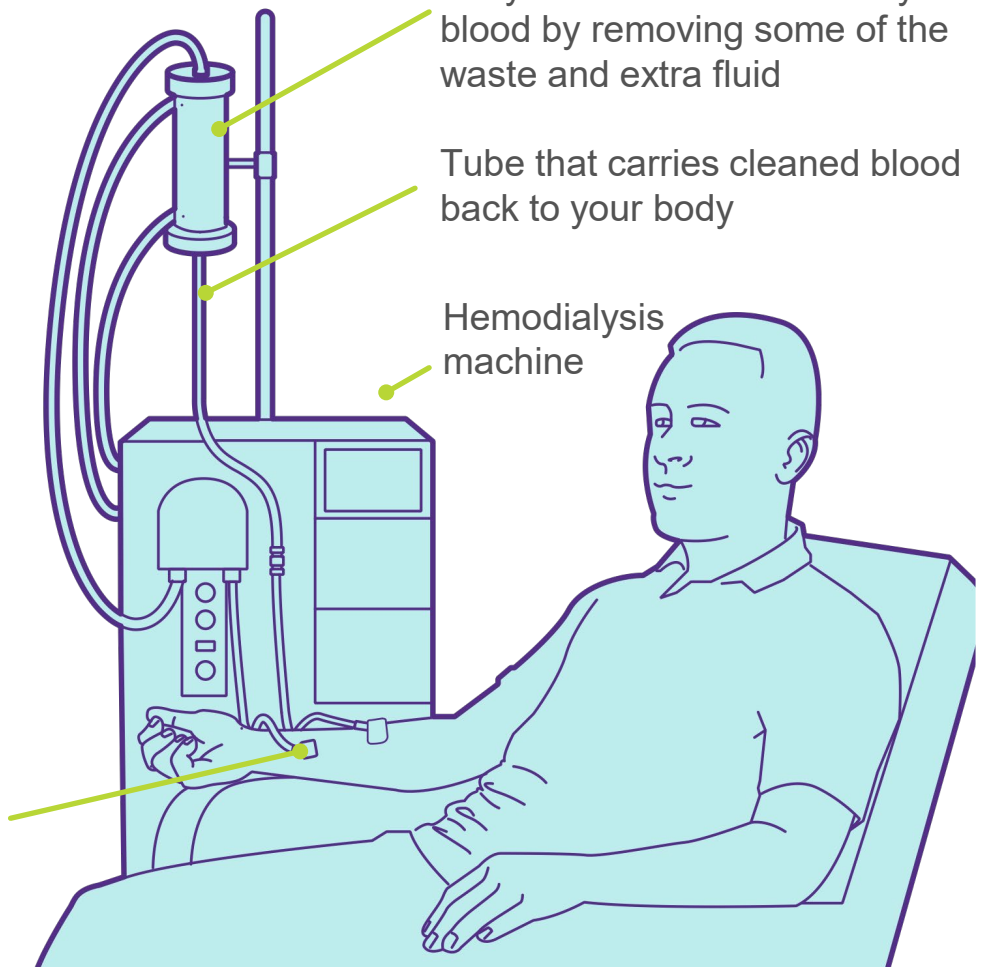


Hemodialysis (HD)

Peritoneal dialysis (PD)

Hemodialysis

- Uses a machine to clean your blood
- Can be done in a dialysis center or at home, during the day or at night
- In-center treatments usually happen 3 days per week, for about 4 hours each time

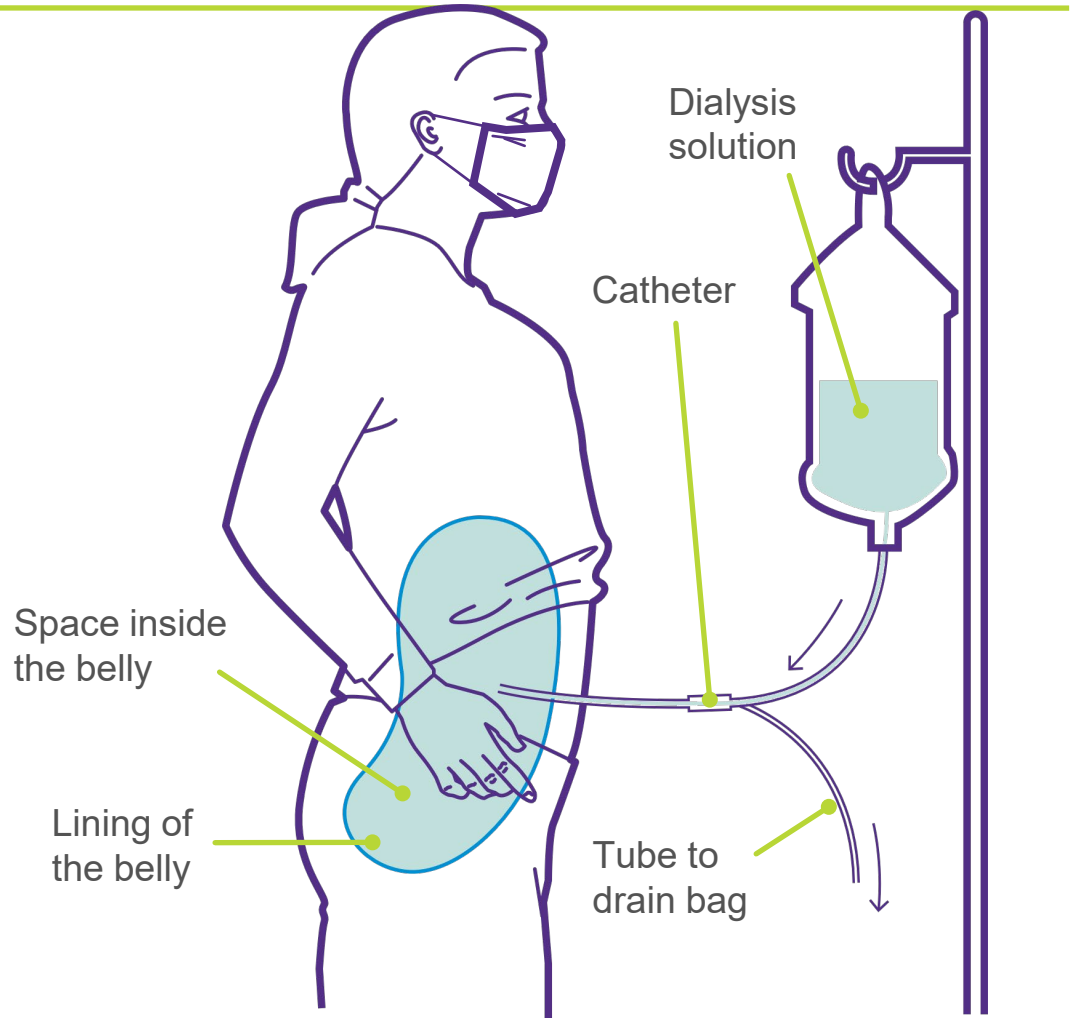


Home hemodialysis

- Usually happens 6 days per week, for about 2-3 hours each time
- On home hemodialysis, you:
  - May be able to be less strict with your meal plan if you do treatments everyday
  - Don’t need to travel to a center and may have more flexibility in your schedule
  - Can keep working
  - Can travel if you plan for it

Peritoneal dialysis (PD)

- Uses a fluid that is put in your belly and then removed to clean your blood
- Can be done in any clean, dry place
- Can be done at home, work, or school
- Done continuously throughout the day and night



Kidney transplant

- A surgery where doctors put a healthy kidney from someone else into a person with kidney failure
- The best treatment option because it raises chances of living a longer, healthier life
- After a kidney transplant, you must take immunosuppressant medicines for as long as the transplant lasts

Types of transplants

	Living donor transplant	Living donor: Paired kidney donation	Deceased donor transplant
What is it?	Healthy kidney comes from someone who is living	2 or more pairs of kidney patients and their donors swap donors, so each patient gets a kidney that works for them	Healthy kidney comes from someone who has just died
How long does the transplanted kidney last?	15-20 years	15-20 years	10-15 years

Medical management

- Also called supportive care or comfort care
- Uses medicines to treat the symptoms of kidney failure without dialysis or a kidney transplant
- Can help you live comfortably, but it will not keep you alive
- More common among older people and people with 2 or more illnesses at the same time

Activity: Match the treatment to its description

Medical management Type letter

Dialysis Type letter

Kidney transplant Type letter

A Surgery to get a healthy kidney

B A treatment that cleans your blood

C Treats the symptoms of kidney failure

Answer: Match the treatment to its description

Medical management	**C**	Treats the symptoms of kidney failure
Dialysis	**B**	A treatment that cleans your blood
Kidney transplant	**A**	Surgery to get a healthy kidney

Activity: Summary

- When your kidneys are permanently damaged and do not work as well as they should, it is called _____
- The most common causes of CKD are _____
- Symptoms of CKD usually do not appear until _____
- Ask your doctor about _____ This is the only way to know how well your kidneys are working.
- You can prevent CKD and kidney failure by:

_____ _____ _____

Answer: Summary

- When your kidneys are permanently damaged and do not work as well as they should, it is called **chronic kidney disease (CKD)**
- The most common causes of CKD are **diabetes and high blood pressure**
- Symptoms of CKD usually do not appear until **later stages or kidney failure**
- Ask your doctor about **tests for kidney disease.** This is the only way to know how well your kidneys are working.
- You can prevent CKD and kidney failure by:
  - **Controlling diabetes and high blood pressure**
  - **Eating healthy**
  - **Being active**

References

American Diabetes Association. (2020). *Diagnosis*. Retrieved from https://www.diabetes.org/a1c/diagnosis

American Kidney Fund. (n.d.). Retrieved from www.kidneyfund.org

Centers for Disease Control and Prevention (CDC). (2020). *Chronic Kidney Disease Basics*. Retrieved from https://www.cdc.gov/kidneydisease/basics.html

Centers for Disease Control and Prevention. (2021). *Facts About Hypertension*. Retrieved from https://www.cdc.gov/bloodpressure/facts.htm

Food and Drug Administration (FDA). (2020). Sodium in your diet, use the nutrition facts label and reduce your intake. Retrieved from https://www.fda.gov/food/nutrition-education-resources-materials/sodium-your-diet

Harvard T.H. Chan School of Public Health. (2011). The Nutrition Source. *Healthy Eating Plate.* Retrieved from https://www.hsph.harvard.edu/nutritionsource/healthy-eating-plate/

National Kidney Foundation. (2020). *ACR*. Retrieved from https://www.kidney.org/kidneydisease/siemens_hcp_acr

National Kidney Foundation. (2020). *Three simple tests your should ask your doctor to do*. Retrieved from https://www.kidney.org/news/kidneyCare/Spring09/askYourDoc_spring09#:~:text=Ask%20your%20doctor%20about%20these,keep%20it%20from%20getting%20worse!

KIDNEY HEALTH COACH

American Kidney Fund®
FIGHTING ON ALL FRONTS

Thank you!
Please take a moment and complete our quiz and evaluation form.

https://www.surveymonkey.com/r/KHCSessionSurveyEnglish