Kidney Health Coach
The Kidneys

• The kidneys are vital organs

• Two bean-shaped organs, about the size of a fist

• Each kidney connects to the bladder by a thin tube called a ureter
What do the kidneys do?

• Filter waste and extra fluid out of the body to make urine
• Keep the right amount of minerals in the body
• Control blood pressure
• Keep bones healthy
• Help the body make red blood cells
Chronic Kidney Disease (CKD)

• Having CKD means there is permanent damage to the kidneys which cannot be reversed

• Damage can worsen over time
Stages of Chronic Kidney Disease

• Stages 1-3 usually do not have obvious symptoms

• Stage 4 means kidney damage is severe

• Stage 5 means kidney failure or nearing kidney failure

• Most people with early stage kidney disease do not know they have it
Kidney Failure

• Kidney failure is also called end-stage renal disease, or ESRD

• When a person has kidney failure, their kidneys are not working well enough to keep them alive

• A person with kidney failure needs dialysis or a kidney transplant to survive
Playing to Win

To beat kidney disease, we need to understand what causes it.
Who can get kidney disease?

• Anyone can get kidney disease

• People with diabetes and/or high blood pressure are more likely to get kidney disease than others
Diabetes is the leading cause of kidney disease and kidney failure.

Almost half of all kidney failure cases are caused by diabetes.
Diabetes and CKD

• Diabetes is a disease that causes the body to have trouble making or using insulin.

• Not having enough insulin causes too much glucose (sugar) to stay in the blood.

• This causes the kidneys to work too hard to remove excess sugar in the blood. Because of being overworked, the kidneys can become damaged.

• Normal blood glucose level:
  • Fasting (70-99)
  • Non-fasting (100-140)
High blood pressure (hypertension) is the second leading cause of kidney disease and kidney failure.

About 25% of all kidney disease cases are caused by high blood pressure.
High Blood Pressure and CKD

- Having high blood pressure means the heart is working too hard to pump blood.
- High blood pressure makes blood flow forcefully through the small blood vessels in the kidneys.
- This can damage the kidneys and cause kidney disease.
- A healthy blood pressure is considered 120/80 or below.
- High blood pressure (hypertension) is considered 140/90 or higher.
Kidney disease can also cause high blood pressure.

The kidneys work to regulate blood pressure.

When the kidneys are damaged, they cannot do this job as well as they should.
Others at Risk

• Others at risk for kidney disease:

- Have heart disease
- Have a family member with kidney disease
- Are African-American, Hispanic, Native American, or Asian Pacific Islander
- Are over 60 years old

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The Playbook

• A playbook is a collection of strategies a sports team could use during a game

• Defensive and offensive plays
Defensive Plays
Actions to prevent chronic kidney disease and kidney failure
Controlling Blood Sugar and Blood Pressure

- Control blood pressure
- Control blood sugar
Be active!

- Physical activity is very important for staying healthy
- Set a goal to exercise for 30 minutes a day, 5 days per week
- Be creative! Try walking, dancing, or playing a sport
Eat a Healthy Diet

To prevent kidney disease, diabetes, and high blood pressure:

• Keep a low-salt diet
• Limit unhealthy fats and sugar
• Eat a diet rich in fruits, vegetables, and whole grains
• Control portion sizes
Eat a Healthy Diet

Keep a low-salt diet

• Avoid foods and meals that are pre-packaged, like frozen dinners, canned soups, or deli meats

• Limit fast food and salty snacks like chips and pretzels

• Eat fresh or frozen vegetables instead of canned, which often contain added salt

• Try seasoning food with fresh herbs, lemon juice, or other spices instead of adding salt
Eat a Healthy Diet

**Limit unhealthy fat**

- Choose lean meats or fish
- Try beans, lentils, or quinoa instead of meat
- Instead of butter, use olive or vegetable oils
- *Limit* saturated fat
- *Avoid* trans fats
Eat a Healthy Diet

Limit sugar

• Foods that are marketed as healthy like granola bars, cereals, and yogurts can have high sugar content

• Avoid sugary drinks like sodas, and sweetened teas or coffee drinks

• Limit drinking fruit juices, even those which are “unsweetened”

• For a sweet snack, stick to fruits
Eat a Healthy Diet

Eat foods with high nutrient value

- Fruits
- Vegetables
- Whole grains
Eat a Healthy Diet

Control portion sizes

• Eat slowly and stop when full
• Read nutrition labels
• Do not eat directly out of the bag or box
• Measuring tips:
  • A typical four-ounce portion is about the size of the palm of your hand
  • A tablespoon is about the size of the top half of your thumb
  • A teaspoon is about the size of the tip of your index finger
Other Lifestyle Changes

- Quit smoking or using tobacco products
- Limit alcohol
- Work with a doctor
Tests for Kidney Health

• The only way for a person to know if they have chronic kidney disease (CKD) is to get tested

• Urine test
  • Checks for protein or blood in the urine
  • This test helps detect structural damage to the kidneys

• eGFR – estimated **Glomerular Filtration Rate**
  • Based on blood creatinine level (waste product in the blood), age, sex, race, and weight
  • This test shows how well the kidneys are working
  • A doctor will consider an eGFR level over 3 months to decide if a person has kidney disease
GFR and the Stages of CKD

• **Stage 1**: Kidney damage and eGFR greater than 90
  • Stage 1 CKD means there are some signs of kidney damage (like protein in the urine, or physical damage to the kidneys), but the eGFR is greater than 90

• **Stage 2**: Kidney damage and eGFR 60-89
  • Stage 2 CKD means there are some signs of kidney damage (like protein in the urine, or physical damage to the kidneys), but the eGFR is between 60 and 89

• **Stage 3**: eGFR 30-59
  • Stage 3 CKD means the kidneys are moderately damaged, and are not working as well as they should

• **Stage 4**: eGFR 15-29
  • Stage 4 CKD means the kidneys are severely damaged, and are not working nearly as well as they should

• **Stage 5**: eGFR less than 15
  • Stage 5 CKD means the kidneys are getting close to complete failure, or have already failed
Offensive Plays
Manage CKD and treat kidney failure in the best ways possible.
Managing Chronic Kidney Disease (CKD)

- Depending on the stage of kidney disease, it may be possible to prevent CKD from becoming kidney failure

- To prevent CKD from becoming kidney failure, one should:
  - Control their blood sugar if they have diabetes
  - Control their blood pressure if they have high blood pressure
  - Eat a healthy diet
  - Stay active
  - Quit smoking, limit alcohol, and work with their doctor
  - Talk to their doctor about types of medicine that can help protect the kidneys, such as ACE inhibitors and ARBs

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Kidney Failure

• A person with kidney failure will need to go on dialysis or get a kidney transplant to live

• Dialysis does not make the kidneys better, it does part of the job that healthy kidneys do for the body
Kidney Failure

Major symptoms:
- Back pain
- Dry itchy skin
- Metallic taste in the mouth
- Confusion
- Fatigue
- Nausea and vomiting
- Loss of appetite

- Swelling in the hands, face, feet and ankles
- Urine is dark, foamy, and/or bubbly
- Frequent shortness of breath
- Urinating more or less than normal

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Kidney Failure

Treatment methods:

• Hemodialysis
• Peritoneal dialysis
• Transplant
• Supportive care
Hemodialysis

- Uses a machine to clean the blood

- Can be done in a dialysis center or at home

- If done in a dialysis center, treatments usually take about 4 hours each time, 3 days per week

- If done at home, treatments usually take about 2-3 hours each time, 6 days per week
Peritoneal Dialysis

- Uses the lining of the abdomen, called the peritoneum, and a cleaning solution called dialysate to clean the 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

- Removal of a healthy kidney from one person to replace a failed kidney of another person
- Once a person receives a kidney transplant, they must stay on immunosuppressant medications for the duration of time they have the transplanted kidney
Supportive Care

- Uses medicines to manage the symptoms of kidney disease without doing dialysis or having a kidney transplant

- Can help someone live comfortably, but it will not keep them alive

- More common among older patients and patients dealing with two or more illnesses at the same time
Recap

1. When the kidneys are permanently damaged and do not work as well as they should, it is called chronic kidney disease.

2. Diabetes and high blood pressure are the most common causes of chronic kidney disease and kidney failure.

3. The best ways to prevent kidney disease are to keep a healthy blood sugar level and a healthy blood pressure.


5. The way to know how well the kidneys are working is to get a blood or urine test.
Thank you!