CHRONIC KIDNEY DISEASE – WHY WOMEN MAY BE AT RISK?
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No financial disclosures
OBJECTIVES

- Discuss the role of the kidneys
  - Why kidneys important for good health
- Discuss common kidney failure prevention strategies
  - Labs
- Discussion of over the counter medications- Supplements and pain medications
- Discuss diagnostic procedures (tests) involving dye
- Present risk factors
- Discuss Diabetes and Hypertension control
- Provide resources for patients
WHY KIDNEYS ARE IMPORTANT

- Kidneys work 24 hours day 7 days a week
- Small organs but important
- Size of your fist
WHAT KIDNEYS DO

- Remove extra water (fluid)
  - Kidneys clean between 120 to 150 quarts of blood
  - 1-2 quarts of urine
- Make hormones
  - Regulate blood pressure
  - Keep bones healthy
  - Make red blood cells
    - Erythropoietin

WHAT KIDNEYS DO

- Remove body waste (toxins)
- Regulate electrolytes
  - sodium, potassium, and phosphorous
- Activate vitamin D

STAGES OF CHRONIC KIDNEY DISEASE (CKD)

GLOMERULAR FILTRATION RATE (GFR) BASED ON:
- AGE
- WEIGHT
- HEIGHT
- MALE OR FEMALE
- ETHNICITY (AFRICAN AMERICAN (AA) OR CAUCASIAN)
AA HAVE MORE MUSCLE MASS CREATININE IN CALCULATION

NATIONAL KIDNEY FOUNDATION. (2002).

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
<th>GFR (mL/min/1.73 m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kidney damage with normal or ↑ GFR</td>
<td>≥90</td>
</tr>
<tr>
<td>2</td>
<td>Kidney damage with mild ↓ GFR</td>
<td>60–89</td>
</tr>
<tr>
<td>3</td>
<td>Moderate ↓ GFR</td>
<td>30–59</td>
</tr>
<tr>
<td>4</td>
<td>Severe ↓ GFR</td>
<td>15–29</td>
</tr>
<tr>
<td>5</td>
<td>Kidney failure</td>
<td>&lt;15 (or dialysis)</td>
</tr>
</tbody>
</table>

Chronic kidney disease is defined as either kidney damage or GFR <60 mL/min/1.73 m² for ≥3 months. Kidney damage is defined as pathologic abnormalities or markers of damage, including abnormalities in blood or urine tests or imaging studies.
COMMON KIDNEY FAILURE PREVENTION STRATEGIES

- Prevention
  - Drink plenty of water
  - Urine light yellow color
- Control:
  - Glucose - blood sugar
    - Effects the capillaries in the glomerulus
  - Hypertension - blood pressure
    - Hardening of the arteries
  - Weight
    - In activity
    - lipids
LABS

- Labs
  - Creatinine
    - Muscles
    - Yellow color in urine
  - BUN (Blood urea nitrogen)
    - From protein
  - Glomerular Filtration Rate (GFR)
  - Hemoglobin and Hematocrit (management)
LABS

- Urine
  - Screen for kidney disease
  - Good follow up
  - Ask question from your providers (experts)
  - Repeat labs if necessary
    - Urine is checked for:
      - Blood
      - Protein
      - Albumin
LABS

- Women
  - Urinalysis for blood or protein
  - Follow up with another test if questionable
  - Early detection of Kidney disease
CONSIDERATION OF OVER THE COUNTER MEDICINES IN RELATION TO KIDNEY DISEASE

- Tylenol – safe as directed
  - Liver
  - 4 grams per day
- Aspirin as prescribed
- Tums
  - Calcium
  - If over used leads to:
    - Muscle issues
    - Kidney stones
CONSIDERATION OF OVER THE COUNTER MEDICINES IN RELATION TO KIDNEY DISEASE

- NSAIDs-
  - Ibuprofen
  - Naproxen
  - Aleve
  - Advil

- Causes issues with the nephrons in the kidneys
- Stay hydrated
- Limit amount and duration
- See provider
- No more than 10 days
CONSIDERATION OF OVER THE COUNTER MEDICINES IN RELATION TO KIDNEY DISEASE

- Supplements
  - NO supplements proven beneficial for your kidney health
  - Not FDA approved
  - No clinical studies that shows and clinical benefits to the kidney
- Natural diuretics
- Vitamins- Contact physician
DIAGNOSTIC PROCEDURES INVOLVING CONTRAST DYE

- MRI
- Cardiac Cath
- CT Scan
- Talk to doctor about any scheduled tests and appropriate hydration
- Ask about the test without contrast
- If you have kidney issue- Be careful with the dye
FAMILY HISTORY RISK FACTORS

- Diabetes
  - Monitor glucose
  - Kidney function
- Hypertension (high blood pressure)
  - Narrowing of arteries and small vessels (leaky)
  - Hardening
- Focal segmental glomerulosclerosis (FSGS) - scaring in the glomerulus

FAMILY HISTORY RISK FACTORS

- Recessive polycystic kidney-cysts
- Nephronophthisis- inflammation and scaring
- Congenital abnormalities of the kidney and urinary tract

Lupus - autoimmune disorder

Pregnancy
- Increases risk or increased blood pressure
- Increases risk if diabetes

Preeclampsia

Eclampsia

Urinary tract infections (women)
- Moves up into the kidney structures

Oral contraceptives (young women)
- Increases risk or increased blood pressure
- Increases risk of diabetes
- Blood clots
RISK FACTORS

- Obesity
  - Diabetes
  - High blood pressure
  - Metabolic syndrome
  - Diet

- Smoking
  - Kidney cancer
  - Tumor blood in urine
  - Remove health tissue with the tumor (entire kidney)
  - Hardening of the arteries
RISK FACTORS

- Toxic substances (medication and dye) - vaso-constriction
- Illegal drugs - hypertension
- Excessive alcohol - less efficient filtering
- Other disease processes
RISK FACTORS

- Acute injury
  - Can happen to anyone
  - Can recover with different stages of kidney function
- Causes:
  - Dehydration
  - Shock
  - Acute arrest
RISK FACTORS

- Medications
  - Diuretics
    - Keep hydrated
  - Ace inhibitors - first line for BP
    - Creatinine may increase
  - Metformin
    - Monitor Creatinine
RISK FACTORS

- Chemo Therapy
- Kidney stones
  - Obstruction
  - Pocket of fluid
  - Kidney damage

National Geographic (for picture)
Managing or controlling your blood sugars and blood pressure slow the progression of kidney damage.

Work with your health care providers

Life style changes

Diet

No specific diet

Exercise

Walk

DIABETES AND HYPERTENSION CONTROL FACTORS

- Medications
  - Your blood pressure can be checked 1-2 hours after taking the medication
  - The medications that are taken long term can be an issue for the kidneys. Issue to no begin right away.

- Caffeine
- Diuretic
- Vaso-constriction

RESOURCES THERE ARE IF QUESTIONS

- Health Care professionals- Doctors, Advance Practice Nurse Prescribers, Registered Nurses
- Local National Kidney Foundation
  - Kidney.org
- National Institutes of Health (NIH)
  - https://www.nih.gov/
- U.S. Department of Health and Human Services
RELIABLE WEBSITES

Web sites endings:
Edu.
Gov.

HON is the most common accreditation site

www.ncbi.nlm.nih.gov/pubmed
www.medlineplus.gov
QUESTION TO ASK

“Five Quick Questions”

“Who runs or created the site or app? Can you trust them?”

“What is the site or app promising or offering? Do its claims seem too good to be true?”

“When was its information written or reviewed? Is it up-to-date?”

“Where does the information come from? Is it based on scientific research?”

‘Why does the site or app exist? Is it selling something?’

NCCIH, January 2018, retrieved from: https://nccih.nih.gov/health/webresources
What is Chronic Kidney Disease?

Chronic kidney disease (CKD) means your kidneys are damaged and can’t filter blood the way they should. The disease is called “chronic” because the damage to your kidneys happens slowly over a long period of time. This damage can cause wastes to build up in your body. CKD can also cause other health problems.
Your Kidneys and How They Work

On this page:
- What are the kidneys and what do they do?
- Why are the kidneys important?
- How do the kidneys work?
- Points to Remember
- Clinical Trials

What are the kidneys and what do they do?

The kidneys are two bean-shaped organs, each about the size of a fist. They are located just below the rib cage, one on each side of the spine. Every day, the two kidneys filter about 180 to 200 quarts of blood to produce about 1 to 2 quarts of urine, composed of wastes and extra fluid.

The urine flows from the kidneys to the bladder through two thin tubes of muscle called ureters, one on each side of the bladder. The bladder stores urine. The muscles of the bladder wall remain relaxed while the bladder fills with urine. As the bladder fills to capacity, signals sent to the brain tell a person to find a toilet soon. When the bladder expands, urine flows out of the body through a tube called the urethra, located at the bottom of the bladder. In men the urethra is long, while in women it is short.
QUESTIONS


Women and Kidney Health

Tuesday, September 25
6-7pm

Thanks for joining us!