Thanks to our speaker!

• Randy Chen, MD
  – Practicing nephrologist - San Mateo County
  – Has a special interest in slowing progression of CKD and improving the quality of lives in patients with kidney disease.
  – Dr. Chen has won 3 consecutive awards as a medical director for his dialysis unit for outstanding patient care and leadership for Satellite Healthcare.
Slowing the Progression of Chronic Kidney Disease

Dr. Randy Chen, M.D.
How the Kidneys Work

- The kidneys filter out the blood to produce urine which contains waste products, water and electrolytes.
- The kidneys also make hormones that help with:
  - Blood production
  - Blood pressure regulation and hydration
  - Bone and mineral balance
- The kidneys also regulate acid base, water and electrolyte balance.
What is Chronic Kidney Disease (CKD)?

• CKD means that there is permanent damage to the kidneys so they cannot work at their full capacity. This is reflected in a decrease in glomerular filtration rate or GFR (estimated by math using the blood creatine level).
• There are 5 stages of CKD. Most patients have stage 3 CKD.
• As the ability of the kidneys to do the job of filtering blood or toxins and producing hormones worsens, health issues may occur.
Stages of CKD

Based on KDIGO staging classification
• 14.8% of people in the US have CKD (NHANES data)
• 30 million people are estimated to have CKD
• Nearly half a million patients in the US are on dialysis
What Causes Chronic Kidney Disease?

- Any process that can lead to damage to the kidneys, can lead to CKD.
- **Diabetes mellitus** is the number one cause of CKD in the world.
  - If you have diabetes, there is a high chance you will develop CKD at some point in your life. About 1 in 2 people with DM have CKD.
- **High blood pressure** can lead to damage to the very small arteries of the kidneys and lead to CKD.
- Medications can lead to kidney injury. Ibuprofen and other NSAID’s are particularly related to CKD.
- There are specific disease that can cause damage and inflammation directly to the kidneys. Example: Lupus, membranous nephropathy.
How Will I Know if I Have CKD?

- CKD often has no symptoms until the very late stages.
- Many people do not know they have CKD until the later stages.
- Blood and urine tests often reveal CKD.
- The blood creatinine level is used to calculate the rate at which your kidneys are filtering = estimated GFR.
- CKD is most often associated with diabetes and hypertension.
When Should I Get Worried?

• If your GFR shows a detrimental decline over time, this is a sign that your kidney function is worsening.
• If your diabetes, high blood pressure and other medical problems are not controlled, that may often lead to much faster worsening.
• If the protein in your urine is high or getting higher, that is a bad sign.
• Your doctor will tell you that your kidney function is worse and may refer you to a kidney specialist.
How Fast Does CKD Progress?

- It depends on the cause and stage.
- Getting blood tests to measure your kidney function (creatinine and GFR) can help your doctor see the trend.
- The poorer the control of your health issues, the faster CKD is likely to progress.
- An example. In late stages, I generally see a 1 mL/min decrease in GFR every month (diabetic nephropathy).
- The creatinine or GFR is like how close the train is from the edge of the cliff. The urine protein level gives an idea of the speed of the train.
Can I reverse CKD?

- Injury to the kidneys in the setting of CKD is often irreversible.
- Once you lose or scar off the nephron, it cannot grow back.
  - e.g. if you lose a finger, you can’t grow that back.
- However, you can prevent further injury to your kidneys and slow or even stop progression of CKD.
Dietary Recommendations in CKD

• According to one of our lead renal dietitians, follow these steps:
  – Limit salt
  – Limit protein if advised by your physician
  – Protect your heart – eat heart-healthy
  – Maintain blood sugar in a good range

• Dietary management is not only important to help your kidneys but almost all your other medical problems too.
Pay Attention to What You Are Eating

- Read food labels.
- Use smart apps that have food libraries that can track your food.
- Stick to your goals.
Reduce Sodium Intake

• Eat fresh foods. Packaged foods often have added salt.
• Eat less than 2300mg of sodium per day.
• Do not add too much salt to foods; try natural seasonings.
• Read food labels
  – A meal that is more than 20% of Daily Value is HIGH in sodium.
  – A snack that is more than 5% of Daily Value is HIGH in sodium.
• Limit canned foods
  – If eating canned foods, rinse foods to reduce salt.
Reduce Protein Intake

• Patients with advanced CKD are advised to eat 0.8g/kg a day or less of protein which in most people is about 60 grams.
  – 60 g = about 8 oz (half a pound) or 3 decks of cards
  – 7 grams = 1 ounce
• Build your food plate at home with mostly vegetables (if your doctor has not limited potassium).
• Good sources of protein include: Eggs, Chicken, Fish, Beans and Nuts.
Cut Back on Unhealthy Fats

• Limit saturated fat that can build in your heart and kidneys.
• Choose lean cuts of meat such as:
  – Poultry without skin
  – Fish
  – Lean ground beef, loin and or round cuts
  – Beans
• Cook meats by grilling, baking or sautéing with olive oil spray.
• Unsaturated fats such as those found in olive oil and nuts should be eaten more frequently than unhealthy fats.
Watch Your Carbohydrate Intake

• Manage blood sugars with dietary changes, medicines if necessary, and physical activity.
• Limit refined carbohydrates.
  – Avoid/limit desserts, candies, sweetened beverages
• Eat meals at consistent times to avoid spikes in blood glucose and insulin.
• Pay attention to portion size and eating too many starchy foods.
What About Limiting Potassium and Phosphorous? I read on the internet that I have to do this.

- Don’t always listen to what the internet has to say. Ask your doctor if you need to limit these minerals in your diet.
- Patients with more advanced CKD or other medical problems might need to limit but not always.
- At times, phosphorous containing foods need to be limited (examples: dairy, nuts) but the doctor will decide.
- At times, potassium-containing foods need to be limited (examples: bananas, prunes, OJ) but the doctor will decide.
Are There Specific Medications that Can Help to Protect My Kidneys?

• Renin-Angiotensin-Aldosterone-System (RAAS) Inhibitors block a hormone system that can worsen kidney injury.
  – Decrease blood pressure inside the kidneys directly
  – ACE-inhibitors, ex. lisinopril
  – Angiotensin-Receptor Blockers or ARBs, ex. Losartan

• General blood pressure lowering medicines
Blood Pressure Control

• The goal blood pressure in patients with CKD is generally below 130/80.
• Most patients with CKD should be on a RAAS inhibitor.
• Diuretics (water pills) are often helpful in CKD to help control blood pressure as well as water and salt retention.
• Many patients with CKD need several blood pressure medications to get to goal.
Having diabetes mellitus presents a high risk of developing CKD.

Controlling DM and lowering the damage done by it is crucial in slowing CKD if you have DM.

Speak with your doctors about ways to use dietary, lifestyle and medication changes to achieve tight control of your diabetes.
Lower Your Risk of Heart Disease

- CKD is highly associated with heart disease. They both influence each other.
- Major risk factors for heart disease include high BP, DM (insulin resistance), smoking, obesity, hypercholesterolemia.
- Physical activity and exercise can improve heart health.
Potentially Harmful Medicines

- Be careful with using “over-the-counter” medicines and check with your doctor about their safety for people with CKD.
- Non-steroidal Anti-inflammatory Medications (NSAIDs) such as ibuprofen, high dose aspirin, naproxen, celecoxib.
- Dietary supplements should be used in moderation and caution. They are not tightly regulated.
- Proton-pump inhibitors should be used only as necessary and you should discuss their use with your physicians.
Some Medications May Need to Be Adjusted

- Dose adjustments in some meds may need to be made if your GFR is not normal. They may accumulate to high levels if not.
- Some meds need to be stopped if your kidney function gets to a certain level as they can be very toxic, ex. Metformin.
- Some meds may start to cause harm to your kidneys if they are not dose adjusted for your GFR. Antibiotics are an example.
Water and Water pills

• Should I drink more water to help flush my kidneys?
  — Generally not unless you tend to get dehydrated.

• Will water diuretics harm my kidneys?
  — Not permanently generally. Often times they are very necessary.

• You need to work closely with your physicians in terms of water and salt balance if you have CKD.
Problems That Can Be Caused By CKD

- Hypertension
- Electrolyte and acid-base disorders
- Fluid and salt retention
- Anemia
- Bone disease
- Uremia: Feeling poorly, having no appetite, confusion
Stage 5 CKD and Dialysis/Transplant

• How will I know if it is time for dialysis or transplant?
• A nephrologist and his or her team can help you prepare for dialysis or transplant.
What If a Loved One Has CKD?

- CKD is very common and often is a result of other medical problems. Try to understand this.
- Support an improved healthy lifestyle and encourage following medical recommendations.
- Go with them to their appointments.
- Give emotional support. Empathize.
Living with CKD

- CKD can be treated and slowed
- People can live long and happy lives with CKD
- There is always hope for patients with CKD
Question and Answer Session
Join us for our next webinar!

Tips for talking with your doctor

Tuesday, September 25th, 2018 | 1-2 p.m. (EST)

- Tips for talking with your doctor
- Questions you should ask at every visit
- Ways to talk with your doctor about your medicines, procedures, and surgery

Sagar Nigwekar, MD
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