an introduction to kidney functions & chronic kidney disease

The Kidneys

What are the kidneys?
- There are 2 kidneys
- There is one on either side of your back
- Each kidney is about the size of your fist

The systems of your body are all connected! Your kidneys work with your brain, bones, heart, and the rest of your body to make sure that your body gets everything that it needs for you to live a healthy life. If your kidneys are not working, they might not be able to send or receive messages from the rest of your body.

What do the kidneys do?
- Filter your blood
- Remove extra water to make urine
- Make hormones
- Remove waste
- Help control blood pressure

When the kidneys are damaged, wastes can build up in the body.

Parts of the Kidney

Renal Artery: The renal artery carries blood into your kidney to be cleaned.

Renal Vein: The renal vein carries the blood out of your kidney after it has been cleaned.

Ureter: Your ureter carries bad substances out of your kidney after your kidney cleans blood.

Nephron: Nephrons are like little filters in your kidneys. They remove harmful substances from your blood.

Your kidneys are like a laboratory, they can...
1. Control Vitamin D for strong bones
2. Tell your body to make red blood cells
3. Get rid of drugs/medicines
4. Get rid of acid and fluid
5. Get rid of waste
6. Make hormones to control blood pressure
7. Balance salt, potassium (a nutrient found in food), and phosphorus (another nutrient)

Your kidneys handle about 50 gallons of liquid every day!

50 x ⚠️ = wow!!
Chronic Kidney Disease (CKD)

What is CKD?
CKD is a problem with the kidneys that gets worse over time, but it can be managed or slowed down!
You can be born with kidney problems or your kidneys can get sick when you're older.

What are some reasons that I might get CKD?
There are a lot of reasons why you may get CKD. The most common causes are:
- from diabetes
- high blood pressure
- if you get an infection
- if one of your parents or grandparents had it, you might develop it too.

The Stages of Chronic Kidney Disease

Stages One and Two
- You might not feel anything different!
- Your doctor will make sure you eat the right things and keep an eye on your blood pressure.
- You may need to take medications.

Stage Three
- You might feel tired or have trouble sleeping.
- You may have swelling or pain in your lower back where your kidneys are.
- You may need to follow a specific diet and take medications.

Stage Four
- You might feel the same things from stage 3, as well as feeling sick to your stomach (nausea) and vomiting.
- You might have a hard time staying focused on things.
- You may need to follow a special diet and will take medications.
- You might need many blood tests, and could possibly start dialysis.

Stage Five
- You might hear this called "end stage kidney disease."
- Your kidneys are very sick.
- You may have the same feelings from stages 3 and 4, as well as headaches.
- Your body may make less urine
- You will need to follow a special diet and take medications.
- You might need many blood tests to see how your kidneys are doing.
- You will probably start dialysis and get put on a waiting list for a kidney transplant.