

# Chronic Kidney Disease (CKD)

Understanding your kidneys and protecting kidney health

## What do your kidneys do?

Your kidneys filter waste and extra fluid from the blood, help regulate blood pressure, balance minerals and acid-base levels, and support red blood cell and bone health.

## What is CKD?

Chronic kidney disease means the kidneys have ongoing damage or reduced function. CKD often develops gradually, and many people have few or no symptoms in the early stages.

**CKD is usually assessed with both blood testing (eGFR) and urine testing for albumin/protein. One number alone does not tell the whole story.**

### Common causes

- Diabetes
- High blood pressure
- Glomerular or autoimmune kidney disease
- Polycystic or inherited kidney disease
- Prior kidney injury or recurrent obstruction

### Why early detection matters

- Treatment may slow loss of kidney function.
- Blood pressure and urine protein can often be treated.
- Medication doses may need adjustment.
- Complications such as anemia, mineral imbalance, or fluid retention can be identified earlier.

## Symptoms to discuss with your care team

- New or worsening swelling
- Shortness of breath
- Marked decrease in urine output
- Persistent nausea or poor appetite
- New confusion, severe weakness, or unusual fatigue

**Seek urgent medical attention for severe shortness of breath, chest pain, fainting, confusion, or other emergency symptoms.**

# CKD Stages and eGFR

How kidney function is commonly described

| Stage      | eGFR (mL/min/1.73 m <sup>2</sup> ) | General description                                |
|------------|------------------------------------|----------------------------------------------------|
| <b>G1</b>  | 90 or higher                       | Normal/high eGFR with evidence of kidney damage    |
| <b>G2</b>  | 60-89                              | Mildly reduced eGFR with evidence of kidney damage |
| <b>G3a</b> | 45-59                              | Mild to moderate reduction                         |
| <b>G3b</b> | 30-44                              | Moderate to severe reduction                       |
| <b>G4</b>  | 15-29                              | Severe reduction                                   |
| <b>G5</b>  | Less than 15                       | Kidney failure range                               |

## Why does urine protein matter?

Albumin or protein in the urine can be a sign of kidney damage. Higher levels are generally associated with greater kidney and cardiovascular risk. Your nephrologist may use urine albumin/protein measurements together with eGFR to guide treatment.

### Ways to protect your kidneys

- Take prescribed medicines consistently.
- Keep blood pressure controlled.
- If you have diabetes, work toward your individualized glucose goals.
- Avoid frequent NSAID pain relievers unless your clinician says they are appropriate.
- Avoid tobacco and stay physically active as able.
- Keep nephrology and laboratory follow-up appointments.

### Medication safety

- Tell clinicians and pharmacists that you have CKD.
- Ask before starting herbal products or supplements.
- Some medicines require dose adjustment as kidney function changes.
- Before contrast studies or procedures, follow the instructions of your treating clinicians.

**Your CKD stage, treatment goals, and laboratory targets should be individualized by your nephrologist.**