

Medications for Chronic Kidney Disease



What is Chronic Kidney Disease?

- In chronic kidney disease (CKD), the kidneys lose their ability to function over time, causing a build-up of excess fluid and toxic waste in the blood. Chronic kidney disease may cause problems such as:
 - Fluid and salt imbalances
 - Anaemia (low red blood cell count)
 - Increased risk of bone disease
- End-stage renal failure (ESRF) refers to the inability of the kidneys to function to meet the body's needs. With ESRF, dialysis or kidney transplant is needed to stay alive.

What are the Common Medications for Chronic Kidney Disease and Some Common/Important Side Effects?

1. Phosphate Binders

- Examples: Calcium Acetate, Calcium Carbonate, Lanthanum Carbonate, Sevelamer Carbonate

These medications bind to and reduce phosphate absorbed from food, which helps to prevent bone loss. Take immediately before or with meals.

- Chew tablets thoroughly if you are taking Calcium Carbonate and Lanthanum Carbonate.
- Do not crush, chew or break Sevelamer Carbonate tablets.

Side Effects	Management
Headache, constipation, nausea, vomiting, abdominal pain	Take the medication immediately before or with meals. These side effects improve as you get used to the medication. Inform your doctor if the symptoms are bothersome.

2. Vitamin D

- Examples: Alfacalcidol, Calcitriol

These medications increase Vitamin D levels in your body, which help to treat bone disease.

Side Effects	Management
Nausea, vomiting, stomach cramps, loose stools	Take the medication with or without food. These symptoms improve as you get used to the medication.

3. Iron Supplements

- Examples: Ferrous Gluconate Compound (Sangobion®), Iron Hydroxide Polymaltose Complex (Maltofer®).

These supplements help the body produce red blood cells and increase blood counts.

Side Effects	Management
Difficulty passing motion, hard stools, black-coloured stools, nausea, vomiting, stomach cramps	<p>Take Ferrous Gluconate Compound (Sangobion®) on an empty stomach for better absorption. If stomach irritation occurs, it may be taken after food. Space Ferrous Gluconate Compound (Sangobion®) 1 to 2 hours apart from calcium or antacids for better absorption.</p> <p>Take Ferrous Polymaltose (Maltofer®) with food for better absorption.</p> <p>Black-coloured stools are expected. They are harmless, hence do not be alarmed.</p> <p>Your doctor may prescribe you medications to help you pass motion regularly.</p>

4. Erythropoietin Injection

- Examples: Epoetin Beta (Recormon®), Methoxy Polyethylene Glycol-Epoetin Beta (Mircera®)

These injections stimulate the bone marrow to produce more red blood cells.

Side Effects	Management
Increase in blood pressure (warning signs: severe headache, dizziness, nose bleeds, blurring of vision)	Check your blood pressure regularly. Your doctor may prescribe medications to treat high blood pressure, if necessary.
Pain or swelling at the injection area	Change the area of injection frequently to reduce pain or swelling.
Blood clotting disorders (warning signs: painful swelling or redness of legs, slurred speech, visual changes, chest pain, breathlessness)	If any of these signs/symptoms occur, contact your doctor immediately.

5. Electrolyte Supplement

- Sodium Bicarbonate

In CKD, there may be build-up of acid in the body. This medication helps to reduce acid levels in your body.

Side Effects	Management
Headache, loss of appetite, stomach discomfort or bloatedness, nausea	Take the medication with or without food. If stomach irritation occurs, take the medication 1 to 2 hours after meals.

6. Diuretics (to increase the production of urine)

- Examples: Frusemide, Bumetanide, Metolazone

These medications help to remove excess fluid and salt in the body.

Side Effects	Management
Giddiness (e.g. when getting up from a lying or sitting position), weakness, feeling tired, muscle cramps	<p>Get up slowly from a lying or sitting position to prevent giddiness.</p> <p>Your doctor may prescribe potassium supplements if required, to prevent muscle cramps due to salt imbalances.</p>

7. **Multivitamin Supplement**

- Renal Vitamin (contains Vitamins B and C)

This supplement helps to treat vitamin deficiencies caused by CKD/dialysis.

If you develop rashes, facial swelling or shortness of breath after taking the medication, you could be allergic to the medication. Please seek medical attention immediately.

What Should I Do if I Miss a Dose?

If you miss a dose, take the missed dose as soon as you remember. If it is almost time for your next dose, skip the missed dose and take only the usual dose. Never take a double dosage to make up for the missed dose.

Why Do I Need to Take Medications?

It is important that you take your medications regularly as they can help to:

- Treat fluid retention and salt imbalances
- Improve symptoms from low red blood cell count
- Reduce phosphate absorbed from food and help prevent bone loss

Can the Medications be Administered / Taken with Other Medications?

- Inform the doctor, pharmacist or nurse about other medications – including over-the-counter medications, supplements and traditional/herbal remedies – that you are currently taking, as they may affect the way you benefit from your CKD medications.
- Some medications should not be taken with your current medications and may cause further damage to the kidneys.
- Always bring all your medications or medication list when you visit your doctor or pharmacist.
- The following medications should be avoided. Consult your doctor, pharmacist or nurse before taking them.
 - Non-steroidal anti-inflammatory drugs (used to relieve pain and swelling)
 - Antacids (for gastric pain or symptoms of bloatedness)
 - Fleet enema or oral solution (laxative)
 - Traditional Chinese Medicine

Are There any Special Precautions That I Need to Take?

- Inform your doctor if you intend to get pregnant or breastfeed while taking these medications.
- Your doctor or dietitian may advise you to take food or fruits low in sodium, potassium and phosphate. You may need to restrict the amount of fluids you drink a day, as instructed by your doctor.

How Do I Store These Medications?

- Store your medications in a cool, dry place away from heat, moisture and direct sunlight.
- For Recormon®/Mircera® injections, store in a refrigerator between 2 – 8°C. Do not freeze.

If you have any problems with your treatment, please contact your doctor, pharmacist or nurse.

Please keep all medications out of reach of children.



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