Your Medications

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Note: *Keep any information you receive from your pharmacist in this section of your workbook.*

Important things to know about your medications

Medications are an important part of your treatment plan. Because your medication needs will change you can expect to talk about your medications at every clinic visit.

We recommend that you bring your medications for every clinic visit.

For more information about your specific medications you can visit the BC Provincial Renal Agency's website at *www.bcrenalagency.ca*. You will find medication information under the for patients section of the website.

Things to remember about your medications

- Make a list of your medications and carry it with you at all times.
- If you visit more than one doctor, make sure you give each of them a list of your current medications every time you see them.
- Check that you receive the medication that your doctor has prescribed. Talk with your pharmacist for additional information about your medications and how to take them properly.
- Check expiry dates. **Do not use expired medication.**

- Take your medication as directed. If you have any concerns about your medications talk to your health care professional before stopping use.
- Let your health care team know if you take any other medications including over the counter medications or herbal medications.
- Talk to your doctor if you experience any problems or side effects.
- Do not change pill bottles.

Your medication record

Write down the following **in pencil** so you can change it as needed. If you need help, ask your nurse

(e.g. Phosphorus binders — I take sevelamer 800mg twice a day with meals.

EPO/ARANESP I take _____

Iron I take _____

Phosphorus binders I take _____

I take _____

I take _____

Vitamin D analogues I take _____

Blood pressure meds I take _____

I take _____

I take _____

Vitamins I take _____

Other medications

I take _____

I take _____

I take _____

I take _____

Vitamins and minerals

Your body needs vitamins to work well and does not produce vitamins on its own. Ideally, you should get all the vitamins you need from the food you eat. However, people with kidney disease may have slightly different vitamin needs because some of their vitamins are being washed away during dialysis, while other vitamins can build up in the body if extra vitamins are taken.

The vitamin tablets that are ordered by your nephrologist or dietitian are designed for people on dialysis. They have just enough of the right vitamins to keep you healthy.

Consult with your health care team before taking any additional vitamins, minerals or herbal remedies.

Kidney multivitamins

Two common multivitamins for kidney patients are replavite and renavite. These multivitamins contain the right combination of vitamins for your needs.

Vitamin D (analogues)

Your health care team may decide that you need a special form of vitamin D called calcitriol or alpha calcidol (One-Alpha®).

Your parathyroid glands are four pea-sized glands located in the front of your neck. Their function is to produce a hormone called parathyroid hormone or PTH. Your body produces this hormone to regulate calcium and phosphorous levels in your blood and bone. However, this gland often gets carried away in people with kidney disease and starts to produce too much PTH which weakens the bones, and can cause hardening of the arteries from the extra calcium. Vitamin D will help keep your PTH levels down.
(For more information, see the information about phosphorus binders on Page 8.)

Things to know about vitamins

- Take your prescribed vitamin supplements after dialysis.
- If you are on extended dialysis you may need more vitamins. Consult your dietitian for more information.
- Do not take over-the-counter vitamin D without first consulting your doctor.

Iron

The human body needs iron to make healthy red blood cells. Most dialysis patients will need to take additional iron. Your nephrologist will prescribe a dosage and type that will meet your needs.

- **Oral Iron**
  It is usually recommended that you take iron between meals, but if it upsets your stomach try taking it with a small meal or snack just before bedtime. It is **VERY IMPORTANT** that you **don't take iron at the same time as you take calcium**. Also, avoid taking any oral iron with tea or coffee.
- **Iron Sucrose (Venofer®) or sodium ferric gluconate complex (Ferrlecit®)**
  Many dialysis patients need iron quickly so your care team may decide you need to take IV (intravenous) iron. The iron is put directly into your blood stream, and your body can absorb it much faster than iron taken orally. If you require IV iron your training nurse will show you how this should be done during dialysis. The procedure for doing this is also explained at the end of this section.

Understanding EPO therapy

Erythropoietin EPO (Eprex, Aranesp and _____)

Healthy kidneys produce a hormone that tells your bone marrow to make new red blood cells. This hormone is erythropoietin, or EPO. Weak or failing kidneys often don't make enough EPO to keep your blood count normal, so you end up with not enough red blood cells. This is called anemia. Many kidney patients need to take a medication that replaces the normal erythropoietin production. With this medication your red blood cell production increases and you will have more energy.

EPO is important because it:

- Increases red blood cell production
- Increases hemoglobin
- Improves energy

EPO must be taken by injection — there is no pill. Most home hemodialysis patients are taught to inject EPO into the blood lines on their dialysis machines or through a small needle under the skin of their stomachs. You will be taught how to do this by your training nurse.

Adjusting your EPO dose

Your blood will need to be checked regularly to be sure that your hemoglobin is within a safe range. At the same time your iron levels will also be watched because these two medications work together to make red blood cells. Once your doctor is satisfied with your hemoglobin and iron numbers they will discuss these numbers with you and tell you how much EPO and iron you need. These numbers tend to go up and down, so this will be talked about during every clinic visit.

Things to remember about Eprex and Aranesp

- Always keep Eprex and Aranesp in the refrigerator
- Eprex can come in a multi-dose vial or in pre-filled syringes. Aranesp only comes in pre-filled syringes.
- When traveling, bring a cold pack for the trip and put your Eprex or Aranesp in a refrigerator as soon as possible.
- Keep these medications away from direct light.
- Do not shake either the vial or pre-filled syringes.
- Do not use the medication if it is cloudy, discolored, or if it has been previously frozen or left out of the fridge.

Blood pressure medications

Blood pressure or anti-hypertensive medications help reduce high blood pressure. Each medication works in a different way. Some medications relax the blood vessels, some block the chemicals that cause blood vessels to tighten and others help to get rid of excess fluid from the blood.

Your doctor will prescribe the most appropriate medication for you. You will find that your medications and doses will change as your needs change. Many people take more than one medication to help control blood pressure, so be sure to follow the directions given by your doctor and health care team.

Symptoms to be aware of when on blood pressure medications

Dizziness Check your blood pressure and report to your nurse if you feel dizzy and your B/P is lower than_____ .

Cough Some medications may cause a dry cough. If this occurs, tell your nurse or doctor about it.

Low heart rate Some B/P medications reduce your heart rate. If your heart rate falls under 50 beats per minute, tell your doctor or nurse.

Anticoagulants — heparin

Heparin belongs to a group of drugs known as anticoagulants or blood thinners. Other anticoagulants include warfarin, Coumadin®, Plavix® and enteric-coated aspirin. All these drugs prevent blood from clotting but are used for different medical conditions.

During hemodialysis your blood passes though many different tubes and filters so there are many opportunities for clots to form. Heparin is the most common medication for preventing blood from clotting during dialysis. The goal for heparin is to use just the right amount, but there is a fine line between using enough heparin and using too much or too little.

Too much heparin can mean your body won't form clots for hours and will make you more prone to bleeding. Too little heparin could allow your blood to clot in the tubing and dialyzer. Clotted blood can be dangerous and doesn't move very well.

Things to remember about heparin

- If you will be having medical procedures including surgeries or dental appointments, notify your health care team to determine if you need to adjust your heparin dose before or after your procedure.
- Report to your nurse or doctor if you notice that you are bruising easily. If you have any pain, take acetaminophen or Tylenol. Avoid pain killers like ibuprofen and aspirin because they also prevent blood from clotting.

Signs of too much heparin

- Deep bruising right after a dialysis treatment
- It takes longer than _____minutes to stop bleeding from your needle sites after treatment
- Unusual bleeding, such as nosebleeds, and difficulty stopping the bleeding.

Signs of too little heparin

- Dialyzer doesn't clear well after rinse back.
- Blood clots are noticed in the venous drip chamber.
- Your dialyzer is rated as a _____ or higher.

Medications to dissolve clots (for people with hemodialysis catheters only)

Blood clot formation inside a hemodialysis catheter is a major cause of catheter problems. Clots slow or prevent blood flow during dialysis. Occasionally you may develop a clot inside your hemodialysis catheter.

There are drugs that can dissolve these clots. They are called thrombolytic drugs and include streptokinase (also called Streptase® or Cathflo®).

Antibiotics

Antibiotics are medications that help fight infections caused by bacteria. Bacteria can enter your body through your vascular access, through a chest infection or through any other exposed site.

There are many different kinds of antibiotics and each type is designed to kill a different kind of bacteria. To know exactly what bacteria is growing in your body a sample from the infected area needs to be taken. The sample will go to a special laboratory and the results will come back to your doctor within two to three days.

Things you should know about antibiotics

- You should always take the full treatment. Don't stop when you start feeling better. Stopping early helps create super bacteria which are resistant to antibiotics.
- If you experience any severe side effects like a rash, swelling around the face or shortness of breath, stop taking the antibiotic, call 911 and go to your nearest hospital immediately.
- Let your kidney health care team know if you are taking antibiotics that were ordered from another doctor, including your family doctor or any other specialist.
- Some oral antibiotics can cause nausea. Talk to your pharmacist for suggestions about the best time to take oral antibiotics.
- Notify your health care team if you develop diarrhea from your antibiotics.

Phosphorus binders

Phosphorus is an important mineral found primarily in your bones. Phosphorus is like a calcium magnet and pulls calcium from your bones.

When your kidneys are working well, extra phosphorus is removed from your blood and flushed away in your urine. But when kidneys fail, calcium and phosphorus levels become out of balance. As phosphorus levels rise in your blood your body will attempt to compensate by producing parathyroid hormone (see the section about vitamin D above). Eventually, calcium levels in your blood are reduced and your body will continue to adjust by pulling in more calcium, including the calcium stored in your bones.

Over time this will make your bones become brittle and the stolen calcium can start to show up in places like your joints, blood vessels and your heart. To prevent this process you may be told to take phosphorus binders. Phosphorus binders (also called phosphate binders or just binders) work by binding or attaching to phosphorus in the food in your gut so that it can be eliminated through your bowel.

There are many different types of phosphorus binders, including calcium carbonate, calcium acetate, sevelamer and lanthanum carbonate. Your doctor will prescribe the one that is best for you.

Things to know about phosphorus binders

- Phosphorus binders work only if you take them at the beginning of your meals.
- Phosphorus binders are tailored to your needs based on your blood results. Talk to your doctor or dietitian regularly about your particular dietary needs.

Pain medication

Different pain medications may be prescribed for different types of pain and each medication will affect people differently. Many types of pain medication are filtered through the kidneys, therefore people with kidney disease will need special consideration. If you are given a prescription for a pain medication from a doctor other than your nephrologist, be sure to consult your kidney health care team before taking it. However, if you require ongoing medical treatment for pain, your nephrologist may ask your family doctor to supervise your pain medications.