



Managing your medications

with help from your pharmacist

Dan Martinusen BSc(Pharm), ACPR, PharmD, FCSHP
Chair- Pharmacy Services Committee – BC Renal

Disclaimer

All content in this presentation is for informational purposes only. It is not intended to be a substitute for professional medical advice and should not be relied on as health or personal advice.

Always seek the guidance of your doctor or other qualified health professional with any questions you may have regarding your health or a medical condition. Never disregard the advice of a medical professional, or delay in seeking it because of something you have seen or heard in this presentation.

Kidneys – the canaries in the coal mine

Kidneys are sensitive to:

- low oxygen
- low blood pressure
- high blood pressure
- dehydration
- obesity
- certain drugs
- high blood sugar
- reduced blood flow
- smoking

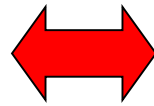


But the kidneys can compensate somewhat by...

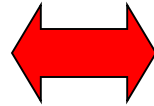
- Increasing oxygenation
- Raising or lowering blood pressure
- Regulating blood sugar
- Increasing blood flow
- Compensating for dehydration

But only to a point, then problems begin to occur...

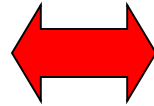
What are the Causes/Risk Factors for Kidney Disease?



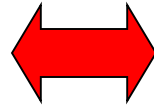
Diabetes



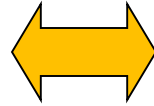
High Blood Pressure



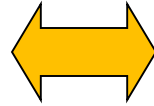
Heart Disease



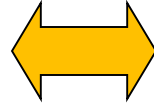
Smoking



Family History

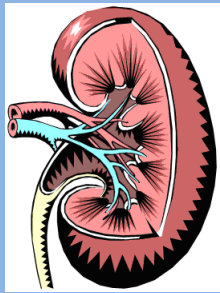


Ethnic Origin



Age > 40 years

Managing Your Kidney Health

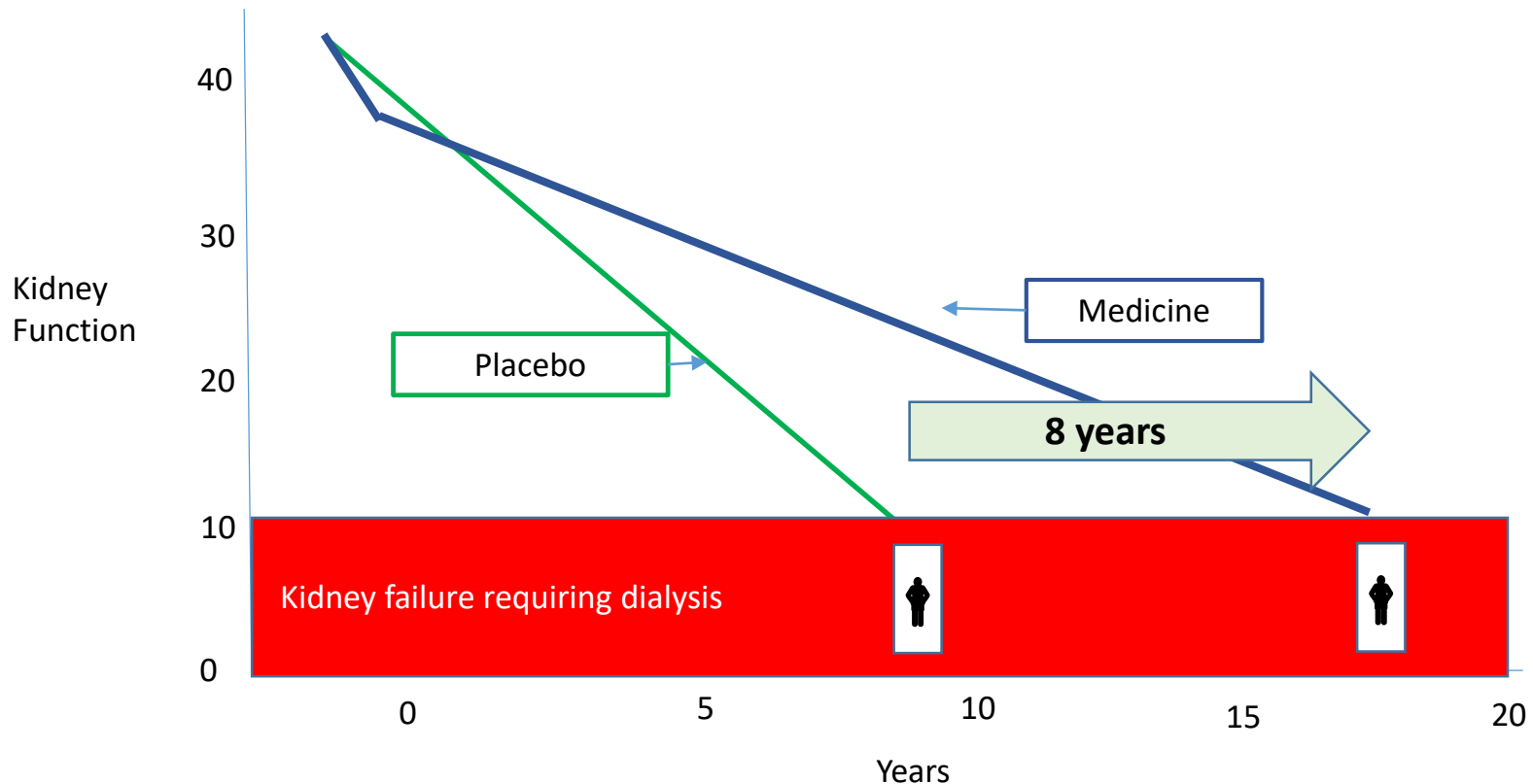


- Good blood pressure control
- Good blood sugar control
- Taking medications as prescribed
- Maintaining a current medication list
- Knowing what non-prescription medications are safe for you to take
- Making healthy food choices
- Smoking as little as possible or better yet not at all!
- Getting some exercise
- Following your blood work
- Identifying what keeps your attitude positive

Topics covered

- Can medications slow kidney decline?
- What are some common medications used to help the kidneys?
- How can I keep track of my medication?
- Should I take my medications when I am sick?
- Are there medications that can harm the kidneys (that I should avoid)?
- What non-prescription meds are safe?

Medicines can slow the decline of kidney function, giving patients more time before dialysis



Age 62 with 40% kidney function, dialysis starts at age 71 or 79

Adapted from Heerspink, et al. "Dapagliflozin in patients with chronic kidney disease". The New England Journal of Medicine. 2020. 383(13):1436-1446

Ways to control your blood pressure

Self Management Strategy # 1

- Take your BP medications as prescribed
- Talk to a dietitian about limiting salt intake
- Get your body moving - 30 minutes of exercise (most days) can **reduce** your SBP 5-10 points
- Lose weight - taking off as little as 10 lbs can help **reduce** your SBP by 5-10 points
- Learn how to manage your stress!

Why so many BP meds?

- Each “class” of meds works in a different way
- Using several classes at lower doses is better
- β -Blockers (atenolol, metoprolol), Ca^{++} channel blockers (amlodipine), ACEI (ramipril, lisinopril),
- ARB (candesartan, losartan), diuretics (furosemide, hydrochlorothiazide), clonidine, methyldopa etc.
- Most people require 2+ BP meds to control BP
- ACEI, ARB, SGLT2i: early “eGFR dip” is ok but monitored by you doctor.

Blood Sugar Management

Self Management Strategy # 2

Controlling your blood sugar can:

- help slow the damage being done to the filters of your kidney
- prevent further damage to the blood vessels in your heart and the rest of your body



Know Your Blood Sugar Target

IDEAL RANGE

- Fasting Glucose 4 – 7 mmol/L
- 2 hr after eating 5 – 10 mmol/L
- A1c ideally less than 7%
- Canadian Diabetes Guidelines (discuss your individual targets with your doctor)

Ways to Control Your Blood Sugars

- Take your diabetes medications as directed.
- Follow the diet recommendations.
- Make an appointment with a dietitian or at a Diabetic Education Center for help and guidance.
- Get your body moving to help burn the sugar.
- Aim for a healthy waistline

Meds to Control Your Blood Sugars

- Insulin (many types)
- Many classes of oral medications
- Metformin
- SGLT2 inhibitors (canagliflozin, dapagliflozin, empagliflozin)
- DPP4 inhibitors (linagliptin, saxagliptin, sitagliptin)
- Sulfonylureas (glyburide, gliclazide)
- Choice depends on the evidence of benefit and safety.

Controlling cholesterol

- atorvastatin, lovastatin, rosuvastatin, simvastatin (“statins”)
- Lower LDL (bad cholesterol)
- Part of an overall heart and kidney disease prevention strategy
- Not “instead of” diet modifications

Stop Smoking



Self Management Strategy #3

Smoking hurts your kidneys by:

- Increasing your blood pressure
- Damaging your blood vessels
- Kidney and other cancers

- Talk with your doctor /pharmacist



About Alcohol...

Did you know that alcohol will...

- **Increase** your blood pressure?
- **Increase** your blood sugars?
- **Impact the effectiveness** of your medications?

Alcohol in moderation may be acceptable.

We encourage you to speak to your doctor about what is the right amount for you.

Understanding Your Blood Work Results

Self Management Strategy #4

- When you go to the lab, ask to receive an automatic copy of your results.
- Learn about the tests your doctor is ordering and what they mean.
- Prepare to talk about your results when you go to your medical appointments.



Maintain An Updated Medication Record

Self Management Strategy # 5

- Keep a current list of all your medications (including non-prescription meds).
- Take this list to all your health care appointments, including trips to the hospital.
- Know the what, when, why and how of the medications you are taking.
- Not sure if a medicine is kidney friendly?
Ask the Pharmacist!

Medication Lists

For Your Own Safety

Keep an updated list of your medications with you at ***all times*** so that:

- ➔ your doctors/dentist know what you are on
- ➔ the hospital will know what you are taking
- ➔ drug interactions/duplication are avoided
- ➔ your medications are safe to take

Medication sick day rules

When you have more than minor vomiting, diarrhea, fever, sweats and / or shaking

- Stop taking the medications below and restart when you are well (after 24-48 hours of eating and drinking normally)
- If in doubt, contact your pharmacist, nurse or physician
- ACE Inhibitors (ramipril, lisinopril, others ending in “pril”)
- ARBs (losartan, candesartan, irbesartan others ending in “sartan”)
- Diuretics (furosemide, hydrochlorothiazide, chlorthalidone)
- Metformin for diabetes
- NSAIDS (ibuprofen, diclofenac, naproxen, ketorolac, for example)
- SGLT2i (canagliflozin, dapagliflozin, empagliflozin)
- Sulfonylureas for diabetes (gliclazide, glyburide, glimepiride)
- www.bcrenal.ca/resource-gallery/Documents/Medication%20Changes%20When%20You%20Are%20Sick.pdf

About Your Pharmacist...

- Your pharmacist is on *your team* to help you optimize your health
- Ask questions...pharmacists are available *without* an appointment!
- Pick up the telephone or drop by your local pharmacy

It's
OK
to Ask

About Medication Changes

- As your kidney function changes, so will your medication needs.
- What you currently take now will not necessarily meet your needs over time.
- Your healthcare providers will work with you to ensure you are getting:
what you need, when you need it, and in the right dose.



Balancing All Your Medicines

Maximize the effect of the medicines you take to:

- ✓ Ensure the ***best absorption*** for instance, with or without food
- ✓ Ensure you experience the fewest ***side effects***

Talk to your doctor or pharmacist about flexibility around dosing and timing. (e.g. pain, nausea)

Reducing Side Effects

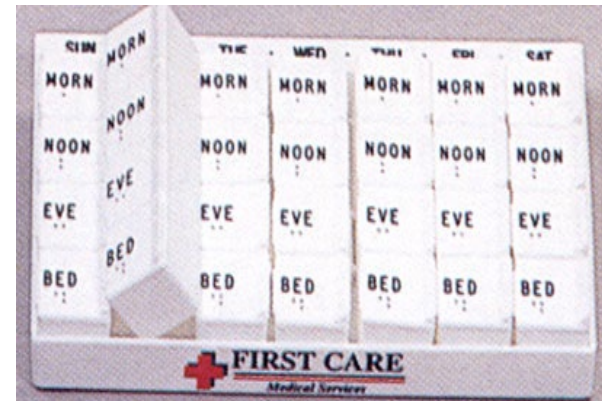
- Medications have **benefits** but they can cause **side effects**. Our job is to **minimize the side effects while maximizing the benefits**
- Talk about side effects when a new medicine is prescribed and make a plan to minimize the negative effects. Medications may be taken differently or even switched.

DON'T SUFFER IN SILENCE!



Organizing Your Medications

- Medications lists
- Relatives
- Calendars
- Tablet organizers
- Blister packs



What works for you?



What to Avoid



Some Herbal preparations

- the unknown.....
- not regulated by the HPB
- <https://www.herbalckd.com/>

Vitamin preparations

- avoid high doses of Vitamin A and C

Pain/anti-inflammatory medications

- ⚠ ***over the counter:*** aspirin – ***Tylenol is OK***
- ⚠ ***over the counter:*** ibuprofen (Advil, Motrin)
- ⚠ ***prescription :*** NSAIDs (indocid, naproxen)
 - Cox 2 inhibitors (celecoxib - Celebrex)

Cold and flu preparations

- containing ***decongestants***
- containing ***aspirin*** type meds

Non-Prescription Medications and Your Kidneys



If you have chronic kidney disease, please check with your doctor or pharmacist BEFORE taking any medications, including the ones in this handout. Never take more than the recommended dose of any medication. Read the label carefully before buying over-the-counter (non-prescription) medications and follow the instructions.

WHY?

The kidneys work to get rid of many medications. If your kidneys are not working well, **medications might build up in your body and cause unwanted side effects.**

Here is a list of commonly used medications that are OK to take or not OK to take if you have kidney disease. This is not a complete list. When in doubt, consult your doctor, pharmacist or Kidney Care Clinic (bring this list with you).

Over-The-Counter (Non-Prescription) Medications

Type	OK to take	Don't take	Don't take because...
Antacids	<ul style="list-style-type: none"> • TUMS (calcium carbonate), ranitidine (ZANTAC 75) or famotidine (PEPCID-AC) can be taken on an as-needed basis. • Omeprazole (OLEX) can also be taken on a as needed basis. • If you need something regularly, talk to your doctor or pharmacist. 	<ul style="list-style-type: none"> • Antacids that contain aluminum, magnesium (MAALOX, MYLANTA, GAVISCON) or sodium (ALKA-SELTZER) 	<ul style="list-style-type: none"> • Your kidneys may not be able to get rid of the extra aluminum, magnesium and sodium. A build-up may cause unwanted effects. • Extra sodium can increase your blood pressure.
Anti-diarrhea medications	<ul style="list-style-type: none"> • Loperamide (IMODIUM), kaolin-pectin (KAOPECTATE) are safe on an as-needed basis. • Talk to your doctor if diarrhea lasts more than 2 days or is associated with fever. 	<ul style="list-style-type: none"> • Bismuth subsalicylate (PEPTO-BISMOL) 	<ul style="list-style-type: none"> • This product contains salicylic acid that may harm your kidneys.
Anti-histamines (for hay fever or runny nose)	<ul style="list-style-type: none"> • Chlorpheniramine (CHLOR-TRIPOLON) or diphenhydramine (BENADRYL) are safe to use but may make you feel drowsy. • Half the usual dose of loratadine (CLARITIN), desloratadine (AERIUS) or cetirizine (REACTINE). • For nasal congestion related to allergy, nasal steroids triamcinolone (NASOCORT) or fluticasone (FLONASE), nasal sodium cromoglicate (CROMOLYN) & saline nasal sprays (SALINEX, HYDRASENSE) are safe options. 	<ul style="list-style-type: none"> • Full dose of the types of antihistamines that do not make you feel drowsy, e.g. loratadine (CLARITIN), desloratadine (AERIUS) and cetirizine (REACTINE). 	<ul style="list-style-type: none"> • Your kidneys may not be able to get rid of certain antihistamines. A build-up may cause unwanted side effects.
Cold / flu medications	<ul style="list-style-type: none"> • Topical nasal sprays such as xylometazoline (OTRIVIN) for less than 5 days may be okay. Check with your doctor or pharmacist. • Saline nasal sprays (SALINEX, HYDRASENSE), are safe for use 	<ul style="list-style-type: none"> • Oral decongestants such as pseudoephedrine (SUDAFED) or phenylephrine which are found in many cough and cold products. • Products with multiple ingredients (e.g., DIMETAPP, NEOCITRAN, TYLENOL COLD and SINUS, CONTACT-C) 	<ul style="list-style-type: none"> • Oral decongestants can increase blood pressure and cause your heart and kidneys to work too hard. • Products with multiple ingredients usually contain an oral decongestant—check the label.
Colonoscopy preparation	PEG-3350 solutions without electrolytes.	<ul style="list-style-type: none"> • Oral phosphate containing bowel preparations. 	<ul style="list-style-type: none"> • Your kidneys may not be able to get rid of the extra phosphate. A build-up may cause unwanted effects.

Over-The-Counter (Non-Prescription) Medications

Type	OK to take	Don't take	Don't take because...
Cough medications <small>(not safe for use in children under 6 yrs old)</small>	<ul style="list-style-type: none"> Any sugar-free cough syrup in people with diabetes. For productive cough, use guaifenesin (ROBITUSSIN syrup). For dry cough, use dextromethorphan or DM (BENYLIN DM or ROBITUSSIN DM syrup). 	<ul style="list-style-type: none"> Cough syrups that contain sugar if you have diabetes. Products with multiple ingredients (e.g. ROBITUSSIN COUGH & COLD, BENYLIN COUGH & COLD, BENYLIN COUGH & CHEST CONGESTION syrup). 	<ul style="list-style-type: none"> Cough syrup containing sugar may affect the sugar control in people with diabetes. Products with multiple ingredients usually contain an oral decongestant– check the label.
Fever/pain medications	<ul style="list-style-type: none"> Acetaminophen (TYLENOL) Acetylsalicylic acid 75 to 81 mg (baby ASPIRIN) if over 19 years old and recommended by your doctor to prevent heart attack or stroke. Topical Diclofenac (Voltaren Emugel), can be used on an as-needed basis or for a short period of time (less than 1 week) 	<ul style="list-style-type: none"> Anti-inflammatories such as ibuprofen (ADVIL, MOTRIN), naproxen (ALEVE) or acetylsalicylic acid (ASPIRIN or ENTROPHEN) in doses over 325 mg per day. Acetylsalicylic acid (ASPIRIN) if under 19 years old. 	<ul style="list-style-type: none"> Anti-inflammatories can increase blood pressure, increase water retention and harm your kidneys.
Laxatives	<ul style="list-style-type: none"> Docusate (COLACE) – a stool softener to decrease straining Lactulose syrup and Polyethylene glycol 3350 powder (LAX-A-DAY or RESTORALAX) are safe for longer term use to prevent and treat constipation. Sennosides (SENOKOT) and bisacodyl (DULCOLAX) are safe for short term or “as needed” use to relieve constipation. 	<ul style="list-style-type: none"> Laxatives that have magnesium or phosphate (MILK OF MAGNESIA, FLEET ENEMA or ORAL FLEET) 	<ul style="list-style-type: none"> Your kidneys may not be able to get rid of the extra magnesium or phosphate. Laxatives can cause diarrhea and dehydration which can hurt your kidneys.
Nausea & vomiting	<ul style="list-style-type: none"> Dimenhydrinate (GRAVOL) 	<ul style="list-style-type: none"> If you have a bad flu or illness which causes you to vomit or have diarrhea AND you are not able to eat or drink normally, contact your doctor or nurse. 	<ul style="list-style-type: none"> If you are sick and not able to eat and drink normally, you may become dehydrated. Dehydration affects your kidney function and blood pressure.
Sore throat	<ul style="list-style-type: none"> Acetaminophen (TYLENOL) HALLS or BRADOSOL if you do not have diabetes. RICOLA SUGAR FREE or BENTASIL SUGAR-FREE if you have diabetes. 	<ul style="list-style-type: none"> Avoid taking throat lozenges that contain sugar if you have diabetes. Sugar-free throat lozenges containing an artificial sweetener called acesulfame potassium, e.g. HALL'S, CHLORASEPTIC, FISHERMAN'S FRIEND SUGAR-FREE 	<ul style="list-style-type: none"> Taking too many regular throat lozenges may affect sugar control in people with diabetes. Sugar-free throat lozenges containing acesulfame potassium may increase blood potassium level.
Herbal / alternative medications & vitamins	<ul style="list-style-type: none"> Talk to your doctor or pharmacist about what vitamins might be best for you. 	<ul style="list-style-type: none"> AVOID all alternative or herbal medications until you have checked with your pharmacist or doctor. Avoid these vitamins: <ul style="list-style-type: none"> Vitamin A High dose vitamin C High dose vitamin B 	<ul style="list-style-type: none"> Alternative or herbal medications may harm your kidneys or may interact with other medications. Most multivitamins can be harmful if your kidneys are not working very well.

Useful resources

<http://www.bcrenal.ca/resource-gallery/Documents/Non-Prescription%20Medications%20and%20Your%20Kidneys.pdf>

www.bcrenal.ca/resource-gallery/Documents/Medication%20Changes%20When%20You%20Are%20Sick.pdf

<http://www.bcrenal.ca/health-info/managing-my-care/medication#Conditions--&--Treatment>

bcrenal.ca



@BCRenal

