When you have chronic kidney disease, nutrition is an important part of your treatment plan. Your recommended diet may change over time if your kidney disease gets worse. Your Dietitian will help you plan your meals with the right foods and in the right amounts.

Nutrients affecting the kidney at this stage are:
- protein, sodium, potassium, phosphorus, & vitamins

1. PROTEIN

- Protein comes from:
  - red meats
  - poultry (chicken, turkey, duck)
  - fish and other seafood
  - eggs
  - milk and cheeses
  - tofu, legumes and beans

- Eating the right amount of protein will help to:
  - build muscles & repair body tissues
  - fight infections and helps with healing
  - prevent wastes from building up in your blood

- Large servings of protein foods may increase the workload of the kidney
  - a serving size is 3 ounces (~ size of a deck of cards)

TIPS

- There are two kinds of protein. A well balanced diet should include both kinds of proteins every day.
- Higher quality (more complete) protein comes from animal products like meat, poultry, fish, eggs and dairy products. These are the easiest proteins for your body to use.
- Lower quality (less complete) protein comes from vegetables and grains.

To be used in conjunction with advice from a Registered Dietitian.
2. SODIUM

- Limiting sodium to 2000-3000 mg (about 1 teaspoon of salt) per day:
  - helps to reduce fluid build up in the body (swelling of the ankles, fingers, eyes).
  - helps to control blood pressure within normal ranges

- Sodium is a mineral and is found in most foods, but is especially high in:
  - table salt & sea salt
  - salty seasonings (e.g. soy sauce, teriyaki sauce, garlic salt, and seasoning salt)
  - most canned foods and some frozen foods
  - processed meats (e.g. ham, bacon, sausage, cold cuts)
  - salted snack foods (e.g. chips, crackers, pickles)
  - most restaurant and take-out foods (MSG)
  - canned or dehydrated soups (e.g. packaged noodle soup)

**TIPS**

- eat foods closest to their natural state (not processed)
- read food labels for the amount of sodium
- to add flavour to your food try a dash of:
  - hot pepper sauce
  - lemon juice
  - vinegar
  - fresh or dried herbs and spices
  - no-added salt blends (Mrs. Dash®, McCormick’s No Salt Added ®)

- avoid:
  - salt substitutes (Half Salt® or No-Salt®)
3. POTASSIUM

- Is an important mineral that helps your heart & muscles to work properly.
- Too much or too little potassium in your blood can be dangerous.
- Not everyone needs the same amount of potassium. How much you need will depend on:
  - how well the kidneys are working
  - some types of medications you are taking
- Potassium is found in all foods but large amounts are found in:
  - some fruits & vegetables (bananas, melons, oranges, potatoes, tomatoes, dried fruits, dark green leafy vegetables & some fruit & vegetable juices)
  - milk and yogurt
  - dried beans and peas
  - salt substitutes (Half Salt® or No-Salt®)
  - chocolate
  - nuts and seeds
  - lentils and legumes

TIPS

- know your blood potassium level (normal = 3.5-5.0).
- if it is too low you may need a supplement (either potassium medication or a higher potassium food) to raise your potassium level
- if it is too high you may need a binder (medication) to lower your potassium level and avoid high potassium foods
- soaking root vegetables will reduce the amount of potassium in the vegetables
4. PHOSPHORUS

- Also known as phosphate
- Is a mineral that works with calcium to form strong bones & teeth
- In the later stages of kidney disease, phosphorus starts to build up in your blood. Calcium is then pulled from your bones into your blood. This causes serious problems like:
  - damage to the heart & other organs
  - poor blood circulation
  - bone pain & weakness
  - skin sores

- Phosphorus is found in most foods. Large amounts are found in:
  - dairy products (milk, cheese, pudding, yogurt, ice cream)
  - dried beans and peas (kidney beans, split peas, lentils)
  - nuts and seeds
  - other beverages (colas, beer, cocoa)
  - chocolate
  - whole grains especially bran
  - seasoned meats & processed/convenience foods
  - baking powder

- The Dietitian will discuss ways to help you lower your phosphorus intake.
- The Doctor may prescribe a phosphate binding medication to be taken with meals to help control the level in your blood.

TIPS

- Use non-dairy creamers and milk substitutes in place of milk to help lower the amount of phosphorus in your diet.
- Rice Dream Original® is low in phosphorus.
5. **VITAMINS**

- When your diet is limited you may need to take a special vitamin pill made for people with kidney disease.
- Do not take over-the-counter vitamins.
- Do not take over the counter Vitamin D or calcium pills unless recommended by your kidney doctor.
- Check with the kidney doctor and/or pharmacist about herbal medications.

6. **FLUID**

- In the later stages of kidney disease, your kidneys may not be able to remove the extra fluid in your body.
- You may need to limit how much fluid you eat or drink.
- Tell the health care team if you notice you have swelling (eyes, legs, arms or abdomen) or if you are making less urine.

**OTHER THINGS TO THINK ABOUT**

**ENERGY / Calories**

- Comes from the foods you eat. Without enough calories, your body will use up your protein to give you energy. This will cause muscle wasting (loss of muscle).
- Eating enough calories helps:
  - you stay at a healthy weight
  - your body use protein for building muscles and tissues

**TIPS**

- Eat 3 meals each day
- Have something to eat every 4-6 hours
- Watch how much or how little you eat (portion control)
- The Dietitian will help you with your calorie needs
**FATS**
- Provide energy and are part of a healthy diet.

**TIPS**
- Use vegetable oils such as canola, olive and soybean.
- Choose non-hydrogenated soft margarines (tubs) as these are low in saturated and trans fats.
- Limit intake of butter, hard margarines, lard and shortening

### SAMPLE OF HOW A DIET MAY CHANGE IN STAGE 4

<table>
<thead>
<tr>
<th>MEAL</th>
<th>No diet restrictions</th>
<th>Low: Salt, Potassium, Phosphorus &amp; Protein</th>
</tr>
</thead>
<tbody>
<tr>
<td>BREAKFAST</td>
<td>Orange juice, Bran cereal, Milk, Coffee with milk</td>
<td>½ cup cranberry juice, Rice Krispies®, ½ cup of milk, Coffee with non-dairy creamer</td>
</tr>
<tr>
<td>LUNCH</td>
<td>Canned Pea soup, Bologna sandwich, Salad (lettuce, tomato, cucumber, celery), Banana, Milk</td>
<td>Homemade low salt, low potassium vegetable soup, Roast beef sandwich, Salad (lettuce, cucumber, celery), ½ cup grapes, water/hot beverage/non-cola soda</td>
</tr>
<tr>
<td>SUPPER</td>
<td>Ham, Canned peas, Frozen fried potatoes, Orange, Milk,</td>
<td>3 ounces pork roast, ½ cup frozen or fresh peas, ½ cup homemade boiled potatoes, 1 white dinner roll, Peach, Water/hot beverage/non-cola soda</td>
</tr>
<tr>
<td>SNACK</td>
<td>Crackers, cheese &amp; sausage, Cola</td>
<td>1 cup air popped popcorn (unsalted)</td>
</tr>
</tbody>
</table>