Diet, Exercise, and Your Kidneys

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“I try to eat healthy. I never sprinkle salt on ice cream, I only eat decaffeinated pizza and my beer is 100% fat-free.”
“I have one pill that blocks fat, one pill that blocks carbs, and one pill that blocks the kitchen door.”
“My diet says I can have 1800 calories per day. It doesn’t say anything about NIGHT!”
Melissa’s Objectives

1. What are the components of a healthy diet for kidney patients?
2. What are the requirements of each component?
3. Adopting a healthy diet for your kidneys.
Components of Renal Diet

- Protein
- Potassium
- Calcium
- Phosphorus
- Sodium
- Fluid
- Calories
Protein

- Necessary to make and repair cells
- Essential for growth and maintenance of body tissue
- Provides energy
- Essential to maintain osmotic pressure and fluid balance in blood
Protein

- **Needs**
  - Acute - .6 - .8 g/kg
  - CKD - .6 - .75 g/kg
  - HD – 1.2 g/kg
  - PD – 1.2 – 1.3 g/kg
  - Transplant
    - 1.3 – 2.0 post op
    - .8 – 1.0 chronic
Animal Protein

- Animal sources
  - meat, fish, poultry, eggs & dairy products
- High biological value protein
- Recommend 50% intake
- Complete protein
  - all essential amino acids
Vegetable Protein

- Plant sources
  - nuts, soy/tofu, beans, fruits, vegetables, grains & breads
- Complete and Incomplete
  - does not contain all essential amino acids
Energy/Calories

- Needs for calories differ for each stage of renal failure and age
Calories

- Provides energy for body functions
- Present in
  - carbohydrates
  - fats
  - protein
- Caloric needs
  - 30 - 35 kcal/kg/day of lean body weight
Exercise Break
Sodium

- **Needs**
  - Acute: 1 – 2 g
  - CKD: 1 – 3 g
  - HD: 1 – 3 g
  - PD: 2 – 4 g
  - Transplant: 2 – 4 g
Potassium

- Needs
  - Acute: 2 g
  - CKD: unrestricted unless high
  - HD: 2 - 3 g
  - PD: 3 - 4 g
  - Transplant: Unrestricted unless high
Potassium Sources

- fruits & vegetables
  - bananas, cantaloupe, citrus & dried fruits
  - tomatoes, potatoes, green leafy vegetables
  - dried beans
- chocolate & expresso/cappuccino
- salt substitutes
Phosphorus

- **Needs**
  - Acute – maintain WNL
  - CKD – 10 mg/kg/day
  - HD – 17 mg/kg or 10-12 mg/gm protein
  - PD – Same as HD
  - Transplant - RDA
Phosphorus is controlled by

- dialysis
- poorly removed
- dietary restrictions
- medication
- phosphate binders
Components of Renal Diet

Phosphorus Sources
- dairy products
  - milk, cheese, yogurt, ice cream
- eggs, meats, nuts & beans
- chocolate
- dark colored cola
- Phosphorus Additives
Calcium

- **Needs**
  - Acute – maintain serum levels WNL
  - CKD – 1.0 – 1.5 g <2 – 2.5 including binder load
  - HD and PD - <2 – 2.5 including binder load
  - Transplant - .8 – 1.5g
Fluid

- Needs
  - Acute – Output plus 500 cc
  - CKD – no restriction
  - HD – Output plus 1000 cc
  - PD – Maintain balance
  - Transplant – unrestricted unless overloaded
Vitamins and other minerals

- **Vitamins**
  - Water Soluble
  - Vitamin D

- **Minerals**
  - Iron
  - Zinc
Exercise Break
Lifestyle Changes

- Talk with your healthcare team
- Track what you are eating
- Use resources to help with meal planning
- Read food labels
- Flavor your meals without the salt
- Dine out with a plan
- Be active
Mobile Applications

- Sanofi Kidney APPetite
- KidneyDiet
- NKF My Food Coach
Quick Guide to Food Labels: For those with kidney disease

SERVING SIZE:
Always look here first. Make sure you calculate how much you're getting based on the serving size.

SODIUM:
Always look at the “mg” and NOT the “%”!
Less than 2000 mg/day
Less than 600 mg/meal
Less than 100 - 200 mg/snack

POTASSIUM:
Potassium - listing is not required. No listing does NOT mean no potassium.

Low potassium: <100mg or <3%
Medium: 101-200mg or 3-6%
High: 201-300mg or 6-9%
Very High: >300mg or >9%

PHOSPHORUS:
Low phosphorus: <50 mg or <5%
Medium: 51-150 mg or 5-15%
High: >150 mg or >15%

However, phosphorus usually is not on the label, so you will have to read the Ingredient List – Look for phosphorus or words with “phos” in them.

Phosphoric Acid
Hexametaphosphate
Monocalcium Phosphate
Tricalcium Phosphate

Stay away from added phosphorus! It can easily add up to 1000mg phosphorus per day!

Nutrition Facts

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<th>Ingredient</th>
<th>Amount Per Serving</th>
<th>% Daily Value</th>
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<tbody>
<tr>
<td>Calories</td>
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<tr>
<td>Total Fat</td>
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<td>Saturated Fat</td>
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<tr>
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<tr>
<td>Sugars</td>
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<tr>
<td>Protein</td>
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<td>40%</td>
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Vitamin A 25% + Vitamin C 25%
Calcium 25% + Iron 45%
Vitamin E 26% + Thiamin 25%
Riboflavin 25% + Niacin 25%
Vitamin B6 25% + Folate 30%
Vitamin B12 25% + Biotin 25%
Pantothenic Acid 25% + Phosphorus 30%
Iodine 25% + Magnesium 25%
Zinc 30% + Copper 50%

Recent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.

Calories: 2,000 2,500

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Salty Alternatives

- Go for sodium-free ingredients as much as possible.
- Stick to fresh ingredients to avoid additives and hidden sources of sodium, potassium and phosphorus.
- Be aware that some reduced-, low- and no-sodium products may contain potassium chloride to replace the taste of salt.
- When making sauces from scratch, note that some spices and spice blends have added salt.
Kidney Friendly Kitchen

- Stock up with foods low in phosphorus, potassium and sodium (read food labels)
- Choose fresh or frozen without added salt
- Use ¼ of tomato sauce or canned tomatoes in a recipe
- If using canned foods, rinse before cooking/eating
- Avoid baking mixes, try to make from scratch
- Use sweet pickles to reduce salt
- Check ingredients in vinegars, some may have added salt
Dining Out

- Plan ahead
  - Read menus
  - Bring a kidney friendly dish to a potluck
- Limit/avoid foods high in salt
- Monitor fluid

- Limit alcohol
- Watch portion sizes of high potassium fruits/vegetables
- Practice food safety
- Take binders, if prescribed
Websites

- **www.davita.com**
  - Nutrition education
  - Diet helper: log foods and find recipes

- **www.ultracare-dialysis.com**
  - Recipes and education

- **www.kidney.org**
  - Nutrition education and recipes

- **www.kidneyschool.org**
  - Patient Education

- **www.kidneyfund.org**
  - Patient Education

- **American Association of Kidney Patients**
  - **www.aakp.org**

- **Renal Support Network**
  - [http://www.rsnhope.org/about-rsn/](http://www.rsnhope.org/about-rsn/)
Exercise Break
Thank you for attending!
Questions