Nutrition Guidelines after Solid Organ Transplant

Nutrition plays a key role in the transplant process. Before transplant, eating well and being at a healthy weight may help you recover faster from surgery. After transplant, good nutrition plays a key role in maintaining transplant function and your overall health.

Initial Nutrition Guidelines after Transplant
After surgery, your body needs enough nutrition to promote healing, fight and prevent infection, and gain back weight you may have lost. You may have a lower appetite or change in your sense of taste due to medicines you will be taking. Even though you may not feel hungry, you will need to eat.

Tips:
- Eat small, frequent meals or 3 meals with 2-3 snacks in between.
- Include high calorie, high protein foods like yogurt, pudding, cottage cheese, nuts, peanut butter, shakes, lean meats and eggs.
- Use nutritional supplement drinks such as Boost®, Ensure®, or Carnation Breakfast Essentials®.

Sometimes right after kidney transplant, your new kidney may not be working as it should. This is called delayed graft function (DGF) or “sleepy” kidney. You may need dialysis. While you have DGF, follow a renal diet which is low in sodium, potassium, and phosphorus. Once your kidney wakes up and you no longer have DGF, you can stop the renal diet and instead follow the healthy eating guidelines in this handout.

Long Term Nutrition Guidelines after Transplant
After transplant, you will need to develop and maintain a healthy lifestyle. This helps prevent problems like diabetes, osteoporosis, and heart disease. Weight gain can happen after transplant due to an increased appetite from steroids, unhealthy eating habits, lack of exercise, and family history of obesity. Making healthy food choices can help prevent these problems.

1) Achieve a healthy weight and help reduce your risk for heart disease:
- Eat regular meals: 3 meals per day or small, frequent meals.
- Control portion sizes at meals.
- When dining out, control portion sizes by splitting a meal with someone or ordering the kids portion size.
- Choose healthy snacks.
- Limit intake of high calorie, high fat sweets such as cakes, cookies, ice cream, and candy.
- Make physical activity part of your daily routine at least 4-5 days a week.
- Eat a heart healthy diet by:
  - Choosing lean meats. Choose fish and skinless poultry more often than red meat. Consume 6-8 ounces per day. Trim the fat off the meat, and remove the skin from poultry before cooking.
  - Lower your use of butter and lard. Choose margarine that is trans-fat free.
o Use olive oil, canola oil, or other vegetable oil with cooking.
o Avoid high fat, processed meats such as brats and sausage.
o Choose low fat dairy products such as skim or 1% milk, low fat yogurt, and low fat cottage cheese. Limit intake of high fat dairy products such as whole milk, ice cream, and custards.
o Choose low fat versions of salad dressings, mayo, sour cream, and cream cheese.
o Choose baked or low fat versions of crackers and chips.
o Eat more fiber foods such as whole grain breads and cereals, whole grain pastas, brown rice, dry beans and peas, fruits and vegetables.

3) Carbohydrates
If you have diabetes or high blood sugars, you may need to eat a diet that has a consistent amount of carbohydrate at each meal. Guidelines for this kind of diet include:

- Eat meals at regular times every day. Do not skip meals.
- Choose a variety of foods at each meal that includes fruits, vegetables, proteins, and carbohydrates.
- Eat about the same amount of carbohydrate at each meal. Foods that contain carbohydrate are: breads, cereals, pasta, rice, starchy vegetables such as potatoes, corn, and peas, fruits, milk and yogurt, and sweets.
- Limit your intake of concentrated sweets such as regular soda, candy, or jams.

2) Eat a diet that is low in sodium.
A diet low in sodium can help control blood pressure and prevent fluid retention. To reduce your sodium intake:

- Avoid adding salt to your foods. Use herbs, spices, or blends such as Mrs. Dash® instead of salt.
- Avoid foods with large amounts of sodium such as processed foods like ham, bacon, sausage, cheese, canned vegetables and soups, and boxed meals.
- Avoid salt substitutes with potassium.
- Read food labels to find out if foods are high in salt.

4) Food Safety
Transplant patients are at higher risk of foodborne illnesses. To prevent foodborne illnesses, practice food safety. The booklet Food Safety for Transplant Recipients from the U.S. Department of Agriculture Food Safety and Inspection Service provides ways you can lower your risk of foodborne illness. You can find it online at: http://www.fda.gov/food/foodborneillnesscontaminants/peopleatrisk/ucm312570.htm. You can also find it by searching with the terms “Transplant Recipients and Food and Drug Administration.”
Avoid these high risk foods:

<table>
<thead>
<tr>
<th>Types of Food</th>
<th>High Risk Foods To Avoid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat and Poultry</td>
<td>• Raw or undercooked meat or poultry</td>
</tr>
<tr>
<td>Fish/Seafood</td>
<td>• Raw or undercooked fish, raw sushi</td>
</tr>
<tr>
<td></td>
<td>• Smoked fish that has not been reheated*</td>
</tr>
<tr>
<td></td>
<td>• Partially cooked seafood such as shrimp and crab*</td>
</tr>
<tr>
<td>Dairy</td>
<td>• Unpasteurized/raw milk</td>
</tr>
<tr>
<td></td>
<td>• Cheese made from unpasteurized milk such as: feta, brie, camembert, blue cheese, queso-fresco</td>
</tr>
<tr>
<td>Eggs</td>
<td>• Foods that contain raw or undercooked eggs</td>
</tr>
<tr>
<td>Fruits/Vegetables</td>
<td>• Unwashed fruits &amp; vegetables</td>
</tr>
<tr>
<td></td>
<td>• Raw sprouts (alfalfa, bean, or other sprout)</td>
</tr>
<tr>
<td>Processed Meats</td>
<td>• Hot dogs, deli meat, luncheon meat that has not been reheated*</td>
</tr>
<tr>
<td></td>
<td>• Unpasteurized refrigerated pates or meat spreads</td>
</tr>
</tbody>
</table>

Adapted from: “Food Safety for Transplant Recipients” U.S. Department of Agriculture Food Safety and Inspection Service.

* Processed meat (hot dogs, deli meat, and luncheon meat), precooked seafood, and refrigerated smoked fish must be reheated to steaming hot or 165 degrees before you eat them.

Food Safety Guidelines for Dining Out

- Avoid entrée items that have uncooked or undercooked ingredients like eggs, poultry, meat, or fish. Don’t hesitate to ask your server questions about the menu items.
- Avoid buffets. It is hard to control portion sizes at buffets. The buffet may also contain foods that are undercooked or have sat at an unsafe temperature for too long.
- When you return to the transplant clinic or DGF clinic for appointments, it is safe to dine at the hospital cafeteria. The food is prepared fresh and does not sit out for long periods of time.
- Make sure to put leftovers in the fridge as soon as you can, or within 2 hours. If the air temperature is above 90 degrees F, put food in the fridge within 1 hour.

5) Food Drug Interactions and Immunosuppressive Medicines

Some medicines can interact with certain foods. This can impact how medicines work. Below are the diet guidelines for your immunosuppressive medicines:

Corticosteroids (prednisone):

- Follow a low sodium diet to prevent fluid retention.
- Control portion sizes, eat regular meals, make healthy food choices and choose low calorie snacks to prevent weight gain due to increased appetite.
- Make sure you are getting enough calcium and vitamin D.
- Include at least 2-3 servings of high protein foods per day.
- If you have high blood sugars eat the same amount of carbohydrate at all meals.
Cyclosporine:
- Avoid grapefruit products.
- Avoid potassium supplements or salt substitutes that contain potassium.

Tacrolimus:
- You may take this with or without food. It is important that you be consistent day to day in whether you take it with or without food.
- Avoid grapefruit products.
- Avoid potassium supplements or salt substitutes that contain potassium while taking this drug.

Mycophenolate:
- Can be taken with or without food. Taking it with food may help prevent stomach upset.

Dietary Supplements:
- Avoid herbal or dietary supplements unless approved by the transplant team first.

Teach Back
What is the most important thing you learned from this handout?

What changes will you make in your diet/lifestyle, based on what you learned today?

If you are a UW Health patient and have more questions please contact UW Health at one of the phone numbers listed below. You can also visit our website at www.uwhealth.org/nutrition.

Nutrition clinics for UW Hospital and Clinics (UWHC) and American Family Children’s Hospital (AFCH) can be reached at: (608) 890-5500.

Nutrition clinics for UW Medical Foundation (UWMF) can be reached at: (608) 287-2770.

The Spanish version of this Health Facts for You is #471

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright 3/2017 University of Wisconsin Hospital and Clinics Authority. All rights reserved. Produced by the Clinical Nutrition Services Department and the Department of Nursing. HF#494