

# Section 7



## Nutrition

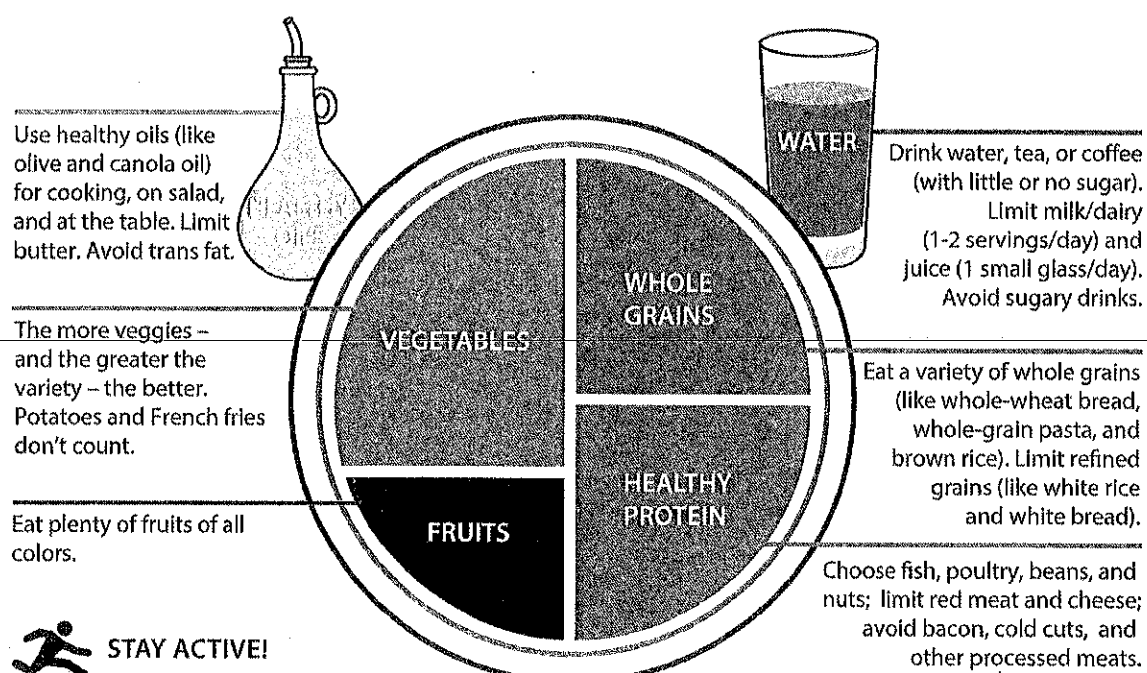
# Healthy Eating

This nutrition plan can help most people stay healthy after a transplant. For example, good nutrition can reduce potential problems such as: high blood fats (cholesterol and triglycerides), high blood glucose (sugar), and high blood pressure. It can also prevent excess weight and strengthen bones.





According to the New 2015 Dietary Guidelines, it is important to consume a healthy eating pattern that accounts for all foods and beverages within an appropriate calorie level. If you have any health problems, you should contact a registered dietitian for more information about what you should eat.

## Consume a healthy diet with:

- Vegetables dark green, red and orange, legumes (beans and peas), fruits, especially whole fruits
- Protein rich foods like seafood, lean meats and poultry, eggs, legumes (beans and peas), nuts, seeds, and soy products
- Grains, at least half of which are whole grains
- Fat-free or low-fat dairy, including: milk, yogurt, cheese, and/or fortified soy beverages
- Plant based oils. **Limit consuming** saturated fats and trans fats, added sugars, and added sodium (salt).
- **Do not eat or drink grapefruit, pomegranate or starfruit.**



# Recommended Foods

Vegetables & Fruits	Dairy	Grains	Meats & other protein sources
Fresh vegetables are best!	Low-fat ice cream	Whole grain breads	Skinless chicken and turkey
Unsalted canned or frozen vegetables	Non/Low-fat cheese	Whole grain pastas, rice, brown	Fish
Unsalted vegetables juices	Fat-free (skim or low fat 1% milk	Whole grain, unsweetened	Extra-lean fresh beef and pork
Unsweetened canned and frozen fruit (no grapefruit and starfruit)	<b>Fats &amp; Oils</b>	<b>Seasoning</b>	Dried beans and peas
	Olive oil	Fresh or dried coking herbs	Unsalted Nuts
Unsweetened juice in small amounts	Canola oil	Onion or onion powder	Tofu
Unsweetened dried fruits	Trans fat-free margarine	Garlic or garlic powder	Eggs
 	Non-fat or low-fat salad dressing	Salt-free and sodium-free seasonings	 

## Shop Smart:

- Check the expiration date when you buy food. Don't buy food that is expired or out of date
- Don't buy cans or jars with dents, cracks or bulging lids
- Make sure frozen items are frozen solid when you buy them
- Don't buy products if the package is torn or damaged
- Only buy eggs that are refrigerated
- Put raw meat, poultry and fish in separate plastic bags and separate them in your cart from other foods
- Shop for chilled and frozen foods last
- Don't buy food that is spoiled or moldy; food that is past its "use by" date

# Food Safety

## 4 STEPS TO FOOD SAFETY



### Keep it clean: hands, counters, containers

- Wash hands for at least 20 seconds with warm, soapy water before starting
- Wash hands after touching raw meats, eggs and fish
- Wash hands after touching dirty surfaces or your hair, face or body
- Keep counters clean and avoid cross contamination from one food item to another. Use a mixture of two to three teaspoons of bleach mixed with four cups of water to wash your counter tops. Rinse with hot water .
- Wash off all containers before opening (cans, bottles, etc.)

### Handle fresh fruits and vegetables properly:

- Wash all fresh produce before consumption. Use a mixture of 1 part vinegar to 3 parts water in a spray bottle. Soak for 30 seconds, then rinse. Do not use soap, detergents, or bleach solutions
- Wash fruits and vegetables even if you are going to peel them. At the store, buy produce that is not bruised or damaged. Bacteria can thrive in these places
- A scrub brush can help loosen dirt mainly with potatoes

### Thaw foods the proper way:

- Do not thaw in the sink or on the counter
- Defrost foods in the refrigerator using a drip-proof container or plastic bag or defrost in the microwave and cook immediately

### When in doubt, throw it out!

- Decaying vegetables and fruits
- Food that has expired
- Food that smells or looks spoiled
- Leftovers that may have been left out more than two hours or kept for more than 3 or 4 days

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# Food Safety

## Avoid Raw and Unpasteurized Foods

- Avoid unpasteurized products. These include some juices, apple cider, milk, and raw or moldy cheese such as camembert, feta, bleu, and queso fresco. Check food packaging for the word ***pasteurized***.
- Avoid homemade fermented foods such as sauerkraut, kimchi, or yogurt.
- Avoid raw probiotics drinks such as kombucha.
- Wash all raw fruits and vegetables with water before eating, even if the food is going to be cut or peeled.
- Before eating leafy greens, berries, mushrooms, artichokes, and other fresh fruits and vegetables that are hard to clean, submerge them in water.
- Avoid raw bean or alfalfa sprouts. If cooked, they are OK to eat.
- Bagged, pre-washed vegetables, such as spinach and other leafy greens, still need to be washed before eating.
- Reheat frozen vegetables and entrees before eating.

## Food Handling Rules to Follow

- Avoid eating raw eggs, meat, poultry, or fish. Cook meat to well-done and eggs until the yolks are hard. See the chart on page 19 for safe cooking temperatures.
- Avoid tasting raw or partly-cooked meats, poultry, eggs, fish, or shellfish. This includes cake batter or cookie dough that contains raw eggs.
- Avoid eat luncheon and deli meat directly from the package. Instead, you can:
  - Heat luncheon meats in the microwave or on the stovetop before eating.
  - Freeze luncheon meats and defrost them in the microwave when you are ready to make a sandwich.
- Avoid smelling foods to check for freshness. You may breathe in mold spores.
- Marinate and defrost foods in the refrigerator, not at room temperature.
- If you defrost foods in the microwave, cook it right after defrosting.
- Throw out canned foods that have bulges, dents, holes, or leaks.
- Use different dishes and utensils for raw and cooked foods.
- Throw away dishes, utensils, pots, pans, and cutting boards that are cracked. They are too hard to clean well.

## Eating at Restaurants

- For the first 3 months after your transplant surgery, avoid raw fruits and vegetables. If cooked, they are OK to eat.
- Do **not ever** eat at buffet-style restaurants or from salad bars.
- Avoid sushi (raw or cooked)



# Important Nutrients After Transplant — Potassium

Potassium is an electrolyte found mainly inside your body's cells. It maintains the fluid content of cells assists muscles to move and helps nerve function.

Potassium may sometimes be abbreviated as "K" you medical reports.

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**High or low potassium may be deadly if not treated  
right away by your doctor.**

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Normal serum potassium (K) levels	Hyperkalemia	Hypokalemia
3.5-5.0 mm	High Potassium, greater than 5.5mm	Low Potassium, less than 3.5mm
<b>What causes potassium levels to change?</b>  There are many reasons for potassium levels in transplant patients to change.	<ul style="list-style-type: none"> <li>• Diabetes</li> <li>• Kidney failure</li> <li>• Potassium-sparing diuretics ("water pills")</li> <li>• Blood transfusion</li> <li>• Taking medications like Cyclosporine®, Prograf®</li> </ul>	<ul style="list-style-type: none"> <li>• Prolonged vomiting</li> <li>• Diarrhea</li> <li>• Gastric suction</li> <li>• Long-term diuretics ("water pill" therapy)</li> <li>• Insulin</li> </ul>

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## **Foods high in Potassium:**

- |               |             |                     |
|---------------|-------------|---------------------|
| • avocado     | • chocolate | • plantain          |
| • banana      | • peanuts   | • squash            |
| • cantaloupe  | • tangerine | • carrots           |
| • figs        | • orange    | • soy beans         |
| • dried fruit | • papaya    | • all kind of beans |
| • mango       | • prune     | • lentils           |
| • pumpkin     | • guava     | • potato            |

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# Important Nutrients After Transplant — Magnesium

Magnesium is a mineral found in your bones, blood and muscles.

## What does magnesium do?

- Give your body energy as it digests your food
- Your muscles to relax and helps prevent tooth decay by keeping calcium inside your tooth enamel

What is a normal blood magnesium?	Recommended daily amount for magnesium:	What may cause a low magnesium level?
1.5-2.0 mEq/L	Males: 350 mg/day Females: 300 mg/day	<ul style="list-style-type: none"> <li>• Diuretics (“water pills”)</li> <li>• Prolonged IV fluids without nutrition</li> <li>• Cyclosporine®</li> <li>• Malabsorption</li> <li>• Low intake</li> <li>• Vomiting/Diarrhea</li> </ul>

## Foods high in Magnesium:

- |                |                   |                   |
|----------------|-------------------|-------------------|
| • Baked potato | • Peaches         | • Garbanzo beans  |
| • Navy beans   | • Black-eyed peas | • Summer squash   |
| • Wheat germ   | • Peanuts         | • Kidney beans    |
| • Beet greens  | • Broccoli        | • Sunflower seeds |
| • Oysters      | • Sesame seeds    | • Lima beans      |
| • Zucchini     | • Shrimp          | • Tofu            |
| • Beets        | • Dried figs      |                   |



# Important Nutrients After Transplant— Sodium

**Salt is also known as sodium.**

If you eat a lot of salt it can cause high blood pressure and osteoporosis (brittle bones). In transplant patients, some medicines such as steroids and cyclosporine may cause your body to hold onto water and you will gain weight. Limiting foods high in salt may help you from gaining water weight.

Did you know... One teaspoon of salt has 2000 mg of sodium

- **How much is too much:** Limit yourself to 2000 mg of salt a day.
- **Check the food label:** If a food has more than 250 mg of sodium in one serving, don't buy it.
- **Going out to eat:** Avoid foods made with MSG (Monosodium glutamate).
- **Beware of salt substitutes:** Most salt substitutes contain potassium chloride. Ask your dietitian if you are on a potassium restriction before using these products.

## **Season food without salt**

Try spices to season your foods. Make mixtures of your favorite spices and keep them handy in your favorite salt shaker.

- Use onion and garlic powder
- Avoid onion and garlic salt.

## **“TOP TEN” LIST OF PLACES TO FIND SODIUM:**

- |                               |                                       |
|-------------------------------|---------------------------------------|
| • Salt shaker                 | • Pretzels, potato chips, salted nuts |
| • Fast food, convenience food | • Processed food                      |
| • Canned food                 | • Soups, bouillon cubes               |
| • Cured meat, luncheon meat   | • Pickles or pickled food             |
| • Soy sauce                   |                                       |



# Important Nutrients After Transplant— Sweets

THURSDAY

FRIDAY

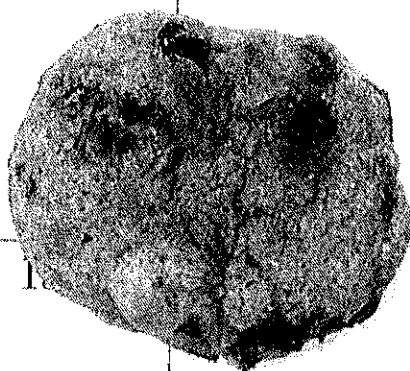
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**Limit Daily  
Sugar  
Intake**

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Right after your transplant, you will be given high doses of steroid medications. These medications affect the way your body uses sugar. To

prevent weight gain and high blood sugar, limit how many sweets you eat.

If high blood sugar becomes a long-term problem, a diet with a set meal plan may be ordered by your doctor. This meal plan will be given to you by a registered dietitian.

## Avoid In Excess

Sugar	Sugar sweetened beverages:	Sugar-coated cereal
Honey	◊ Soda	Canned fruit in syrup
Candy	◊ Lemonade	Fruit yogurt made with sugar
Cookies	◊ Iced tea	Syrup
Pie	◊ Kool Aid®	Jelly
Cake	◊ Juices	Jam
Ice cream		

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