## MEDICAL NUTRITION THERAPY

## Fat Controlled \& Sodium Controlled (2000 milligrams sodium)

Name: $\qquad$
Dietitian: $\qquad$
Phone: $\qquad$
Date: $\qquad$

## Factors that increase risk for heart disease

* high cholesterol (saturated fats \& cholesterol raise cholesterol levels in the blood)
* high triglycerides
* high blood pressure
* physical inactivity
* smoking
* diabetes
* overweight/obesity
* age (men >45 have a greater risk, women >55 have a greater risk)
* gender (postmenopausal women have a greater risk)
* family history of heart disease


## Cholesterol

Cholesterol is a fatty substance that is produced in your liver. It is also found in foods from animals, including meats, poultry, fish, seafood and dairy. Cholesterol makes substances that help different parts of the body function properly. Cholesterol's most important job is to help carry fat through your blood vessels. It also helps produce Vitamin D and acids that help process the fats you eat.

## Types of Cholesterol

1. LDL (low density lipoproteins)

* "bad" cholesterol
* carries fat to your body's cells
* builds up on inner walls of arteries making the arteries too narrow which slows the flow of blood and oxygen to the heart
* the greater the LDL, the more risk of having a heart attack or stroke

2. HDL (high density lipoproteins)

* "good" cholesterol
* helps remove LDL "bad" cholesterol
* helps slow the build-up in arteries to protect you from a heart attack
* smoking decreases HDL level in the blood

3. VLDL (very low density lipoproteins)

* made up of protein, triglycerides and some cholesterol
* feeds the cells

4. Triglycerides

* fats in the blood
* also produced from overeating - the body will store extra fat as triglycerides
* alcohol raises fat levels in the blood - if you drink alcohol, limit yourself to less than 2 drinks a day

|  | DESIRABLE <br> cholesterol | $\frac{\text { RISK }}{200 \mathrm{mg} / \mathrm{dl}}$ | $200-239$ |
| :--- | :--- | :--- | :--- |
| HDL | $>60$ | -- | HIGH RISK <br> $>240$ |
| LDL | $<100$ | $101-159$ | $<40$ Men <br> $<50$ Women |
| Triglycerides | $<150$ | $150-199$ | $>160$ |
| Ratio | $<4$ | $>4$ | $>200$ |

Total Cholesterol = HDL + LDL + VLDL
Triglycerides/5 = VLDL
LDL= Total Cholesterol - HDL - (triglycerides/5)
Ratio = total cholesterol divided by HDL

## How Cholesterol Works

1. You eat foods that contain fat.
2. The fat is digested and absorbed in your small intestine and is then sent to your liver for processing.
3. The liver loads the fat into VLDL's. The VLDL's then travel through your blood vessels and unload fat. Once the VLDL's unload the fat, they become LDL's.
4. The LDL pieces get stuck along the blood vessel walls which narrows the blood vessels.
5. The HDL's rescue the stuck LDL's and take them back to the liver where they are recycled into new VLDL's or broken down and excreted.
6. If you eat too much fat, your liver makes extra VLDL's to carry the fat, more LDL pieces become stuck and then there are not enough HDL's to rescue them all, which may lead to a heart attack.

## Types of Fat

1. Saturated

* solid at room temperature
* found in animal sources, such as: lard, butter, whole milk, cheese, other high-fat dairy products, sausage, ham, fatty ground beef, red meat marbled with fat and poultry skin. Some plant foods including coconut oil, palm oil, palm kernel oil, and cocoa butter used to make chocolate also contain saturated fat.

2. Polyunsaturated

* liquid at room temperature
* found in vegetable oils (safflower, corn, soybean, sunflower) and seafood.

3. Monounsaturated

* liquid at room temperature
* found in canola oil, olive oil, peanut oil, nuts, avocado, and peanut butter

When substituted for saturated fatty acids, polyunsaturated and monounssaturated fatty acids may help to lower blood cholesterol levels.

## 4. Trans Fat

* Also known as partially hydrogenated oil.
* As unsaturated fats and oils are hydrogenated, fatty acids known as trans fatty acids are formed. Trans fatty acids or trans fat can raise total blood cholesterol and LDL cholesterol and lower HDL cholesterol. Many manufacturers have stopped using partially hydrogenated oil as an ingredient, but it can still be found in some brands of canned frosting, baking mixes, microwave popcorn, frozen pizza, baked goods, fried food, coffee creamer and stick margarine.
* After June 2018, partially hydrogenated oil will no longer be permitted as an ingredient in foods. Trans fat is no longer considered "generally recognized as safe" (GRAS). After 2018 companies may petition for the limited use of partially hydrogenated oil.
* Trans Fats must be listed on the Nutrition Facts label. If a product contains partially hydrogenated oil, but the amount of trans fat is less than 0.5 grams per serving, the amount of trans fat may be listed as 0 grams. Check ingredient lists for partially hydrogenated oil and avoid products that contain it.
* When choosing a tub margarine, make sure the first ingredient is a liquid oil. Then compare polyunsaturated fats and compare them to the amount of saturated fat. The ratio should be 2:1 (unsaturated:saturated). Avoid tub margarine that contains partially hydrogenated oil.

Example: Tub Margarine contains:
2 grams monounsaturated fat
2 grams polyunsaturated fat
2 grams saturated fat
0 grams trans fat
ratio $=4: 2=2: 1$
(This margarine would be acceptable to use.)

* Most tub margarines are acceptable to use except for the following brands: Dairy Fresh \& Country Crock tub margarine.

Effects of fat on Cholesterol Levels:

Saturated
Increase LDL - makes heart and artery disease more likely
Polyunsaturated
Decrease LDL, Decrease HDL
Monounsaturated
Decrease LDL, Increase HDL
Trans Fatty Acids
Increase LDL, Decrease HDL - If label says hydrogenated or partially
hydrogenated, be aware of trans fat.

Comparison of Dietary Fats


- Cholesteral Content $\mid \mathrm{mg}$ /Tbspl: Lard 12: Beef tallow 14; Butterfat 33. No cholesterol in any vegetable-based oil.

Source. POS Pilot Plant Corporaton. Saskatoon. Saskatchewan, Canada June 1994

| $\square$ SATURATED FAT | POLYUNSATURATED FAT |
| :--- | :--- |
| $\square$ MONOUNSATURATED FAT | $\square$ Linoleic Acid |
| Alpha-Linolenic Acid |  |
| (An Omega-3 Fatty Acid) |  |

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## Lifestyle Changes to Help Lower Cholesterol and Improve Heart Health

1) Eat less saturated fat - < $5 \%$ total calories
2) Avoid trans fat - < $1 \%$ total calories
3) Choose monounsaturated and polyunsaturated fats in place of saturated and trans fats aim for total fat intake to be $25-35 \%$ of total calories.
4) Eat less cholesterol - <200 mg/day
5) Be more active - 30 minutes or more, at least 5 days/ week.

- Exercising 5 times each week, for at least 30 minutes/day, not only helps lower cholesterol, but also helps control weight, lowers blood pressure, lowers risk of diabetes and helps reduce stress. Examples of exercise are brisk walking, running, swimming, cycling, dancing, jumping rope, skating and aerobics.
- Incorporate light weights into exercise routine for maximum benefit.
- Exercise lowers LDL cholesterol and triglycerides and raises HDL cholesterol.

6) Eat more fiber

- Fiber helps to lower cholesterol.
- Daily fiber goal: 28-35 grams of total fiber. (10-15 grams should be soluble)
- Choose more soluble fiber from apples, oat bran, corn bran, rolled oats, legumes (black beans, kidney beans, lentils, navy beans...), carrots, broccoli, oranges and plums.
- A diet high in fiber will include more fruits and vegetables, which provide many natural vitamins and minerals.
- High fiber foods contain $\geq 3$ grams of fiber per serving. (look at the food label)

7) Eat at least 5 servings of vegetables and fruits each day

- For best results, choose a variety of different vegetables and fruits each day. Try to choose different colored produce - green, yellow, orange, red, purple, blue, and white. Different colors represent different nutrient profiles.

8) Limit simple sugars and refined carbohydrates

- Some common names for sugar include table sugar, brown sugar, honey, syrups, agave nectar, and high fructose corn syrup. Limit foods that are high in added sugar like pop, sugar-sweetened beverages, specialty coffee drinks, candy, and baked goods.
- Refined carbohydrates include any product that contains white flour such as white bread, pastries, crackers, snack foods and baked goods. Limit regular pasta and white rice. Choose whole grain varieties instead.

9) Consider adding plant sterols and stanols to your diet - talk to your doctor first.

- Plant sterols and stanols are naturally occurring substances found in plants.
- 2 grams per day is the amount shown to be beneficial.
- Plant sterols and stanols are extracted from plants and used in commercial products.
- Commercial products with added sterols and stanols include: Benecol and Promise activ spreads; Joseph's Flatbread with CardioAid; Minute Maid Premium HeartWise orange juice; and Nature Valley Healthy Heart granola bar.

10) Reduce sodium intake to no more than $1,500-2,300 \mathrm{mg}$ per day

- Avoid adding salt at the table and when cooking - use herbs and spices instead.
- Choose minimally processed foods like fresh and frozen fruits and vegetables; fresh meat, poultry, and seafood; whole, unseasoned grain products; low fat milk and yogurt and natural cheeses.


## Lifestyle Changes to Help Lower Triglycerides

1) Lose weight if needed
2) Increase physical activity
3) Limit alcohol consumption

- Alcohol consumption raises triglycerides, raises HDL cholesterol and increases high blood pressure. Limit alcohol intake to 1 drink per day for ladies and 2 drinks per day for men. 1 drink $=5 \mathrm{oz}$ wine, 12 oz beer, 1 oz liquor.

4) Limit Simple Sugars and refined carbohydrates (please see above)
5) Consider adding omega-3 fatty acids to your diet

- Fish (especially fatty fish like salmon, tuna, mackerel and herring), ground flaxseed, chia seeds, and walnuts are good sources of omega-3 fatty acids and may help lower triglycerides.

6) Follow other recommendations listed above.

## Decoding the Nutrition Facts Label

Nutrition Facts
Serving Size 2 Tbsp. (32g)
Servings Per Container 25
Amount Per Serving
Calories 190 Calories from Fat 130
Total Fat $16 \mathrm{~g} \quad$ \% Daily Valu
Saturated Fat $3 \mathrm{~g} \quad 16 \%$
Trans Fat 0 g
When looking at a nutrition facts label be sure to look at the Portion Size, Total Fat, Saturated Fat, Trans Fat, Cholesterol, and Sodium. Avoid foods with more than 250 mg of sodium per serving (or entire frozen meals with more than 700 mg of sodium)
Cholesterol 0mg 0\%
Sodium 150mg 6\%
Total Carbohydrate $7 \mathrm{~g} \quad 2 \%$
Dietary Fiber $2 \mathrm{~g} \quad 9 \%$
Sugars 5 g
Protein 5g
*Percent Daily Value based on a 2,000 calorie diet


## Breads/Cereals

Standard portion size $=1$ slice or $1 / 2$ cup
Suggested serving per meal = 2 to 3 (6-11 per day)
Calories per serving $=60$ to 90 Carbohydrate grams per serving $=15$

Choose
*look for $100 \%$ whole grain varieties of the following foods:

Whole grain breads, bagels, English muffins, whole wheat breads, pretzels.

Cereals $3 / 4$ cup
Oatmeal
Cream of Wheat

Crackers (with 2-3 grams of fat per serving)

Rice (brown rice best)
Spaghetti, macaroni, pasta
Flour or corn tortillas

Quinoa, barley, rye, amaranth, millet, buckwheat

## Decrease

*limit refined/processed grains or those made with white flour

Commercial baked goods: pies, cakes, doughnuts, croissants, cookies, pastries, muffins, biscuits, white breads, Bisquick.

Cereals with added fat: Granola, Cracklin' Oat Bran.
Sweetened cereals

High fat crackers (Ritz, Club, Townhouse)

## Meat and Meat Substitutes

Standard portion size $=3$ to 4 ounces per meal.
Suggested servings per day = 5 ounces for women; 7 ounces for men.
Calories per ounce $=55$ to 75
Carbohydrates per serving $=0$

| Food | Choose |
| :---: | :---: |
| Beef | Lean cuts of beef such round, sirloin, flank, tenderloin, ground chuck ground beef that is $80-8$ lean or extra lean or ground round, veal (all |
| Pork: | Pork tenderloin, 80-85\% lean or extra lean ground pork, loin chops, loin roast, |
| Poultry: | Skinless chicken and turkey, cornish hens, ground turkey (greater than $90 \%$ lean) |

## Decrease

Regular ground beef, ribs, steaks (T-bone, porterhouse), corned beef, prime rib.

Pork sausage, pork steak, bacon, ham, spareribs

Fried chicken, skin on poultry, domestic duck or goose

Canned fish packed in oil, fried fish

Whole eggs to 3-4 per week

All regular cheeses:
American, swiss, colby, etc.

Other lunch meats, liver, heart, kidney, sweetbreads, sausage, knockwurst, bratwurst, hot dogs

## How to Prepare Lean Meat:

1. Trim all visible fat from meat before cooking.
2. Bake, broil, grill, roast, stir-fry, braise or stew instead of fry.
3. Drain the fat from cooked ground pork or beef.
4. Put homemade meat soups and stews in the refrigerator for a few hours so fat will congeal on top and you can skim it off.
5. Avoid gravies and sauces unless they are a low fat variety.

## Fruits

Standard portion size $=1 / 2$ cup or 1 medium piece. (Fresh fruit contains more fiber)
Suggested servings per day $=2$ to 4
Calories per serving $=60$ to 90
Carbohydrate grams per serving $=15$

Choose
All fresh, frozen canned (in their own juice) or dried fruits, fruit juice (100\% juice or NO sugar added)

Decrease
Fruits canned in heavy syrup, candied fruit.

## Vegetables

Standard portion size $=1 / 2$ cup cooked or 1 cup raw. (Fresh vegetables contain more fiber)
Suggested serving per day $=3-5$.
Calories per serving = 25
Carbohydrate grams per serving $=5$

Choose
All fresh, frozen or canned vegetables.

## Decrease

Vegetables prepared in butter, cream or other sauces.

## Milk and Milk Products

Standard portion size = 1 cup
Suggested servings per day $=2-3$
Calories per serving $=90$
Carbohydrate grams per servings $=12-15$

Choose
Skim milk
1\% or 1/2\% milk
Skim buttermilk
Nonfat yogurt
Evaporated skim milk
Nonfat dry milk
Low fat or fat-free Eagle Brand condensed milk
Almond milk
Soy milk

Decrease
Whole milk
2\% milk
Cream
Half \& Half
Sour cream
Whipped cream
Evaporated whole milk
Regular Condensed Milk
Chocolate milk

## Snacks

## Limit to 1 serving or less per day

Choose
Plain popcorn (air popped),
Small Act II 96\% fat-free microwave popcorn, Orville Redenbacher smart pop, Pop Secret by Request, pretzels, crackers (low-fat),
Baked Tortilla Chips with salsa, fat-free/sugar free pudding,
fat-free/sugar-free ice cream, low fat ice cream, sherbet, sugar-free fudgesicles, sorbet, fruit boosters

## Fats

Standard portion size = 1 Tablespoon lite or 1 teaspoon regular
Suggested serving per day = Not more than 3 or 4
Calories per serving = 45
Carbohydrates per serving $=0$
Choose

## Decrease

Chocolate
Shortening, lard, coconut oil, palm oil

Trans fat free tub margarine:
Ultra Promise, Lower Fat
Fleishmann's, Butter Buds spread

## Decrease

Regular microwave popcorn, granola bars, cheese and crackers, potato chips, corn chips, cookies, cakes, pies, ice cream.

Baking cocoa
Monounsaturated Oils:
Olive, canola, peanut

Choose
Decrease
Fat free spray margarines:
I Can't Believe It's Not Butter,
Fleishmann's, Parkay
Low fat salad dressing
*Fat free salad dressing
Light mayonnaise
*Fat free mayonnaise
Light, fat free sour cream
Non-stick cooking spray
Philadelphia brand fat-free cream cheese**

**use caution when<br>purchasing fat free products as some contain extra salt and sugar

## EATING OUT

1. Avoid "super" or "deluxe" items.
2. Avoid foods that are described as golden, crispy or breaded. They are usually deepfried.
3. Avoid gravies and sauces on meats, potatoes and vegetables.
4. Ask for salad dressing on the side and add sparingly to salad.
5. Ask your server how items are prepared, if the menu is not specific enough.
6. If portions are too large when served, ask for a "doggie" bag at the beginning of the meal. Package up the excess portion to be enjoyed the next day.
7. Avoid buffets, they often promote overeating and large portions.
8. If you know you will be tempted with dessert, order a lower fat entree and go easy on sauces and salad dressings
9. Order broiled, baked or grilled meat, fish and chicken entrees or try a pasta dish with a tomato-based sauce.

## RECIPE MODIFICATIONS

FOR LOWERING TOTAL FAT, SATURATED FAT, AND CHOLESTEROL

| FOR: | TRY |
| :---: | :---: |
| 1 Whole Egg | 1/4 cup egg substitute or 2 Egg Whites Flax Egg $=2 \mathrm{~T}$ ground flax seed +2.5 T water |
| 1 cup Butter | Depending on type of recipe: <br> 1 cup trans fat free tub margarine or 1/2 cup trans fat free tub margarine and 1/2 cup nonfat plain yogurt or 1 cup nonfat plain yogurt, or 1 cup applesauce, or $1 / 2$ cup applesauce and $1 / 2$ cup skim milk |
| 1 cup Shortening or Lard | 2/3 cup Vegetable oil |
| 1/2 cup Shortening | 1/3 cup Vegetable oil |
| 1 cup Whole Milk | 1 cup Skim milk or 1 cup 1/2\% milk |
| 1 cup buttermilk | 1 cup skim buttermilk or 1 Tablespoon lemon juice or vinegar added to 1 cup skim milk |
| 1 cup Light Cream | 1 cup Evaporated Skim Milk or <br> 3 Tablespoons oil and Skim milk to equal 1 cup |
| 1 cup Heavy Cream | 1 cup plain Low fat Yogurt or 2/3 cup Skim milk and 1/3 cup oil |
| 1 cup Sour Cream | 1 cup Nonfat Sour Cream or 1 cup Nonfat Yogurt |
| 1 cup Mayonnaise | 1 cup Nonfat Mayonnaise |


| 1 ounce Cream Cheese | Light Cream Cheese or drain liquid from non-fat yogurt by placing yogurt in coffee filter or cheese cloth for 24 hours in refrigerator |
| :---: | :---: |
| 1 ounce Regular Cheese | Reduced-fat, low-fat, part skim milk, or nonfat cheese |
| 1 Tablespoon Salad Dressing | 1 Tblsp. Low-Calorie or Fat Free Salad Dressing |
| 1 ounce (1 square) Baking Chocolate | 3 Tblsp. Powdered Cocoa and 1 Tblsp. oil |
| 1 cup chocolate chips | 1/4-1/2 cup chocolate chips |
| 1 can Condensed Soup | Campbell's 97\% Fat Free cream soups (Healthy Request) |
| 1 ounce Bacon (2 strips) | 1 ounce Turkey Bacon or 1 ounce lean ham |
| 1/2 cup chopped nuts | 1/2 cup grape nuts |
| 1 cup all-purpose flour | 1 cup whole wheat flour minus 2 Tblsps or $1 / 2$ cup white and $1 / 2$ cup wheat |
| Sugar | Reduce the amount from $1 / 2$ to $1 / 4$ original. Try sweetening with fruit very ripe bananas, applesauce or fruit concentrate (1 Tblsp fruit juice concentrate $=1 \mathrm{tsp}$ sugar) |
| White sauce | Eliminate the fat and blend as usual with cornstarch and non-fat milk. |

## LOW FAT BROWNIE RECIPE:

1 box brownie mix
2 egg whites for each whole egg
Non-fat plain yogurt in place of oil
Follow instructions listed on the box.

## CHEESE

When purchasing cheese it is important to look at the label to determine how much fat is in each slice. It is recommended to look for cheese low in fat. Try to purchase cheese made from $2 \%$ or less milk fat. Look for cheeses that have less than 3 grams of fat per ounce. Use cheeses that contain 4-6 grams of fat per ounce sparingly. These cheeses still contain a high amount of saturated fat. Avoid cheeses with greater than six grams of fat per ounce. These are extremely high in saturated fats. Try to purchase cheese that is not individually wrapped. Kraft, Sargento, and other store brands offer cheese slices that are not individually wrapped. ****In fact Sargento offers "Ultrathin Cheese"; this is great way to have cheese while having portion control.

| Type of Cheese | Calories per Slice | Grams of Fat | Milligrams of Sodium |
| :--- | :---: | :---: | :---: |
| Sargento Ultra Thin <br> Swiss | 40 | 3 | 22 |
| Sargento Ultra Thin <br> Baby Swiss | 37 | 3 | 20 |
| Sargento Ultra Thin <br> Colby | 43 | 3 | 67 |
| Sargento Ultra Colby <br> Jack | 40 | 3 | 70 |
| Sargento Ultra Thin <br> Pepper Jack | 40 | 3 | 70 |
| Sargento Ultra Thin <br> Cheddar Jack | 40 | 3 | 70 |
| Sargento Ultra Thin <br> Mild Cheddar | 43 | 4 | 70 |
| Sargento Ultra Thin <br> Sharp Cheddar | 43 | 3 | 70 |
| Sargento Ultra Thin <br> Provolone | 40 | 2.5 | 230 |
| Regular Kraft American <br> Processed Cheese | 45 |  | 77 |

## SAMPLE MENUS

Each meal consists of approximately 4 carbohydrate servings, which equals 1800 calories.

## Breakfast

1 $1 / 2$ cups unsweetened cereal
1 cup skim milk
3/4 cup blueberries

## Lunch

2 slices bread
2-3oz. lean meat
raw vegetables
1 piece fresh fruit
1 cup yogurt
1 Tblsp. low-fat mayo

## Supper

3 oz lean meat
1 cup mashed potatoes
$1 / 2$ cup mixed fruit
green beans
1 Tblsp. low-fat margarine
$1 / 2$ cup sugar-free pudding

## Breakfast

1 cup oatmeal
2 Tblsp. raisins
1 cup skim milk

## Lunch

1 cup chili
baked potato
$11 / 4$ cup watermelon
raw vegetables
2 Tblsp. low-fat dip

## Supper

$11 / 2$ cup beef $\&$ noodles
$1 / 2$ cup corn
salad
$1 / 4$ cup cottage cheese
$1 / 2$ cup mixed fruit

## Breakfast

2 small pancakes
11/4 cup strawberries
1 cup skim milk

## Lunch

1 cup soup
6 saltine crackers
$1 / 2-3 / 4$ C low-fat cottage cheese
salad
1 cup cantaloupe
2 Tblsp. low-fat salad dressing

## Supper

1 $1 / 2$ cup pasta
Meat and tomato sauce
1 slice bread
broccoli, cooked
$1 / 2$ cup chunky applesauce

## Breakfast

Lender's size bagel
1 oz low-fat cheese or
fat-free cream cheese
3/4 cup fresh raspberries

Lunch (i.e. fast food meal)
Regular hamburger with bun
salad - any size with meat added
$1 / 2$ cup orange juice
small yogurt cone

## Supper

1 cup casserole
salad
$1 / 2$ cup cooked carrots
$1 / 2$ cup canned fruit
1 slice homemade bread

## Breakfast

2 frozen waffles
1 banana
1 cup yogurt

## Lunch

3 oz grilled chicken
1 cup soup
baked potato
$1 / 2$ cup applesauce
mixed vegetables - cooked

## Supper

1 cup tomato soup
grilled cheese sandwich made with low-fat cheese
$1 / 2$ cup mixed fruit green beans
1 Tblsp. low-fat mayo

## Breakfast

English muffin
1 Tblsp. peanut butter
11⁄4 cup strawberries

Lunch
2 tacos
1 piece fresh fruit
raw vegetables
$1 / 2$ cup sugar-free pudding

## Supper

3 oz. cut up chicken, cooked
1 cup rice
1 cup skim milk
low-fat sauce for stir fry
$1 / 2$ cup mixed fruit

## Breakfast

1/2 cup oatmeal
2 slices toast
2 Tblsp. raisins
1 egg or $1 / 4$ cup egg beaters

## Lunch

Healthy Choice frozen TV dinner

## Supper

1 cup acorn squash
3 oz lean meat
salad
3/4 cup blueberries
1 slice angel food cake
low-fat salad dressing
1 cup skim milk

## 2000 MILLIGRAMS SODIUM RESTRICTED DIET

Sodium restricted diets are used to control hypertension, edema, congestive heart failure, liver disease and renal disease.

Sodium is a mineral that is found in most plants and animals that we consume as food. The kidneys work to eliminate any sodium that the body does not need. In certain illnesses, however, the extra sodium stays in the body along with fluid and may result in edema, which may be harmful to the patient with renal or cardiovascular disease. To help prevent this accumulation of sodium and water in the body, sodium in the diet is provided in amounts the body needs to maintain a balance of sodium and water.

Salt and sodium is not the same thing. The most concentrated source of sodium is table salt, which contains 575 mg sodium in $1 / 4$ teaspoon. Baking soda and baking powder also contain high levels of sodium.

As a general rule, the more processing a food has gone through, the higher the sodium content. Canned sauces, vegetables, soups, stews and convenience foods are all high in sodium content.

Certain types of medications contain sodium. Always check with your physician before using any un-prescribed medicine. Some medicines that contain sodium are: antacids, alka seltzer, cough medicines, laxatives, pain relievers, toothpastes and mouth washes.

In a sodium restricted diet, you should not use any type of salt, including garlic or onion salt, in the preparation of food, nor use any salt at the table. You will also need to read food labels carefully in order to avoid sodium additives.

## The DASH Diet

The DASH Diet stands for Dietary Approaches to Stop Hypertension. This diet was developed as a lifelong approach to eating healthy while decreasing or preventing high blood pressure. This diet emphasizes consumption of vegetables, fruits, low fat dairy products, whole grains, fish, nuts and poultry. It is encouraged to consume foods rich in potassium, calcium, magnesium, fiber and other nutrients as a way to decrease blood pressure. Some examples of high potassium foods include oranges, apricots, bananas, honeydew, broccoli, brussel sprouts \& potatoes. Magnesium can be found in the following food items: almonds, cashews, peanuts \& soybeans.

Vegetables: 4-5 servings daily
Fruits: 4-5 servings daily
Grains (preferably whole grains): 7-8 servings daily
Low fat dairy products: $2-3$ servings daily
Meat: 2 servings daily
Nuts, seeds, and beans: 4-5 servings per week
Oils: 2-3 servings daily
Sweets: 5 or less weekly
The DASH diet is not a weight loss program; however, decreasing portion sizes and making healthier choices may result in weight loss. When planning a meal, do not place meat as the main focus of the meal, but instead consider it as a part of the meal. Meat consumption should
mostly consist of white meat (chicken, turkey) and fish, rather than red meat. It is important to read the food labels carefully. If something is sodium free, it has 5 mg or less per serving. If the food item is labeled as low sodium, it is 149 mg or less per serving. Olive oil and canola are recommended to be used when cooking instead of saturated fats. Increasing or adding physical activity into current daily regiments will also help to decrease blood pressure. Cessation of smoking is also recommended to decrease blood pressure.

## AVERAGE SODIUM VALUES OF SELECTED FOODS

| FOOD | SERVING SIZE | SODIUM (mg) |
| :---: | :---: | :---: |
| Bacon | 1 strip | 140 |
| Sausage | 1 link | 170 |
| Ham | 1 oz . | 370 |
| Hot Dog | 1 | 640 |
| Egg | 1 | 62 |
| Peanut Butter | 2 Tbsp. | 155 |
| Ice Cream | 1/2 cup | 53 |
| Milk - Skim | 1 cup | 126 |
| Margarine | 1 Tbsp. | 95 |
| Cottage Cheese | 1/2 cup | 457 |
| Cheddar Cheese | 1 oz . | 176 |
| American Processed Cheese | 1 oz . | 406 |
| Canned Soup | 1 cup | 600-1000 |
| Potato Chips | 1 oz . | 361 |
| Popcorn - Microwave | 3 cup | 190 |
| Tomato Juice | 6 oz. | 658 |
| Salad Dressings | 1 Tbsp. | 50-300 |
| Ketchup | 1 Tbsp. | 178 |
| Soy Sauce | 1/4 cup | 3074 |
| Roasted Peanuts | 1 oz . | 228 |


| Dill Pickle | 1 slice |
| :--- | :---: |
| Frozen Dinner | 1 meal |
|  |  |
|  | HERBS AND SPICES FOR LOW SODIUM DIETS |

Perhaps your physician has restricted the salt (sodium) in your food. Now is the time to be adventurous and try some of the herbs, spices, and seasonings you may not have used before. Go lightly -- a little goes a long way. Enhance the food flavor -- don't overwhelm it! Don't limit yourself to one or two -- experiment with several. Here are suggestions for a start:

| ALLSPICE | ground meats, stews, tomatoes, peaches <br> ALMOND EXTRACT |
| :--- | :--- |
| BASIL | egg, fish, lamb, ground meats, liver, stews, salads, soups, sauces, fish <br> cocktails |
| BAY LEAVES | meats, stews, poultry, soups, tomatoes |
| CARAWAY SEEDS |  |


| FOOD | CHOOSE | LIMIT |
| :---: | :---: | :---: |
| Milk | Low sodium milk (as desired), 2 cups per day of regular whole, low fat or nonfat milk; unsalted buttermilk, evaporated or dry milk (reconstituted), yogurt | Salted buttermilk, chocolate milk, malted milk, eggnog, milkshakes, Dutch process cocoa drinks or mixes, all other kinds of milk including sweetened and condensed |
| Meat, Poultry, Fish, Cheese \& Meat Substitutes | 6 oz. per day (cooked weight) - fresh beef, veal, pork, lamb, chicken, turkey, liver, fish, low sodium luncheon meats (such as Healthy Choice brand) <br> Substitute for 1 oz . of meat: <br> - 1 oz. low sodium cheese <br> - $1 / 2$ c. low sodium cottage cheese <br> - $1 / 2 \mathrm{c}$. unsalted (dietetic pack) canned tuna or salmon <br> - 2 T. low sodium peanut butter | Brains or kidneys; salted, smoked, cured or canned meat, fish \& poultry (bacon, sausage, ham, Canadian bacon, bologna, luncheon meats, frankfurters, corned beef, dried beef); shellfish, kosher meat, frozen fish fillets, frozen precooked meals, all regular cheeses, salted peanut butter, commercial vegetarian meat substitute |
| Egg | 1 per day prepared any style without salt or 1 egg substitute per day prepared without salt | More than 1 egg or egg substitute per day |
| Breads (serving size = 1 slice) | Up to 4 servings per day of low sodium bread, low sodium crackers, corn tortillas, homemade hot breads made with low sodium baking powder and without salt, regular loaf breads (white, wheat, rye, sourdough \& French), yeast rolls | Regular breads and yeast rolls in excess of allowed amounts; regular crackers, cornbread, biscuits, pancakes, waffles, flour tortillas \& all other regular baked goods |
| Cereals \& Starches (serving size $\text { = } 1 / 2 \mathrm{c} \text {.) }$ | As desired - Puffed wheat or rice, Shredded Wheat, other low sodium dry cereals; rice, spaghetti, macaroni \& noodles cooked in unsalted water; unsalted popcorn, pretzels, chips, cornstarch | All other dry cereals, instant hot cereals, instant seasoned rice, noodles \& stuffing mixes; salted popcorn, pretzels \& chips; selfrising cornmeal or flour |
| Fruits (serving size = 1/2 c.) | 3 or more servings per day of fresh, frozen, canned fruit or fruit juice; raisins, prunes | Fruits dried with sodium sulfite, crystallized or glazed fruit, maraschino cherries |


| Vegetables (serving size = 1/2 c.) | 2-4 servings per day of fresh, frozen or unsalted canned vegetables; dried beans, split peas and lentils, low sodium tomato \& V-8 juice | All regular canned vegetables, regular tomato \& V-8 juice, sauerkraut \& other pickled vegetables, instant mashed potatoes \& potato mixes, frozen vegetables in sauces, frozen vegetables with salt |
| :---: | :---: | :---: |
| Fats (serving size = 1 tsp.) | Butter, margarine, cooking fats, oils, French dressing, oil and vinegar dressing, mayonnaise, cream \& avocados. Limit to 2 T. per day of cream, sour cream, cream cheese or non-dairy cream. | Regular butter, margarine \& mayonnaise in excess of allowed amounts; regular salad dressings, bacon fat, salt pork, gravies prepared from salted bouillon or instant mixes |
| Sweet \& Desserts | As desired- sugar, honey, molasses, syrup, jam, jelly, hard candy, jelly beans, gumdrops, marshmallows; the following prepared with low sodium baking powder and without salt or baking soda: cookies, cakes, pies, cobblers, coffee cake; unflavored gelatin or flavored gelatin; custard \& pudding prepared with cornstarch, tapioca or rice using part of milk \& egg allowance; $1 / 2 \mathrm{c}$. sherbet \& ice cream | Regular desserts in excess of 1 serving per day |
| Beverages | Coffee, tea, herb tea, decaffeinated coffee, Postum, Kool-Aid, lemonade, powdered fruit drink mixes, soda water, carbonated beverages with less than 20 mg sodium per serving, alcohol with physician's permission | Carbonated beverages with more than 20 mg sodium per serving, softened water, mineral water |
| Soups (serving size - 1/2c.) | 1-2 serving per day of unsalted homemade soup using foods allowed, low sodium bouillon or broth, commercial low sodium soups | Regular (salted) bouillon or broth \& commercial soups, soups using foods on avoid list |

Miscellaneous
Salt substitute with
physician's permission, fresh or dried herbs \& spices, Mrs. Dash, vinegar, pepper, low sodium catsup, low sodium mustard, mustard powder, vanilla \& other flavoring extracts, cream of tartar, yeast, sodium free baking powder, unsalted nuts

Salt (in cooking or added to food), "lite salt" seasoning salts (celery, garlic, onion, lemon pepper); regular catsup, prepared mustard, Worcestershire sauce, soy sauce, teriyaki sauce, BBQ sauce, chili sauce, MSG, olives, pickles, relish, salted nuts, meat tenderizer

## SAMPLE DAILY MEAL PLAN

## Breakfast

$1 / 2$ c. orange juice
$1 / 2$ c. SF oatmeal
1 SF scrambled egg
2 slices toast
2 tsp. margarine
1 c. low fat milk
pepper
1 tsp. sugar
jelly
coffee or tea

Lunch
3 oz. SF roast beef
$1 / 2$ c. SF mashed potatoes $1 / 2$ c. SF sweet potatoes
$1 / 2$ c. SF green beans
Jell-o salad
1 fresh apple
1 slice bread
1 tsp. regular margarine
1 tsp. sugar
pepper
tea

## Dinner

3 oz. baked chicken
$1 / 2 \mathrm{c}$. SF peas
Tossed green salad with
French dressing
1 slice apple pie
1 slice bread
1 tsp. margarine
1 c. low fat milk
1 tsp. sugar
pepper
tea

SF = salt free
Diet as designed provides approximately 1740 mg . sodium. Regular fats or other foods may be added to increase sodium level.

## SALT FREE TACO SEASONING

## Ingredients

- 6 tsp chili powder
- $41 / 2 \mathrm{tsp}$ cumin
- $21 / 2$ tsp garlic powder
- 5 tsp paprika
- 3 tsp onion powder


## Directions:

- Stir everything together and store in a jar, plastic container, or zip top bags.
- 7 teaspoons of this mixture equals a 1.25 oz . pkg. of taco seasoning. Yield: 3 "packages"


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http://www.justapinch.com/recipes/sauce-spread/marinade/salt-and-sodium-free-taco-seasoning.html

