



Eat Well, Age Well

by Viktoriya Shchupak



With Foreword by
Health Advocates for Older People



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Viktoriya Shchupak

Foreword

We at **Health Advocates For Older People** were thrilled to have Viktoriya volunteer for us and bring her important message of *eating well* and *aging well* to our participants.

We are a 30-year-old non-profit that supports a diverse population of seniors in New York City. In collaboration with dozens of local non-profit and faith-based organizations, we offer free programs and services to seniors that enrich their lives and enhance their well-being. Through a variety of tools, techniques and tactics, we show seniors how to age with independence and vitality. Many of our programs provide fun and companionship; others are educational and health-oriented like Viktoriya's Nutrition Series. Our intent is to remind seniors of the important part that they play in managing their own health and wellness.

Our HEALTHY AGING PROGRAM, in which Viktoriya participated, provides senior exercise, wellness and socialization activities 6 days a week, 52 weeks a year, in ten different locations from West 29th Street to East 143rd Street. Our goal is to promote strength, flexibility, and balance, and to provide physical and mental stimulation...with new projects always on the horizon.

This book is one of those projects. *EAT WELL, AGE WELL* is a result of Viktoriya's knowledge, enthusiasm and hard work...plus **Health Advocates for Older People's** longtime belief in the importance of nutrition as a key component of healthy aging. There is comprehensive and easy-to-use nutritional information in the handbook, along with kitchen management and food preparation tips. Viktoriya's *Authors Note* on the next page will give you an idea of more good things to come.

Nancy Houghton, Executive Director

Health Advocates For Older People

Author's Note

I am a registered dietitian nutritionist, with a Master's Degree in Health and Nutrition Science from Brooklyn College/City University of New York. My area of specialty is nutrition education and my joy is to develop and present healthy-eating workshops for a variety of audiences. While working on my degree, I interned at several community organizations, where I became very interested in working with seniors. Between 2010 to 2014, I volunteered with **Health Advocates for Older People**, where I delivered many classes and seminars on nutrition to their senior participants. The development of materials for those classes was the genesis of this book.

While this book can be useful for the general public, there is considerable information that specifically applies to older adults. I introduce several key concepts right upfront, which help link the ideas throughout the other chapters.

A key to understanding this book is to understand *nutrients*. Nutrients are the components of foods that our bodies need to function; as we age, nutrients become even more important for maintaining optimal health. *Essential* nutrients are those nutrients that our bodies cannot make (or cannot make enough of), so we have to obtain them from foods. The six essential nutrients are: water, carbohydrates, fats, protein, vitamins, and minerals. This book places foods into three main categories (carbohydrates, fats, and proteins – the three energy-providing nutrients), with food groups acting as subcategories.

I have tried to make the book user-friendly, so you can read it front to back, or start reading the sections that interest you most. I have included several healthy and fun recipes to give you ideas about how to make tasty, nutritious, and simple meals. In the book, I combine basic information with practical suggestions. My goal is to help you become more knowledgeable about nutrition and guide you in learning to use this information to make better choices. I hope that the book will convey to you the vital role that I believe nutrition plays in every aspect of our lives. Remember that eating well is not only rewarding, but also fun, regardless of our age.

May you enjoy reading the book as much as I have enjoyed writing it!

- **Viktoriya Shchupak**

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1: Nutrition Labels, Ingredients List, Classifying Foods, Healthy Lifestyle Tips, Estimating Portion Sizes, Healthy Meal Ideas

Reading Nutrition Labels

- **Serving Size:** What is the serving size? How many servings are in the entire container? Multiply the number of calories and all the nutrients by the number of servings that you eat.
- **Calories:** How many calories are in one serving?
- **Nutrients to Limit:** Choose foods with low amounts of saturated fat, trans fat, sodium and sugar.
- **Nutrients to Get Enough Of:** Getting enough of these nutrients may reduce the risk of some diseases.
- **Percent Daily Value (%DV):** How much of the daily recommended amount of a nutrient does one serving provide (based on 2,000 calories/day)?
5% or less means a food is low in a nutrient;
20% or more means a food is high in a nutrient.
- **Fiber:** How much fiber is in a serving?

Nutrition Facts	
Serving Size 1 cup (228g) Servings Per Container 2	
Amount Per Serving	
Calories 250	Calories from Fat 110
% Daily Value*	
Total Fat 12g	18%
Saturated Fat 3g	15%
Trans Fat 3g	
Cholesterol 30mg	10%
Sodium 470mg	20%
Total Carbohydrate 31g	10%
Dietary Fiber 0g	0%
Sugars 5g	
Protein 5g	
Vitamin A	4%
Vitamin C	2%
Calcium	20%
Iron	4%

Start Here →

Check Calories

Limit these Nutrients

Get Enough of these Nutrients

Ingredients List

- Ingredients are listed by amounts. The first ingredient listed is present in the largest amount; the last ingredient in the smallest amount.
- Usually, a shorter ingredients list means that the food is less processed and healthier.
- Make sure that sugar is not one of the first ingredients.
- Be a wise consumer: choose the healthiest food product by comparing ingredients lists.
- Instead of automatically trusting claims, read nutrition labels and ingredients lists.
Examples of meaningless claims: “All Natural,” “Lightly Sweetened,” “Whole Grain.”

Classifying Foods

Whole vs. Processed Foods

Whole Foods

- Foods that are in their natural form
- Examples: fruits, vegetables, whole grains, meat/poultry/fish, eggs, dairy products (e.g., milk, cottage cheese, yogurt), nuts and seeds

Processed Foods

- Foods that have been changed and are no longer in their natural form
- Processing typically involves adding fat, sugar and/or salt, while removing naturally-present components, like fiber.

MyPlate Food Groups

Benefits

- This way of classifying foods is simple and practical when planning meals.

Limitations

- Foods do not always fit neatly into one food group (e.g., beans are *in both* the vegetable and protein food groups; milk is dairy, but also contains protein).



Energy-Providing Nutrients

Benefits

- Helpful when your doctor makes certain recommendations (e.g., reduce consumption of simple carbohydrates, reduce intake of saturated fat to lower LDL-cholesterol)

Limitations

- Most foods contain not just one, but several different nutrients (e.g., beans have both carbohydrates and protein; milk contains all three energy-providing nutrients).

Healthy Lifestyle & Weight Maintenance Tips

Eat a variety of whole foods.

- Whole foods are rich in nutrients that your body needs.
- Consuming whole foods may help to prevent and manage chronic diseases (e.g., diabetes, heart disease), as well as to maintain a healthy weight.

Limit consumption of processed foods.

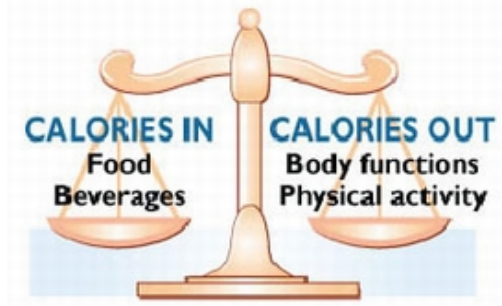
- Processed foods are high in calories and artificial ingredients, but low in nutrients.
- When you eat foods that contain refined (processed) carbohydrates (e.g., cookies, donuts) and added sugars, your blood sugar will rise quickly, which may lead to diabetes over time, plus you may feel hungry again soon after eating.
- **Did You Know?** Excess sugar that you consume gets converted to fat by the liver.

Drink water, milk and unsweetened herbal tea instead of sugary drinks.

Consume the right number of calories.

Why are calories important?

- The number of calories that you take in and use affect your weight. The number of calories that you need to consume depends on your individual needs (e.g., physical activity level, body composition, health conditions, age, gender).



- **NOTE:** You do not have to count every calorie you consume. Just be aware of how many calories are in each serving of the foods that you are eating. Moderation is key!
- **NOTE:** Focus on the nutrients in foods. Consuming whole foods that are rich in a variety of nutrients that the body needs is more important than counting calories.

How many calories do you need?

- Adults over the age of 50 oftentimes need fewer calories per day than do younger adults due to a slower metabolism and often reduced physical activity.
- The number of calories that you need per day depends on your age, gender and level of physical activity.
- Below is a table showing daily caloric recommendations for people who are 50 years of age and older.

Calories Recommended Per Day (50+ Years Old)

Gender	Physical Activity	Calories Recommended Per Day (50+ Years Old)
Man	Low	2,000
	Moderately active	2,200 to 2,400
	Active	2,400 to 2,800
Woman	Low	1,600
	Moderately active	1,800
	Active	2,000 to 2,200

Cook at home whenever possible.

Be more physically active.

Moderation is key! Ways to control portion sizes:

- Eat slowly, chew food well, and put your fork down between bites.
- Use smaller plates, bowls, glasses and serving spoons.
- Keep food and eat only in the kitchen.
- Do not eat while you are distracted (e.g., in front of the television).
- Put snacks on a plate rather than taking from the bag or serving bowl.

Tips to help you feel full throughout the day:

- Do not skip meals, especially breakfast. A high-protein, high-fiber breakfast (e.g., eggs with fruits/vegetables and whole-wheat bread; cottage cheese with fruit, nuts and oatmeal) will help you feel full longer.
- Eat at regular set times about every 5 hours to prevent extreme hunger and overeating. For many people, 3 meals and 1-2 snacks is a healthy meal pattern.

Increase fiber consumption to 25-35 grams per day.

Make better choices when eating out.

You do not have to avoid carbohydrates to lose weight.

- A gram of carbohydrates has fewer calories (4) than does a gram of fat (9).
- Eat a balanced diet that includes whole grains (e.g., oats, barley, quinoa, buckwheat, brown rice, whole-rye or whole-wheat bread), which contain complex carbohydrates.
- Fruits and vegetables contain natural sugar (fructose), plus fiber and vitamins.

Get your nutrients from food whenever possible.

- Take supplements only if necessary and approved by your doctor (e.g., if you have a deficiency in a certain vitamin or mineral).

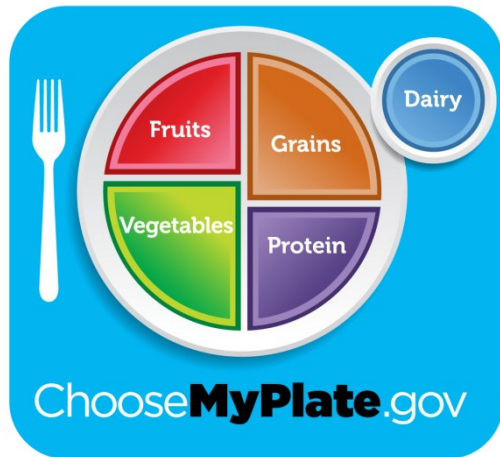
Estimating Portion Sizes



½ Plate Vegetables: Fill half your plate (about 2 cups) with a colorful mix of fruits and vegetables.

¼ Plate Starches: Add about one cup of whole grains (e.g., oats, barley, buckwheat, quinoa, brown rice, whole-rye or whole-wheat bread) and/or starchy vegetables, like potatoes, yams, legumes (beans, peas and lentils), squash and corn.

¼ Plate Proteins: Choose healthy proteins (e.g., chicken, fish, eggs, dairy products).



Food Groups: Recommendations

Grains

- **Recommendation:** 6 servings per day
- **Serving Size:** cooked grains (½ cup); bread (1 slice); cold cereal (look at container)

Vegetables

- **Recommendation:** 3-5 servings per day
- **Serving Size:** 1 cup; leafy greens (2 cups)

Fruits

- **Recommendation:** 2-4 servings per day
- **Serving Size:** 1 cup or 1 medium-size fruit

Protein

- **Recommendation:** 6 servings per day
- **Serving Size:** cooked meat/poultry/fish (1 ounce); beans (¼ cup); egg (1); peanut butter (2 Tablespoons); nuts/seeds (1 ounce)
- Meat/poultry/fish (3 ounces)
- 4 oz of raw meat = 3 oz of cooked meat

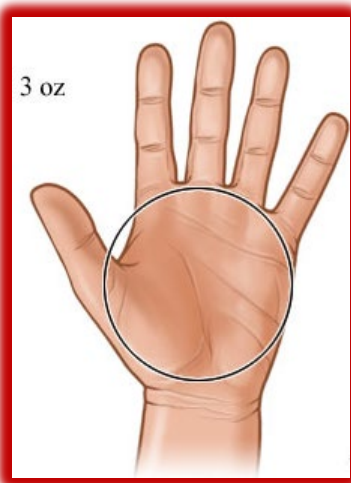
Dairy

- **Recommendation:** 3 servings per day
- **Serving Size:** milk/yogurt/kefir (1 cup); cheese (1.5 ounces)

Using your hand to estimate portion sizes



A fist = 1 cup



Palm = 3 oz of meat/poultry/fish



Thumb = 1 Tablespoon; 1 oz of cheese

Thumb tip = 1 teaspoon

1 Tablespoon = 3 teaspoons



Handful = 1 oz of nuts/seeds

Healthy Meal Ideas

Breakfast Ideas

Idea 1	Idea 2
<ul style="list-style-type: none"> • Oatmeal or whole-grain* bread with butter or avocado • Eggs* • Vegetables/Fruit • Milk* 	<ul style="list-style-type: none"> • Oatmeal or whole-wheat* bread • Cottage cheese or yogurt • Fruit • Nuts*

Lunch Ideas

- Whole grain (e.g., barley, buckwheat, quinoa, brown rice, whole-grain* bread, whole-wheat pasta)
- Fish/Chicken/Eggs*
- Vegetables (salad *OR* steamed/stir-fried)
- Milk*
- Fruit

Dinner Ideas

Idea 1	Idea 2	Idea 3
<ul style="list-style-type: none"> • Whole grain or whole-wheat* bread/bagel/pita • Vegetable salad + cheese • Milk* • Fruit 	<ul style="list-style-type: none"> • Whole grain (cooked) or whole-wheat* bread/bagel/pita • Egg* salad (eggs* + veggies) • Milk* • Fruit 	<ul style="list-style-type: none"> • Starchy vegetable (e.g., potato, sweet potato, corn) • Fish/chicken • Non-starchy veggies (e.g., tomato, bell pepper, carrots, spinach, onion) • Milk*

Healthy Snack Ideas

- Farmer's cheese/cottage cheese (1 cup) + fruit + nuts* (1-2 handfuls)
- Whole-grain* bread + cheese + raw veggies (e.g., carrot, bell pepper, tomatoes)
- Whole-grain* bread + peanut butter* (1-2 Tablespoons) + apple

***Watch out for these foods if you have an allergy or sensitivity to them.**

Eat Healthy When Eating Out

- Have a vegetables as the main or side dish.
- Order steamed or baked foods rather than fried.
- Split a dish with a friend or take leftovers home.
- Ask for whole grains instead of processed ones (e.g., brown instead of white rice).
- Ask for salad dressing and sauces on the side.
- Ask for your food to be prepared with less salt.
- Have fruit for dessert.

Make Healthier Choices by Limiting the Following

Saturated fat & trans fat

- These fats raise the “bad” LDL-cholesterol.
- **For more information, refer to page 20.**

Sodium

- Consuming too much sodium can lead to high blood pressure; therefore, do your best to reduce your sodium intake.
- Processed foods (e.g., tomato juice/sauce, canned soups, pretzels, condiments) contain a lot of sodium, so eat processed foods less often and in small amounts, and choose whole foods instead.
- When cooking, use a little salt and add flavor with herbs, spices, garlic, onion and lemon juice. **(For more on seasonings, look at page 28.)**
- Keep the salt shaker off the table.
- Select products that have less than 140 mg of sodium per serving.
- If using canned vegetables, look for those labeled “low sodium,” “reduced sodium,” or “no salt added.” Rinse canned vegetables under cold water to reduce their salt content.
- Over time, you will get used to consuming less salt and will learn to enjoy foods’ natural flavors!

Added Sugars

- Added sugars are sugars which are not present naturally, but are added to foods or beverages during processing.
- **Some foods that contain a lot of added sugars:** sweetened beverages (e.g., soda, juice), desserts (e.g., candy, cake, cookies, ice cream), sweetened dairy products (e.g., milk, yogurt, kefir).
- Some products are low in fat but have a lot of added sugars, so it’s important to always check food labels and ingredients.
- **Different names for sugar:** brown sugar, raw sugar, honey, molasses, sucrose, glucose, fructose, dextrose, corn sweetener, corn syrup, fruit juice concentrate, cane juice, fruit nectar
- Instead of drinking sweetened beverages (including fruit juices): squeeze fresh lemon to add flavor to water; drink milk (plain, whole-fat) and unsweetened herbal tea (e.g., chamomile tea); eat whole fruits and vegetables.
- Avoid **artificial sweeteners**, which contain chemicals that can cause health problems.

Food Allergies

- People are most commonly allergic to the following foods: nuts (most often peanuts), fish, shellfish, milk, eggs, wheat and soy. **Note:** A milk allergy means that you are allergic to the protein in milk; this is different from lactose intolerance, where a person is unable to digest lactose. **(For more on lactose intolerance, look at page 36.)**

2: Carbohydrates

Why Are Carbohydrates Important?

- They provide energy for the body.
- Our brain needs glucose (a simple carbohydrate) to function.
- If we do not have enough glucose, our muscles will be broken down and used as fuel.

Simple Carbohydrates - Sugars

- **Glucose:** sugar that our bodies use for energy
- **Fructose:** sugar that is naturally present in fruits and some vegetables
- **Lactose:** sugar that is naturally present in dairy products
- **Sucrose:** table sugar; made up of glucose and fructose

Food Containing Simple Carbohydrates

- Fruits and vegetables, which also contain vitamins, minerals and fiber
(For more on fruits and vegetables, see pages 13-16.)
- Dairy products, which also contain important nutrients
(For more on dairy products, see page 35.)
- Processed (junk) foods like soda, candy and chips, which are not nutritious

Complex Carbohydrates

Starch

- Composed of many units of glucose
- Starch is digested to glucose in our bodies.

Fiber

- The part of the plant that is edible, but indigestible
- **Note:** For more on fiber, look at pages 17-19.

Food Containing Complex Carbohydrates

- Whole-grain bread/cereal/pasta, whole grains (e.g., oats, barley, buckwheat)
- Starchy vegetables: potatoes, corn, sweet potatoes, legumes, squash

Why Are Complex Carbohydrates Better?

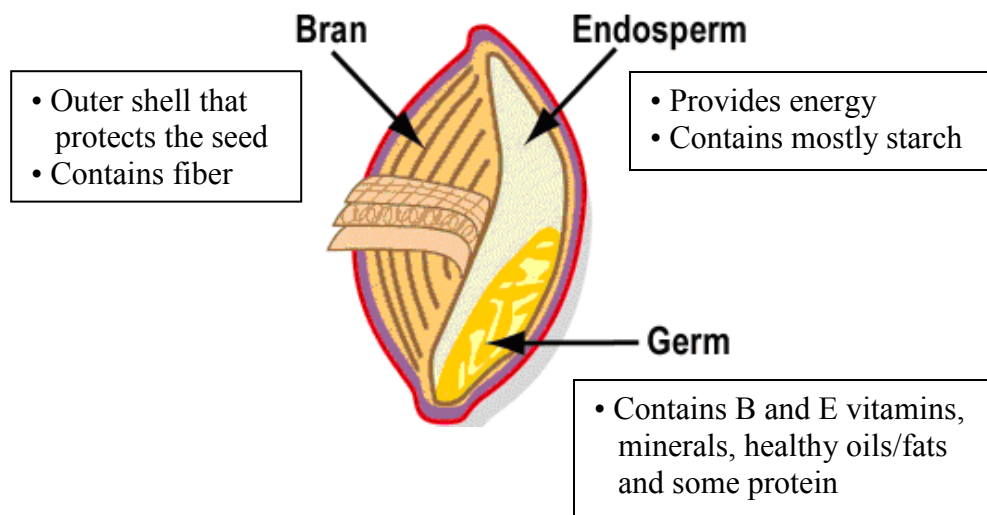
- Since it takes longer to digest (break down) complex carbohydrates into glucose and for this glucose to be absorbed (enter the blood), blood glucose levels do not rise as quickly (important in diabetes), thus helping you to stay full longer.

Grains

Types of Grains: Whole Grains vs. Refined Grains

- **Whole grains** contain the entire kernel, which consists of the bran, germ and endosperm
- **Nutrients found in whole grains:** fiber; vitamins B and E; minerals
- **Refined grains** have been milled/processed, which means that the bran and germ were removed, and with them, important nutrients (e.g., fiber, protein, vitamins and minerals).
Examples: white flour/bread/rice/pasta

Whole Grain Kernel



Whole Grains

Examples:

- Oats
- Barley
- Buckwheat
- Bulgur
- Quinoa
- Brown rice
- Whole-rye bread
- Whole-wheat bread/pasta

Read Food Labels & Ingredients Lists:

- Choose foods with a whole-grain ingredient listed first.
- Foods with labels like “multi-grain,” “bran,” and “100% wheat” are *not* whole-grain.
- Brown color does *not* mean whole-grain.

Recommended Amount: about 6 ounces a day (varies depending on your total daily calorie requirements)

Serving Size: 1 oz = ½ cup cooked grains; 1 slice of bread; cold cereal (look at container)

MyPlate Recommendation: Make at least half your grains whole grains.

Tip: to Eat More Whole Grain:

- Eat oatmeal for breakfast.
- Choose whole-grain instead of white bread/rice/pasta/crackers.
- Make whole-grains like barley, quinoa, buckwheat and bulgur staples in your diet.
- Use whole grains in dishes (e.g., barley in soup, quinoa in salad).
- To save time: cook a lot of bulgur/buckwheat/quinoa and freeze some to heat and eat later.
- Have whole-grain cereal/crackers for snacks.
- Use about half of whole wheat flour in recipes (e.g., pancakes).

*****Special Tip from Our Member Isabelle:** To make pancakes, mix half oats and half whole wheat flour, plus milk.

Weight Loss, Diabetes & Carbohydrates

- **Surprise!** You do not have to avoid carbohydrates to lose weight or stabilize your blood sugar levels! Just be aware of portion sizes (remember the plate method).
- **Note:** Our bodies use carbohydrates for energy and the brain needs glucose to function; therefore, depriving your body of carbohydrates is actually dangerous to your health!
- Eat a balanced diet and include foods containing complex carbohydrates (e.g., whole grains, starchy vegetables), because these foods are typically low in fats and added sugars, and thus are lower in calories! In addition, the fiber in these foods slows down the digestion of starch to glucose, thereby preventing spikes in blood sugar, thus helping to reduce the risk of developing diabetes and helping to keep you full longer.
- Limit consumption of refined carbohydrates (e.g., cookies, cake, donuts), which are high in unhealthy fats, added sugars and calories.

How to Cook Whole Grains

- * Cover grain with water. Add a little salt ($\frac{1}{3}$ or $\frac{1}{2}$ teaspoon). Bring water to a boil and remove foam. Then, lower the heat and allow to simmer until all the water is absorbed.
- * The cooking instructions will usually be on the package.
- * The following table depicts 3 different whole grains:

Whole Grains (Raw & Cooked)	
<p>Buckwheat (Raw)</p>  A close-up photograph of raw buckwheat grains, which are small, triangular, and light brown in color.	<p>Buckwheat (Cooked)</p>  A close-up photograph of cooked buckwheat grains, which are larger, more rounded, and have a darker, more uniform brown color.
<p>Quinoa (Raw)</p>  A close-up photograph of raw quinoa grains, which are small, round, and light yellowish-brown in color.	<p>Quinoa (Cooked)</p>  A close-up photograph of cooked quinoa grains, which are larger, more rounded, and have a darker, more uniform brown color.
<p>Barley (Raw)</p>  A close-up photograph of raw barley grains, which are small, oval-shaped, and light brown in color.	<p>Barley (Cooked)</p>  A close-up photograph of cooked barley grains, which are larger, more rounded, and have a darker, more uniform brown color.

Fruits & Vegetables



Recommended Amounts & Serving Sizes

Vegetables

- **Recommended Amount:** about 3-5 servings a day (varies depending on total daily calorie requirements)
- **Serving Size:** 1 serving = 1 cup raw or cooked vegetables *OR* 2 cups raw leafy greens

Fruits

- **Recommended Amount:** about 2-4 servings a day (varies depending on total daily calorie requirements)
- **Serving Size:** 1 serving = 1 cup of fruit, 1 medium fruit *OR* ½ cup of dried fruit

MyPlate Recommendation: Make half your plate fruits and vegetables.

Benefits

- Fruits and vegetables contain **antioxidants**, which help to prevent diseases by reducing the damage to the body caused by chemicals called oxidants.
- Rich in vitamins and minerals; nutritious and delicious!
- Low in calories, fat and sodium
- Excellent source of fiber! **(For more on fiber, look at pages 17-19.)**

Different Color Groups

- **Red:** red apples, cherries, cranberries, red grapes, pink grapefruit, pomegranates, raspberries, strawberries, watermelon, tomatoes, red pepper, beets, radish, red onion
- **Orange:** mangoes, apricots, cantaloupe, oranges, papaya, pumpkin, carrots, squash, sweet potato, orange peppers
- **Yellow:** bananas, yellow apples, lemons, yellow pears, pineapple, yellow peppers, corn
- **Green:** green apples, green grapes, honeydew melon, kiwi, limes, avocado, dark green vegetables (broccoli, bok choy, collard greens, kale, spinach, Swiss chard), green beans, peas
- **Blue/Purple:** concord grapes, blueberries, blackberries, black currant, plums, prunes, figs, eggplant, purple cabbage
- **White:** white nectarines, white peaches, cauliflower, mushrooms, garlic, ginger, Jicama, parsnip, potato, turnip
- **Variety is Key: Eat a variety of differently colored fruits and vegetables to get a variety of nutrients for optimal health!**

Fresh Fruits & Diabetes

- Good news! If you have diabetes, you do not have to fear eating fresh fruit! You can eat 2-4 fresh fruits a day, while maintaining healthy blood sugar levels. Just make sure that you are mindful of portions (e.g., eat one fruit at a time).
- Processed foods are the main source of fructose (in the form of high-fructose corn syrup) in a typical American diet. Consuming a lot of processed foods can worsen blood sugar control and lead to excess abdominal fat.
- Fresh fruits are typically low in calories, containing at most 100 calories per serving.
- In addition to fructose (the natural sugar in fruits), fresh fruits contain:
 - Fiber and water, which help keep you full, thus working to prevent overeating and aiding in weight loss
 - The fiber in fruits slows fructose absorption, and thus, helps to regulate blood sugar.
 - Vitamins and minerals
- Fresh fruits are important to eat every day. Fruit juices, on the other hand, are high in sugar and calories, while containing little fiber; therefore, limit consumption of fruit juices and choose whole fruits instead.

Tips to Eat More Fruits & Vegetables

- Keep them where you can see them (e.g., on the counter and on the front shelf of the refrigerator).
- Eat some at every meal, every day.
- Cut some up and store in containers in the refrigerator to eat as a snack later.
- Add vegetables to soups, egg omelets, pasta and other dishes.
- Build your meals around a vegetable instead of meat.
- **Buy fresh produce when it is in season since it will be:** cheaper, tastier and more flavorful and rich in vitamins. When fresh produce is not in season (especially in the winter), buy frozen produce. Frozen fruits and vegetables are picked when they are ripe, so they are rich in nutrients, whereas fresh vegetables that are not in season may be of poorer nutritional quality, because they may have been picked before they were fully ripe, traveled long distances to the supermarket and stay long on the shelves.
- Use frozen vegetables for quick and easy cooking.
- Bake a potato in the microwave.
- Eat fruit with cottage cheese or yogurt.
- Make a fruit salad.
- Have fruits for dessert.
- Make a fruit smoothie using fresh or frozen fruits and milk.
- **Preparation Tips for Vegetables:** In order to preserve texture, flavor and vitamins, limit cooking time and steam or stir-fry instead of boiling.

Dark Green Vegetables

What's So Special About Dark Green Vegetables?

- They are a rich source of many vitamins and minerals.
- They contain antioxidants, such as vitamin C, which protect our bodies from damage by chemicals called oxidants.
- They contain very little carbohydrate and a lot of fiber, so they have practically no effect on blood glucose, which is good for people who have diabetes.

Tips to Eat More Dark Green Vegetables

- * **Best ways to eat:** raw in salads or sandwiches, steamed, stir-fried, added to dishes
- Make salads with vegetables like romaine lettuce, spinach and arugula.
- Add romaine lettuce, spinach and arugula to a wrap.
- Add vegetables like collard greens, mustard greens or kale to soups.
- Stir-fry leafy green vegetables together with other foods, like chicken.
- Steam collard greens, kale or spinach.
- **Tip:** Add a teaspoon or two of extra-virgin olive oil to dark green vegetables in order for fat-soluble vitamins (e.g., A, K) to be absorbed.

Dark Green Veggies Organized by Taste

Taste: Mild

Broccoli



Romaine lettuce



Collard greens



Bok Choy



Spinach



Swiss Chard



Taste: Bitter

Kale



Dandelion Greens



Turnip Greens



Taste: Spicy

Arugula



Mustard Greens



Fiber

Good Sources of Fiber: fruits, vegetables, legumes (beans, peas and lentils), whole grains, nuts and seeds



Benefit of Fiber (in General): Fiber promotes satiety (feeling of fullness), and thus can help you maintain a healthy weight.

Types of Fiber: Soluble vs. Insoluble

Type of Fiber	Benefits
Soluble Fiber	<ul style="list-style-type: none"> • Lowers LDL-cholesterol. • Slows glucose absorption, thus helping to prevent sudden rises in blood sugar after meals. • Helps keep you full.
Insoluble Fiber	<ul style="list-style-type: none"> • Aids with bowel movements, thereby helping to keep your digestive system healthy.

Tip\$ to Help You Increase Fiber Consumption

- Eat whole grains and whole-grain products.
- Have oatmeal for breakfast.
- Eat fresh fruits and vegetables instead of drinking juice or soda.
- Eat fruits and vegetables with the skin, which is a good source of insoluble fiber.
- Add beans, peas and lentils to dishes.
- Eat fresh berries (e.g., raspberries, blueberries, blackberries) with cottage cheese or yogurt.
- Instead of chips for snack, have nuts and seeds, low-fat popcorn, whole-grain crackers or whole-grain bread with peanut butter and fresh fruit.
- **To avoid discomfort:** *slowly* increase the amount of fiber you eat; drink about 8 cups of water a day to prevent discomfort.

Food\$ Rich in Fiber

Vegetables



Fruits



Grains



Legumes and Nuts



- **Did You Know?** “High fiber” foods have **5 or more g of fiber per serving (20% or more of the Daily Value)**; “good source of fiber” have **2.5 to 4.9 g of fiber per serving.**

Fiber; Added to Food;

- Foods labeled “fortified with fiber” do not contain fiber naturally or contain very little fiber and have fiber added artificially (e.g., yogurt, cereals that are not whole grain).
- Added fiber has not been shown to be beneficial to health, so instead, choose foods that are naturally rich in fiber.
- Foods that are fortified with fiber are oftentimes not nutritious (e.g., sugary cereals).
- Overconsumption of fibers that are added to foods can result in gas, bloating and may have a laxative effect.
- It is best to consume foods that are naturally good sources of fiber, including fruits, vegetables, legumes, whole grains, nuts and seeds.

Artificial Sweetener; (Sugar Substitutes)

Agave nectar

- Made from the agave plant.
- Contains mostly fructose and glucose.
- Has same number of calories as sugar, but is sweeter, so you can use less of it.

Stevia

- It is on the GRAS list “generally recognized as safe.”

Aspartame (Equal or NutraSweet)

- Has same number of calories as sugar, but is much sweeter, so less is needed.
- When heated, aspartame breaks down into formaldehyde, which is harmful to the nervous system and may cause headaches, dizziness and seizures. Therefore, do not use aspartame when cooking or in warm liquids (e.g., coffee, tea).

Sucralose (Splenda)

- It is heat stable (does not break down when heated).

Saccharin (Sweet N' Low)

- Causes bladder tumors in rats.
- It is heat stable (does not break down when heated).

*****Bottom Line:** Agave and Stevia are the most natural sugar substitutes and generally considered safe to use. Other sugar substitutes contain a mix of artificial chemicals and their safety is questionable, so it is best to limit their use.

*****Note:** I use raw cane sugar, which does not have any added chemicals and suggest that others do the same instead of using artificial sweeteners that contain chemicals that could be detrimental to health.

3: Fats

Why Is Fat Important?

- Fat is the main form of stored energy in the body and is used in times of need.
- Fat surrounds and protects organs.
- Fat is part of cells, including neurons (cells in the nervous system, including the brain).
- Dietary fat provides essential fatty acids.
- Fat is necessary for the absorption of fat-soluble vitamins (A, D, E and K).

(For more on vitamins, read chapter 6: pages 56-60.)

Types of Fats

Type of Fat	Food Sources	What They Do & Recommendations
Saturated Fats (we need some in our diet, but too much hurts us)	<ul style="list-style-type: none"> • Animal foods/products: <ul style="list-style-type: none"> ◦ Processed meats: e.g., bacon, sausage, hot dogs, deli meats ◦ Fatty cuts of meat ◦ Dairy: whole milk products, including cheese ◦ Others: poultry skin, butter, ice cream, mayonnaise, coconut oil, palm kernel oil 	<ul style="list-style-type: none"> • Raise “bad” LDL-cholesterol • Limit consumption of processed meats. Choose lean protein items. • If your LDL-cholesterol is elevated, you can still have whole-fat milk and cottage cheese. Butter and cheese are okay in moderation. However, try to cut out processed foods and condiments as much as possible and eat less meat.
Trans Fats (bad)	<ul style="list-style-type: none"> • Fried and processed foods: potato chips, French fries, baked goods (e.g., cookies) • Hard margarine, shortening • Foods made with partially hydrogenated oil 	<ul style="list-style-type: none"> • Raise “bad” LDL-cholesterol and lower “good” HDL- cholesterol. • Limit foods that have “partially hydrogenated oil” as an ingredient. • Use butter instead of margarine.
Monounsaturated Fats (good)	<ul style="list-style-type: none"> • Avocado, olives, olive oil • Nuts, seeds 	<ul style="list-style-type: none"> • Lower LDL-cholesterol when they replace saturated fats
Polyunsaturated Fats	<ul style="list-style-type: none"> • <u>Omega-3 (good) fats:</u> • EPA & DHA: fatty fish, algae • ALA (alpha-linolenic acid): nuts and seeds (especially flaxseeds and walnuts) 	<ul style="list-style-type: none"> • Omega-3 fats are anti-inflammatory. • The recommendation is for adults to consume 2 servings of fatty fish per week (or about 3,500 mg of EPA/DHA = 500 mg per day). • For information on fish oil supplements, look at page 27.
	<ul style="list-style-type: none"> • <u>Omega-6 fats:</u> • Vegetable oils (e.g., safflower, sunflower, corn, soybean) 	<ul style="list-style-type: none"> • These fats can be okay when they replace saturated fats. • Do not use corn or soybean oil since they are processed and pro-inflammatory. • Use extra-virgin olive oil more.

Omega-3 Fatty Acids

- Omega-3 fats are anti-inflammatory.
- Inflammation contributes to the development of type 2 diabetes, heart disease and arthritis.
- Therefore, increase intake of omega-3 fats.

Tips to Eat Less Unhealthy Fats & More Healthy Fats

- Instead of having chips or cookies as a snack, have nuts and seeds.
- Use extra-virgin olive oil for cooking and all other purposes instead of margarine or corn oil.
- Remove all visible fat and skin off the meat/poultry before cooking.
- Choose healthy cooking methods (e.g., steaming) instead of frying.

Butter or Margarine?

- Choose butter (preferably from grass-fed cows), but eat it in moderation since it is high in saturated fat.
- Do not consume margarines, which contain trans fats.
- Soft or liquid spreads are made from mostly unsaturated oils, but also contain artificial ingredients, which are best to avoid.

Flaxseeds

- **Good source of:** fiber and ALA (a healthy fatty acid)
- **To Use:** Buy whole flaxseeds, grind in a coffee grinder, and use immediately or store in the refrigerator for up to 2 weeks. Add to salads and grain dishes.
- **Be Aware:** Due to its fiber content, add flaxseeds to your diet gradually and drink plenty of water to prevent constipation. Consume flaxseeds rather than flaxseed oil.

4: Protein

Why is Protein Important?

- Protein is used for the growth, maintenance and repair of body tissues.
- Proteins make up our cells and tissues, including muscles, hair and nails.
- Different types of proteins perform specific important functions in the body.
 - Hemoglobin is a protein that carries oxygen in the blood.
 - Enzymes and hormones (e.g., insulin)

Protein Food

Categories:

- Meat: beef, ham, lamb, pork, veal
- Poultry: chicken, turkey
- Seafood
- Eggs
- Dairy
- Legumes: beans, peas and lentils



General Recommendations:

- The Institute of Medicine recommends that adults get at least 0.8 grams of protein for every kilogram (2.2 pounds) of body weight per day. However, for the elderly (adults 65 years of age and older), recommendations are higher (1.0 to 1.2 grams for every kilogram of body weight per day).
- Eat a variety of protein-rich foods that are low in saturated fat and sodium.

Make Healthier Protein Choices

- Reduce consumption of red meat and processed meats (e.g., bacon, ham, sausages, hot dogs, luncheon/deli meats).
- Choose low-fat protein items, such as eggs, fish, skinless chicken and lean cuts of meat.
- Whenever possible, choose organic chicken and meat. “Grass Fed” beef is healthier and leaner, and is sold at farmers markets.
- Consume at least 2 servings of fatty fish per week.
- Eat meat and poultry less often, and eat plant protein foods (legumes, nuts and seeds) more often.
- **Keep proteins lean by doing the following:**
 - Remove skin from poultry.

- Trim all visible fat from meat/poultry.
- When cooking, allow fat to drip off.
- Skip or limit breading, which adds calories and causes protein to soak up fat.
- Cook without fatty sauces or gravies.
- Instead of frying, choose healthier cooking methods like baking/roasting, boiling, poaching, stewing or stir frying (which uses only a little bit of oil).
- Instead of using butter, margarine or mayonnaise, use olive oil and seasonings (e.g., herbs, spices, lemon juice, onion, garlic).

Recommended Amounts

- Approximately 6 servings per day
- 1 serving = 1 oz of cooked meat/poultry/fish; 1 egg; ¼ cup beans; 2 Tbs peanut butter (1 Tbsp = size of thumb); 1 oz of nuts or seeds (1 oz = 1 handful)
- 3 oz of meat, poultry or fish is like the palm of a hand or a deck of cards
- 4 oz raw meat = 3 oz cooked meat



Meat & Poultry (Chemicals to be Aware of)

Nitrites

- Added to processed meats to preserve color and flavor.
- Can be formed in our body after eating meat, even non-processed meat!

Heterocyclic Amines

- Produced when meat, poultry and fish are cooked at high temperatures for a long time.

Tips to Reduce Heterocyclic Amines

- Instead of grilling or broiling, use cooking methods like baking, roasting and stir-frying, as well as cooking methods that use water (e.g., boiling, steaming, braising, stewing, poaching).
- Marinate meat/poultry before cooking.
- Keep the meat/poultry moist while cooking (e.g., add water to bottom of pan).

Cooking Methods

	Cooking Method	Definition	Foods	Advantages/ Limitations
Moist-heat preparation	Boiling	Cooking foods in hot water.	Whole grains, tough vegetables	Advantages: quick, easy, no added fat Limitations: water-soluble vitamins are lost in the water.
	Steaming	Cooking food in steam over simmering water.	Vegetables, fish	Advantages: healthy, simple, no added fat, nutrients are preserved
	Stewing	Simmering foods [at low heat] in liquid (e.g., water) - more liquid than braising	Good for: meat pieces and veggies	Advantages: nutrients are preserved if liquid is consumed
	Braising	Stir-frying and then simmering food in small amount of liquid (e.g., water) in a covered pot.	Good for: tough cuts of meat	Advantages: nutrients are preserved if liquid is consumed
	Poaching	Simmering foods in liquid (e.g., water) at low heat.	Good for: chicken, fish, eggs, fruits	Advantage: foods retain their shape
	Dry-heat preparation	Broiling	Cooking food at a high temperature in an oven under a direct heat source	Good for: tender meat, poultry, fish
Grilling		Cooking food on a grill above an intense heat source.	Good for meat, poultry, seafood, vegetables	• Advantages: some fat drips into pan; tasty, smoky flavor *** Heterocyclic amines
Baking		Cooking food in an oven.	Good for: meat, poultry, seafood, vegetables, fruits, breads, desserts	Advantage: no added fat
Roasting		Similar to baking, but done at higher temperatures.	Good for: meat, poultry, seafood, veggies	Advantage: no added fat
Stir-frying		Stirring food in a pan with a small amount of oil over medium-high heat.	Good for: meat, poultry, fish, veggies	Advantages: little added fat; foods are cooked quickly, and thus, retain nutrients, texture, flavor and color.

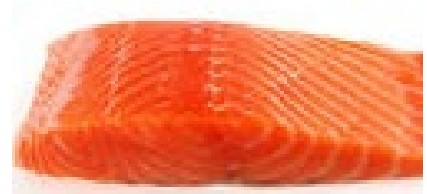
Fish

General Benefits of Fish

- Good source of protein that is low in calories and saturated fat, so it's a good substitute for meat.
- Rich in nutrients, such as omega-3 fats.

Fatty Fish

- Good source of the healthy omega-3 fatty acids EPA and DHA. (For more on EPA and DHA, look at pages 20-21.)
- **Fish high in healthy fats, but low in mercury:** salmon, sardines, herring, trout (Freshwater), mackerel (North Atlantic), anchovies
- Tuna (chunk light) is low in mercury and contains EPA and DHA, though significantly less than other fatty fish. Do *not* choose Albacore (canned white) tuna, which is higher in mercury.
- **Bottom Line:** Eat 2 servings of fatty fish that are low in mercury and other contaminants every week. Eat a variety of fish to minimize exposure to any toxin that



Risks: Chemicals/Contaminants in Fish

Mercury

- Toxic metal that can damage the nervous system, kidneys and the liver.
- Mercury may worsen heart disease, so people with heart disease need to be extra cautious to choose fish that is very low in mercury.
- Larger fish usually contain more mercury, so choose smaller fish.

PCBs (polychlorinated biphenyls)

- Chemicals that have been linked to cancer.

Fish & Shellfish Classified by Mercury Level

(Source: The New York City Department of Health and Mental Hygiene)

Very Low in Mercury: Eat up to 5 Servings a Week

- Anchovies
- Clams
- Crawfish/Crayfish
- Hake
- Herring
- Oysters
- Pollock
- Salmon
- Sardines
- Shrimp
- Tilapia
- Whiting

Low in Mercury: Eat up to 2 Servings a Week

- Butterfish
- Catfish
- Cod
- Crab
- Croaker (Atlantic)
- Flounder
- Haddock
- Mackerel (North Atlantic)
- Mussels
- Perch (Ocean or White)
- Scallops
- Shad (American)
- Sole
- Squid/Calamari
- Trout (Freshwater)
- Tuna (Canned Light)
- Whitefish

High in Mercury: Eat No More Than One Serving a Week

- Bass (Black, Saltwater, Striped)
- Bluefish
- Eel
- Halibut
- Lobster
- Monkfish
- Sablefish
- Scorpionfish
- Sheepshead
- Skate
- Snapper
- Tuna (Albacore/Canned White) *Limit to 4 oz
- Weakfish/Sea Trout

Too High in Mercury: Do Not Eat!

- Chilean Sea Bass
- Grouper
- Mackerel (King or Spanish)
- Marlin
- Orange Roughy
- Shark
- Swordfish
- Tilefish
- Tuna (Fresh, Steaks, Sushi)

For More Information, Visit the Following Website:

- Environmental Protection Agency: www.epa.gov/ost/fish
- Food and Drug Administration: www.cfsan.fda.gov OR call 1-888-723-3366
- New York State Fish Advisories:
www.health.state.ny.us/environmental/outdoors/fish/fish.htm

Farmed Fish

- Farmed fish is fed cheap, poor quality feed, and as a result, have less omega-3 fats.
- Farm-raised fish are kept in small tanks and treated with antibiotics.
- Farmed fish have up to ten times more contaminants than wild fish, so choose wild fish instead of farmed fish (especially salmon).

Add Canned Tuna/Salmon to Your Diet

- **Make a whole meal by combining the following:**
 - Canned tuna/salmon + celery + avocado + walnuts + fresh lemon juice + extra-virgin olive oil
 - Canned tuna/salmon + egg (hard-boiled) + red onion + extra-virgin olive oil
 - Cooked whole grain (e.g., quinoa, buckwheat, barley, bulgur) + canned tuna/salmon + bell pepper + onion + fresh basil/cilantro + garlic + fresh lemon juice + extra-virgin olive oil
 - Cooked whole grain + canned tuna/salmon + tomato + green onion + leafy greens (e.g., Romaine lettuce, spinach) + fresh lemon juice + extra-virgin olive oil

Fish Oil Supplements

May Be Beneficial For

- People who do not consume 2 servings of fatty fish per week on a regular basis.
- People who have heart disease and need to consume 4 servings of fatty fish per week
- To lower triglycerides, individuals need to consume 2-4 grams of EPA/DHA per day.

Risks to Discuss With Your Doctor

- **Consuming more than 3 grams of fish oil per day may:**
 - Increase risk of bleeding by preventing blood clotting
 - Impair the body's ability to fight infection
- **Cod liver oil** contains high levels of vitamins A and D, which are toxic in large doses.

Fish Oil & Medications

- Taking fish oil while on blood thinners (e.g., Coumadin) increases bleeding risk.
- Fish oil may enhance the effects of antihypertensive medications, which may result in dangerously low blood pressure.

Fish Oil Supplements & Side Effects

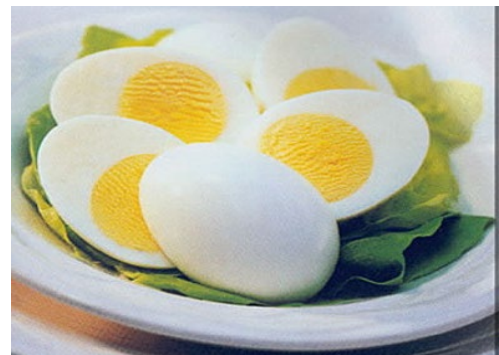
- Side effects may include: fishy aftertaste, bad breath, belching/burping, acid reflux, bloating, gas, abdominal pain, nausea, diarrhea, rash, nosebleed
- To reduce side effects:
 - Take fish oil supplements with meals.
 - Start with a low dose and increase it gradually.
- Most fish oil supplements are low in mercury.

Seasonings

- Enhance foods' natural flavors by seasoning with lemon juice, vinegar, garlic, onion and herbs and spices instead of with butter, margarine, salt, mayonnaise or salad dressing.
- **Herbs:** plant leaves used as seasonings
Examples: basil, bay leaf, cilantro, dill, parsley, ginger, nutmeg, oregano, rosemary, sage, turmeric, thyme
- **Spices:** seasonings derived from a plant's fruit, flowers, bark, seeds or roots
Examples: black pepper, caraway, cinnamon, curry, paprika
- Instead of salt, use no-sodium or low-sodium seasonings, like Mrs. Dash or dry mustard.

Eggs

- Eggs are low in calories. One egg has about 70 calories.
 - Egg whites are a good source of relatively cheap, high-quality protein.
 - Egg yolk contains: a small amount of fat; vitamins (A, B, D, and E); minerals (iron, calcium, phosphorus, potassium); lutein and zeaxanthin, which may help vision
 - Egg yolk contains about 185 mg of cholesterol. The cholesterol in eggs does ***not*** adversely affect your blood cholesterol, and is thus ***not*** dangerous for your health!
 - Having 2 eggs a day is not only okay, but important as a source of protein and healthy vitamins!
 - Eating eggs for breakfast can help you lose weight by helping you feel full longer.
 - Eggshell color differs based on the hen's breed and does not indicate nutrient value.
 - What the hen eats affects eggs' nutritional quality.
 - **Omega 3 enhanced eggs** are from hens fed flax seed or fish oils, but fish is a much better source of omega-3 fats.
 - **Organic eggs:** produced by hens fed organic grains (without: pesticides, fertilizers, growth hormones, antibiotics)
 - **Processed eggs** (e.g., liquid egg whites) may contain preservatives and color additives.
- *****Bottom line:** If possible price wise, choose organic, pasture-raised eggs.



Nutrition Facts

Serving Size: 1 large (50g or 1.8 oz)

Amount Per Serving

Calories 72		Calories from Fat 43
% Daily Value*		
Total Fat 5g		7%
Saturated Fat 2g		8%
Trans Fat 0g		
Cholesterol 186mg		62%
Sodium 71mg		3%
Total Carbohydrate 0g		0%
Dietary Fiber 0g		0%
Sugars 0g		
Protein 6g		
Vitamin A	5%	Vitamin C 0%
Calcium	3%	Iron 5%

Legumes (Beans, Peas & Lentils)

Examples:

- kidney beans
- chickpeas
- black-eyed peas
- pinto beans
- lima beans
- split peas
- black beans
- navy beans
- lentils

Benefits:

- Since legumes are low in fat and are cholesterol-free, they are a good substitute for meat, which contains saturated fat.
- They are a good source of fiber, protein, complex carbohydrates, B vitamins and minerals.











Tips to Eat More Legumes

- Make legumes the main ingredient in soups, stews and casseroles.
- Have beans as a side dish instead of rice or pasta.
- **Add legumes to:** brown rice, mashed potatoes, stir-fried veggies and salads.
- Make dips and spreads (e.g., beans with avocado).
- Snack on fresh or frozen soy beans instead of chips.
- To improve iron absorption, eat beans together with foods high in vitamin C (e.g., tomatoes, bell peppers, dark green vegetables, oranges).



Types of Legumes

* Commonly Used In: salads, soups, casseroles, stews

Type of Legume	Type of Legume
<div data-bbox="212 365 456 495" data-label="Text"> <p>Black beans</p> </div> <div data-bbox="509 331 802 575" data-label="Image">  </div>	<div data-bbox="870 375 1105 447" data-label="Text"> <p>Fava beans</p> </div> <div data-bbox="1151 331 1438 575" data-label="Image">  </div>
<div data-bbox="212 695 483 793" data-label="Text"> <p>Black-eyed peas</p> </div> <div data-bbox="503 667 802 928" data-label="Image">  </div>	<div data-bbox="878 695 1049 766" data-label="Text"> <p>Lentils</p> </div> <div data-bbox="1094 632 1438 928" data-label="Image">  </div>
<div data-bbox="212 995 529 1094" data-label="Text"> <p>Chickpeas (garbanzo beans)</p> </div> <div data-bbox="456 1108 782 1390" data-label="Image">  </div>	<div data-bbox="886 1016 1057 1115" data-label="Text"> <p>Lima beans</p> </div> <div data-bbox="1086 1066 1438 1365" data-label="Image">  </div>
<div data-bbox="212 1478 516 1577" data-label="Text"> <p>Edamame (green soybeans)</p> </div> <div data-bbox="537 1453 808 1688" data-label="Image">  </div>	<div data-bbox="878 1457 1065 1591" data-label="Text"> <p>Red kidney beans</p> </div> <div data-bbox="1122 1453 1422 1743" data-label="Image">  </div>

Beans

Dried:

- Least processed
- No salt added
- Must be soaked before cooking



Frozen:

- Thaw by adding boiling water



Canned:

- Fast and convenient
- Drain and rinse to reduce sodium content and prevent bloating. Choose beans with “no salt added.”



How to Cook Dry Beans

1. Before cooking, soak beans in water overnight *OR* soak in boiled water for 30 minutes.
Soaking the beans: (a) helps remove gas-causing oligosaccharides (indigestible complex sugars); (b) reduces cooking times; and (c) removes dirt, bacteria and chemicals.
2. Put the beans in a pot and add water to cover the beans.
3. Bring beans to a boil. Then, lower the heat and simmer until beans are tender (soft).
Cooking times will vary based on the type of beans, so check the package.
4. Add salt, tomatoes or vinegar only ***after*** beans are cooked.

Did You Know? Do ***not*** add salt, tomatoes or vinegar to beans during cooking, because doing so will harden their skins and prevent them from cooking properly!

Nuts

Nutritional Value

- Nuts are a good source of healthy fats, protein, fiber, antioxidants (e.g., vitamin E) and minerals.
- Naturally low in sodium
- The protein, fat and fiber in nuts helps you feel full.

Recommendations







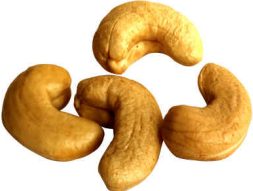



- Eat nuts in moderation as part of a healthy diet.
- Since nuts are high in calories, limit intake to 1 to 2 handfuls per day (1 oz = a handful).
- Choose nuts without added sugar or salt.



Which Nuts Are Best?

- **FDA approved health claim:** “eating 1.5 oz per day of some nuts, as part of a diet low in saturated fat and cholesterol, may reduce the risk of heart disease.” Nuts that can have this claim are: walnuts, almonds, hazelnuts, peanuts, pecans, pistachios and some pine nuts.
- **Walnuts** are high in omega-3 fatty acids. However, other nuts have health benefits as well (e.g., Brazil nuts are rich in selenium, an antioxidant mineral).
- **My recommendation:** consume raw walnuts and almonds (you can add raisins to make a trail mix); you can also incorporate other nuts at times for variety

Types of Nuts

<p>Walnuts</p> 	<p>Almonds</p> 	<p>Brazil Nuts</p> 
<p>Pecans</p> 	<p>Peanuts</p> 	<p>Hazelnuts</p> 
<p>Cashews</p> 	<p>Pine nuts</p> 	<p>Pistachios</p> 
<p>Macadamia Nuts</p> 		

Types of Seeds

- Chia seeds
- Sunflower seeds
- Pumpkin seeds
- Flax seeds
- Hemp seeds
- Sesame seeds

Note: Chia and flaxseeds are high in ALA. Chia and sesame seeds are high in calcium.

Nut_s Nutrition

Nut (1 oz)	Protein (g)	Total Fat (g)	Total Calories	Vitamin E (mg)	Potassium (mg)	Fiber (g)
Almonds (23)	6	14	164	7	208	4
Cashews (16-18)	5	13	157	<1	187	1
Hazelnuts (21)	4	17	178	4	193	3
Macadamia nuts (10-12)	2	22	204	<1	104	2
Peanuts (28)	7	14	160	2	196	2
Pecans (19 halves)	3	20	196	<1	116	3
Pine nuts (167)	4	19	191	3	169	1
Pistachios (49)	6	13	159	1	291	3
Walnuts (14 halves)	4	18	185	<1	125	2

–Source: United States Department of Agriculture National Nutrient Database for Standard Reference, Release 27

General Tip_s to Include Nut_s & Seed_s in Your Diet

- Divide nuts and seeds into small bags and put in refrigerator to have as a snack later.
- Sprinkle nuts and/or seeds onto: salads (instead of croutons), cottage cheese, oatmeal, grain dishes, cooked vegetables
- Eat nuts and seeds as a snack instead of chips or pretzels.
- Make dips and spreads out of nuts/seeds.
- Nuts and seeds are healthy, but remember that moderation is still important!

Specific Idea_s to Add Walnut_s to Your Diet

- **Make a whole meal by combining walnuts with the following:**
 - Canned tuna, avocado, celery and fresh lemon juice
 - Cooked quinoa/brown rice/barley/bulgur, mango, bell pepper, green onion
 - Whole-wheat pasta, cheese, tomato, leafy greens (e.g., spinach)
- **Make a spread:** blend raw walnuts with a clove of garlic, chickpeas (canned), freshly squeezed lemon juice and a little salt
- **Make a creamy dip:** blend edamame, walnuts, parsley or cilantro, 1 clove of garlic and plain Greek yogurt
- **Make a pesto sauce:** blend fresh basil, walnuts, extra-virgin olive oil, avocado and garlic. **Idea:** This kind of sauce goes well with a dish of whole grains, beans and eggs.

Dairy Products

Benefit

- **Good sources of calcium and Vitamin D**, which help keep bones strong and reduce risk of osteoporosis. **(For more on calcium and Vitamin D, read chapter 6: pages 56-60.)**
- Good sources of protein.
- Kefir and yogurt contain probiotics. **(For more on probiotics, look at page 37.)**

Food Categories & Examples

- **Milk** (including lactose-free milk and soymilk)
- **Cheese:** hard cheeses (cheddar, mozzarella, Swiss, Parmesan); soft cheeses (farmer's cheese, ricotta and cottage cheese); American cheese (processed)
- **Yogurt, kefir**
- **Desserts:** puddings, frozen yogurt, ice cream
- **Did You Know?** Cream cheese, cream and butter are *not* considered true dairy products, because they are high in saturated fat, but low in calcium.

Recommended Amounts

- 3 cups per day
- Serving Size: 1 cup = 1 c milk/yogurt/kefir; 1.5 oz cheese (1 oz = size of thumb)

Tips to Help You Make Healthy Choices

- Choose plain, organic, whole-fat dairy products.
- Choose whole-fat milk/yogurt/kefir/cheese/cottage cheese, because whole milk is more natural. Low-fat and skim milks contain artificial chemicals, including sweeteners. Also, you need fat to absorb the vitamin D and calcium in dairy products.
- Limit consumption of flavored milks, fruit yogurts, frozen yogurt and puddings, which contain a lot of added sugar.

Tips to Increase Consumption of Dairy Products

- Include dairy products as part of meals and snacks.
- Add whole-fat milk to oatmeal.
- Add whole-fat milk to coffee.
- Add whole-fat, plain milk or yogurt when making a smoothie.
- For dessert, make pudding from whole-fat milk.

Note: Milk products are good sources of both carbohydrates and protein, as well as fat, which is necessary in moderation.

Lactose Intolerance

What is It?

- When a person lacks (or does not have enough of) the enzyme lactase, which is needed to digest the sugar lactose that is in cow's milk
- **Symptoms:** bloating, gas, cramps, diarrhea
- **Note:**
 - There are people who think that they are lactose intolerant when in fact they are not. Lactose intolerance may not really be as common as some people believe (I thought that I could not tolerate milk well, but was fine when I started drinking it!)
 - If you genuinely are lactose intolerant, be aware that you may be able to tolerate small amounts of lactose and may not have to exclude all milk from your diet.
 - Look below for tips if you are lactose intolerant.

Why is It Important to Address?

- About 70% of calcium in our diets comes from dairy products.
- People who are lactose intolerant often do not obtain enough calcium from their diet and are therefore at greater risk for osteoporosis.
- If a person is not able to obtain the recommended amount of calcium each day from the diet, then taking a daily calcium and vitamin D supplement might be a good idea. Consult your doctor about which supplement is best for you.

If You Are Lactose Intolerant:

- Consume no more than one cup of milk at a time.
- Consume dairy products with other foods at meals.
- You may be able to tolerate yogurt and kefir, which contain probiotics (good bacteria) that ferment (digest) lactose (make sure the label says "live and active" cultures).
- Consume hard cheeses, which are lower in lactose.
- Take tablets with lactase before consuming products containing lactose.
- Other sources of calcium: fish canned with bones (e.g., sardines), legumes, tofu, green leafy vegetables (collard greens, kale, spinach, bok choy), almonds, sesame seeds, soy/almond/rice milk

Probiotics

What Are They?

- Live good bacteria
- The most common are Lactobacilli and Bifidobacteria
- Good sources are kefir and yogurt

General Benefits

- Help protect against bad bacteria, which cause damage in the body
- Help improve GI tract function
- Support and improve immune system function

Specific Benefits

- Help with constipation and diarrhea
- Improve lactose intolerance

Did You Know?

- As you age, there is a shift from good to bad bacteria in your intestines. Therefore, probiotics can be particularly beneficial to older adults.

Recommendations

- Consume kefir and/or yogurt every day for full benefits of probiotics.
- If necessary, there is the option of taking a probiotic in pill form, but consult with your doctor first to see if this is necessary. Always choose whole foods before choosing to take supplements.

Yogurt

Benefits

- Good source of calcium, which helps keep bones strong
- Contains protein; Greek yogurt is high in protein.
- Most yogurts contain probiotics, which are beneficial to health

Recommendations

- Eat plain, whole-fat yogurt with fresh/frozen berries or other fruit (e.g., banana, apple, peach).
- **Read the nutrition label to look at amounts of:**
 - **Sugar:** be aware that even plain yogurt can contain a lot of sugar.
 - **Fat:** choose whole-fat yogurt, which is more natural than low-fat alternatives
 - **Protein:** Greek yogurt is a good source of protein.
- To make sure that the yogurt you buy contains probiotics, make sure that the label says “live and active cultures.”

Soy Products

- **Milk:** soymilk, soy cheese, soy yogurt
- **Other:** tofu, tempeh, green soybeans (edamame), soy nuts



Nutritional Value

- Soy foods are low in saturated and trans fats.
- Soy is the only plant source of complete protein: soy contains all the nine essential amino acids that the human body needs.
- Soy foods are rich in isoflavones, which are antioxidants.
- **Note:** Avoid processed foods that contain soy. I would limit consumption of tempeh, soy cheese and yogurt, soymilk and even tofu because these are processed, and thus, contain chemicals and other artificial ingredients that may be detrimental to health.

Using Soy in Cooking

- Edamame (green soybeans) (fresh or frozen) can be mixed with other vegetables.
- Vegetables can be stir-fried with tofu.
- Firm tofu can be added to soups.

Vegetarian Diets

Types of Vegetarians

- **Partial vegetarians:** do not eat meats, but do consume poultry, seafood, eggs and dairy products
- **Pesco-vegetarians:** do not eat meat or poultry, but do consume fish, eggs and dairy products
- **Ovo-lacto vegetarians:** do not eat meat, poultry or seafood, but do consume eggs and dairy products
- **Ovo-vegetarians:** do not eat meat, poultry, seafood or dairy products, but do eat eggs
- **Lacto-vegetarians:** do not eat meat, poultry, seafood or eggs, but do consume dairy products
- **Vegans:** do not eat any animal products (meat, poultry, seafood, eggs, dairy); only eat plant-based foods (vegetables, fruits, grains, legumes, nuts, seeds)

Benefits

- Vegetarian diets are plant-based, meaning they contain a lot of vegetables, fruits, whole grains, legumes, nuts and seeds. Plant-based diets are associated with a lower risk of heart disease, diabetes and colorectal cancer.
- Vegetarian diets are typically high in fiber, unsaturated fats, vitamins, minerals and antioxidants, but low in saturated fat.
- The low amounts of saturated fat and the high fiber content in vegetarian diets may help to lower LDL-cholesterol.

Drawbacks

- Protein from animal sources (e.g., meat, poultry, milk, eggs) is easily digestible; vegetable protein is not, except for soy protein.

General Tips for Vegetarians

- **Protein sources:** eggs, milk, legumes, nuts, seeds, nut and seed butters, soy
- Build meals around vegetables (including legumes and soybeans) and whole grains.
- Consume mostly whole foods and limit consumption of processed foods that are typically high in unhealthy fats, sodium, added sugars and artificial ingredients.
- Read food labels to choose the healthiest products.
- Be sure you are getting enough iron, zinc, vitamin B12, vitamin D and calcium.

5: Recipes

Home-Baked Whole Wheat Oat Bread

(Based on the Quaker Oats Oatmeal Cookie Recipe)

Ingredients

- Extra-virgin olive oil
- Butter (2-3 Tablespoons)
- Sugar (2 Tablespoons)
- Eggs (3 large)
- Milk (whole, 1 ½ cups)
- Baking soda (1 teaspoon)
- Salt (½ teaspoon)
- Whole wheat flour (2 cups)
- Oats (1 cup)

Method

- Warm up olive oil in glass dish. Add butter and melt.
- Blend sugar into the butter with spoon.
- Add milk and eggs. Whip well with spoon.
- Add baking soda, salt, whole wheat flour and oats. Mix well with whisk until smooth.
- Pour olive oil onto baking dish. Pour mixture onto baking dish. Bake at 350°F for about 40 minutes or until ready.



Home-Baked Whole-Wheat Pancakes

Ingredients

- Extra-virgin olive oil
- Butter (2-3 Tablespoons)
- Sugar (2 Tablespoons)
- Eggs (2 large)
- Milk (whole, 1 cup)
- Baking soda (1 teaspoon)
- Salt (1 teaspoon)
- Whole-wheat flour (1 cup)
- Oats (3 tablespoons)

Method

- Warm up olive oil in glass dish. Add butter and melt.
- Blend sugar into the butter with tablespoon.
- Add milk and eggs. Whip well with spoon.
- Add baking soda, salt, whole wheat flour and oats. Mix well until smooth.
- Warm up olive oil in frying pan. Pour mixture onto frying pan. Flip when bottom is brown.

Home-Cooked Barley

Ingredients

- Water
- Barley
- Salt
- Extra-virgin olive oil



Method

- Measure out and wash 1 cup of barley.
- Measure out 3 cups of water. Put water and barley in pot.
- Bring water to a boil. Spill out water.
- Add 3 more cups of water to pot. Bring to a boil. Lower flame and cover pot with lid, leaving opening for steam to escape.
- Cook until water boils out, mixing and checking Periodically.
- Add extra-virgin olive oil. Mix. Let stand covered for about 2 minutes. Serve!

Home-Cooked Quinoa/Buckwheat/Brown Rice

Ingredients

- Water
- Quinoa/Buckwheat/Brown Rice
- Salt
- Extra-virgin olive oil



Method

- Measure out and wash 1 cup of whole grain.
- Measure out water (2 cups for quinoa, 3 cups for buckwheat or brown rice). Put water and grain in pot. Bring water to a boil. Remove foam.
- Lower flame and cover pot with lid, leaving opening for steam to escape.
- Cook until water boils out, mixing and checking periodically.
- Add extra-virgin olive oil. Mix. Let stand covered for about 2 minutes. Serve!



Garden Grain Salad

Ingredients

- Tomato
- Cucumber
- Bell pepper (red, orange or yellow)
- Leafy greens (e.g., mixed greens, spinach)
- Onion (red or green)
- Fresh herbs (e.g., parsley, cilantro)
- Quinoa or buckwheat (cooked in salted water)
- Choose 2 or 3 of the following: chickpeas, avocado, walnuts, cheese (Swiss or Feta)
- Extra-virgin olive oil
- Salt to taste



Garden Mixed-Vegetable Salad

Ingredients

- Tomato and/or radishes
- Cucumber
- Bell pepper (red, orange or yellow)
- Leafy greens (e.g., spinach)
- Onion (red or green)
- Cauliflower or red cabbage
- Fresh herbs (e.g., dill, parsley/cilantro)
- Avocado
- Extra-virgin olive oil
- Salt to taste



Black Bean & Mango Salad

Ingredients

- Black beans (1 can, drained and rinsed)
- Mango (1, diced)
- Leafy greens (e.g., spinach, Romaine lettuce)
- Bell pepper (1, diced)
- Green onions (2, fresh)
- Cilantro leaves (finely chopped)
- Fresh lemon juice (¼ cup)
- Extra-virgin olive oil (2 Tablespoons)
- Salt to taste



Chickpeas & Tomato Salad

Ingredients

- Chickpeas (1 can)
- Tomatoes (finely chopped)
- Fresh parsley or cilantro (finely chopped)
- Fresh lemon juice
- Extra-virgin olive oil
- **You can also add:**
 - Onion
 - Bell pepper
 - Avocado

Tuna Salad

Ingredients

- Chunk light tuna (1 can)
- Eggs (2 large)
- Onion (½ medium)
- Celery (1 stalk)
- Salt (to taste)
- Parsley (fresh)
- Dill (fresh)
- Extra-virgin olive oil

Method

- Boil 2 eggs: put 2 eggs in pot, cover with water, bring water to a boil, boil for 5 minutes, pour out the water, add cold water, let eggs stand 2 minutes, peel eggs.
- Mash eggs and tuna. Add diced onion and celery.
- Add salt to taste, fresh dill and parsley, and extra-virgin olive oil. Mix well.
- Serve!



Egg Salad

Ingredients

- Eggs (2 large)
- Onion (½ medium)
- Celery (1 stalk)
- Salt (to taste)
- Extra-virgin olive oil

Method

- Boil 2 eggs: put 2 eggs in pot, cover with water, bring water to a boil, boil for 5 minutes, pour out the water, add cold water, let eggs stand 2 minutes, peel eggs.
- Mash eggs. Add diced onion and celery.
- Add salt to taste, fresh dill and parsley, and extra-virgin olive oil. Mix well.
- Serve!

Stir-Fried Mixed Veggies (With Brussels Sprouts)

Ingredients

- Extra-virgin olive oil
- Brussels sprouts
- Portabella mushroom
- Red onion
- Carrot
- Celery
- Kale
- Italian seasoning
- Dill weed
- Salt (to taste)
- Basil (fresh)
- Dill (fresh)
- Parsley (fresh)
- Garlic (fresh)

Method

- Pour oil into frying pan. Heat for about a minute.
- Add cut-up Brussel sprouts and mushrooms. Add Italian seasoning, dill weed and salt. Mix well. Cook covered, with small opening for steam to escape. Mix periodically. Cook until veggies are softer, but still firm (about 5-7 minutes).
- Add cut-up onion, carrot and celery. Mix well. Cook for about 5 minutes, mixing periodically.
- Add cut-up kale. Season with salt, Italian seasoning and dill weed. Also, add more olive oil. Mix. Cook for about 3 minutes.
- Add finely-cut garlic, parsley, dill and basil. Cook for about 2 minutes.
- Leave covered for about 2 minutes. Serve!



Stir-Fried Mixed Veggies (With Broccoli)

Ingredients

- Extra-virgin olive oil
- Broccoli
- Kale
- Red onion
- Carrot
- Celery
- Salt to taste
- Italian seasoning
- Dill weed
- Dill weed
- Peas (1 cup, frozen)
- Basil (fresh)
- Dill (fresh)
- Parsley (fresh)
- Garlic (fresh, diced)

Method

- Pour oil into frying pan. Heat for about a minute.
- Add cut-up broccoli stems. Add salt, Italian seasoning and dill weed. Mix well and let cook covered, with small opening for steam to escape. Mix periodically. Cook for about 7 minutes.
- Add cut-up onion, carrot, celery and broccoli florets. Add more Italian seasoning, dill weed, salt and olive oil. Mix well. Cook for about 5 minutes.
- Add cut-up kale. Season with salt, Italian seasoning and dill weed. Also, add more olive oil. Mix. Cook for about 3 minutes.
- Add finely-cut garlic, parsley, dill and basil, plus frozen peas. Cook for about 2 minutes.
- Let stand covered for about 2 minutes before serving.



Roasted Vegetable Medley

Ingredients

- Extra-virgin olive oil
- Sweet potatoes
- Celery root
- Eggplant

Method

- Pre-heat oven to 375° F.
- Cut up veggies into bite-size pieces.
- Add olive oil and mix veggies in cooking dish.
- Put in oven and cook until ready, checking periodically.



Home-Baked Salmon Fillet

Ingredients

- Extra-virgin olive oil
- Water (½ cup)
- Salmon (wild, Alaskan)
- Italian seasoning
- Dill weed
- Salt (to taste)

Method

- Pre-heat oven to 350° F.
- Add extra-virgin olive oil and water (½ cup) to the bottom of baking dish.
- Put in salmon pieces. Sprinkle fish with salt (to taste), Italian seasoning and dill weed.
- Cook in oven for about 20 minutes, checking periodically to see when fish is ready (when it becomes opaque). If unsure, test with a fork to see if the fish flakes easily – that's when it's ready!
- **To add more flavor:** Mix fresh lemon juice, extra-virgin olive oil, fresh cut-up basil (or cilantro) and garlic. Pour over the fish.



Poached Salmon Fillet

Ingredients

- Extra-virgin olive oil
- Water (½ cup)
- Salmon (wild, Alaskan)
- Italian seasoning
- Dill weed
- Salt (to taste)

Method

- Warm up extra-virgin olive oil in frying pan (for about a minute).
- Add water (½ cup) to the pan. Put in salmon pieces.
- Sprinkle fish with salt (to taste), Italian seasoning and dill weed.
- Cook with cover on, allowing for steam to escape. Cook for about 20 minutes, checking periodically to see when fish is ready (when it becomes opaque). If unsure, test with a fork to see if the fish flakes easily – that's when it's ready!
- **To add more flavor:** Mix fresh lemon juice, extra-virgin olive oil, fresh cut-up basil (or cilantro) and garlic. Pour over the fish.



Home-Made Roasted Chicken

Ingredients

- Extra-virgin olive oil
- Water (½ cup)
- Chicken (fresh, whole)
- Italian seasoning
- Dill weed
- Rosemary (fresh)
- Salt (to taste)
- Dill (fresh)
- Parsley (fresh)
- Garlic (3 cloves, fresh, diced)

Method

- Preheat oven to 375° F.
- Pour oil into baking dish. Add water (½ cup) to dish. Put the whole chicken into baking dish.
- Pour olive oil over the chicken; spread oil over chicken with hands. Sprinkle chicken with salt, Italian seasoning, dill weed and Rosemary.
- Cook for about 1 hour, checking periodically. After half an hour (if needed), pour a bit more olive oil over chicken.
- When chicken is ready, season with diced garlic and fresh dill and parsley.
- Let stand for about 2 minutes before serving.



Home-Made Poached Chicken

Ingredients

- Extra-virgin olive oil
- Water (½ cup)
- Chicken (fresh, thigh pieces)
- Italian seasoning
- Dill weed
- Rosemary
- Salt (to taste)
- Dill (fresh)
- Parsley (fresh)
- Garlic (3 cloves, fresh, diced)

Method

- Heat olive oil in frying pan for about 1 minute.
- Add water (½ cup) to the pan. Add chicken pieces to the pan. Sprinkle chicken pieces with salt, Italian seasoning, dill weed and Rosemary.
- Cook covered, with small opening for steam to escape. Cook for about 40 minutes or until ready, checking periodically.
- When chicken is ready, season with diced garlic and fresh dill and parsley.
- Let stand covered for about 2 minutes before serving.



Homemade Split-Pea Vegetable Soup

Ingredients

- Water
- Dry split peas (1 cup)
- Extra-virgin olive oil
- Onion (½ medium/large, diced)
- Carrot (1, diced)
- Celery (1 stalk, diced)
- Potatoes (3 medium, bite-size pieces)
- Italian seasoning
- Dill weed
- Broccoli (fresh, bite-size pieces)
- Spinach (fresh, cut-up)
- Dill (fresh)
- Parsley (fresh)
- Basil (fresh)
- Salt (to taste)
- Garlic (fresh, 3 cloves, diced)



Method

- Bring water to a boil in small pot. Add dry split peas and soak for about 30 minutes.
- Add water and cut-up potatoes to soup pot. Fill pot with water, leaving room for more veggies to be added later. Bring to a boil. Cook potatoes for about 5 minutes on medium flame.
- Add cut-up broccoli stems and soaked split peas to soup pot and cook for about 5 minutes.
- Heat olive oil in frying pan for about 1 minute. Add cut-up onion, carrot and celery to pan and cook for about 5 minutes, mixing periodically.
- Add fried vegetables, cut-up broccoli florets, Italian seasoning, dill weed and salt to taste. Cook until veggies are chewable, but not too soft.
- Add spinach. Cook for about 2 minutes.
- Add diced garlic. Cook for 1 minute.
- Turn off flame. Add basil, dill and parsley. Add more salt if needed.
- **That's it; you're done!**
It's really that simple!

Homemade Mushroom Barley Soup

Ingredients

- Water
- Barley (1 cup)
- Potatoes (3 medium, bite-size pieces)
- Brussels sprouts (fresh, 1 pack)
- Portabella mushroom (1, fresh)
- Red onion (½ large, diced)
- Carrot (1 whole, diced)
- Celery (1 stalk, diced)
- Extra-virgin olive oil
- Italian seasoning
- Dill weed
- Salt (to taste)
- Spinach (fresh, cut-up)
- Basil (fresh)
- Parsley (fresh)
- Dill (fresh)
- Garlic (fresh, 3 cloves, diced)



Method

- Wash 1 cup of barley. Add barley and 3 cups of water to pot. Bring to a boil and spill water out. Add 3 more cups of water. Bring to a boil. Add ½ teaspoon of salt. Cook covered, with opening for steam to escape, on medium flame, mixing periodically. Cook until water boils out.
- Add cut-up potatoes to soup pot. Fill pot with water, leaving room for more veggies to be added later. Add salt. Bring to a boil. Cook on medium flame for about 10 minutes, covered (with small opening allowing for the steam to escape).
- Heat olive oil in frying pan for about 1 minute. Add cut-up Brussels sprouts. Sprinkle with Italian seasoning, dill weed and salt (to taste). Mix. Cook for about 5 minutes on medium flame covered, with small opening for the steam to escape.
- Add cut-up mushroom, onion, carrot and celery to frying pan. Add olive oil. Cook for 5 minutes.
- Add fried veggies, boiled barley, Italian seasoning, dill weed and salt (to taste) to soup pot. Cook until veggies are chewable.
- Add spinach. Cook for about 2 minutes.
- Add diced garlic. Cook for 1 minute.
- Turn off flame. Add fresh basil, dill and parsley. Add salt to taste (if needed). Let stand covered for a few minutes.
- **That's it; you're done!**
It's really that simple!

Homemade Bean Vegetable Soup

Ingredients

- Water
- Beans (dry, 1 cup)
- Extra-virgin olive oil
- Broccoli (fresh, bite-size pieces)
- Onion (½ medium/large, diced)
- Celery (1 stalk, diced)
- Potatoes (3 medium, bite-size pieces)
- Italian seasoning
- Dill weed
- Broccoli (fresh, bite-size pieces)
- Spinach (fresh, cut-up)
- Dill (fresh)
- Parsley (fresh)
- Basil (fresh)
- Salt (to taste)
- Garlic (fresh, 3 cloves, diced)



Method

- Bring water to a boil in small pot. Add dry beans and soak for about 30 minutes.
- Add water and cut-up potatoes to soup pot. Fill pot with water, leaving room for more veggies to be added later. Bring to a boil. Cook potatoes for about 5 minutes on medium flame.
- Add cut-up broccoli stems and soaked beans peas to soup pot and cook for about 5 minutes.
- Heat olive oil in frying pan for about 1 minute. Add cut-up onion, carrot and celery to pan and cook for about 5 minutes, mixing periodically.
- Add fried vegetables, cut-up broccoli florets, Italian seasoning, dill weed and salt to taste. Cook until veggies are chewable, but not too soft.
- Add spinach. Cook for about 2 minutes.
- Add diced garlic. Cook for 1 minute.
- Turn off flame. Add basil, dill and parsley. Add more salt if needed.
- **That's it; you're done!**
It's really that simple!

6: Vitamins & Minerals

Vitamins

Fat-Soluble Vitamins

- Vitamins A, D, E and K
- These vitamins are stored in your body.
- Fat-soluble vitamins are best absorbed when eaten with a little fat (e.g., salad with olive oil).

Water-Soluble Vitamins

- B vitamins and vitamin C
- Water-soluble vitamins are not stored and leave the body in urine.
- These vitamins are lost in the water during cooking, so steaming vegetables is better than boiling.

Did You Know?

- **Frozen** fruits and vegetables can be a good source of nutrients.
 - Frozen fruits and vegetables are picked when they're ripe, so they are rich in nutrients, whereas fresh produce that's not in season may be of poorer nutritional quality because it may have been picked before it was fully ripe.
 - In addition, nutrients are lost when fresh produce is transported over long distances and stored on a supermarket shelf or in your refrigerator for long periods of time.
- If cooked too long, all vegetables can lose some of their vitamins.
- Dark, leafy greens and brightly colored produce are great sources of many nutrients.
- Get as many of your vitamins as you can from foods, especially fresh or frozen fruits and vegetables. Talk to your doctor if you think you may need a supplement.
- Vitamins B and C are destroyed when vegetables are canned.

Vitamins

Vitamin	What It Does	Good Sources
A	<ul style="list-style-type: none"> • Helps keep bones, teeth, eyes, skin and immune system healthy • Crucial for eyesight • Essential for cell growth and development • Antioxidant: protects cells from damage 	<ul style="list-style-type: none"> • Protein foods: meat, liver, eggs • Dairy products • Vegetables: darkly colored orange vegetables (e.g., carrots, sweet potatoes, pumpkin) and dark green vegetables (e.g., collard greens, kale, spinach, Romaine lettuce, broccoli) • Orange fruits (e.g., cantaloupe, apricots, peaches, papayas, mangos) • Fortified cereals
C	<ul style="list-style-type: none"> • Helps with wound healing • Keeps bones, teeth, gums, blood vessels and immune system healthy • Helps the body absorb iron and calcium • Antioxidant: protects cells from damage 	<ul style="list-style-type: none"> • Fruits: citrus (e.g., orange), berries • Vegetables: bell peppers, tomatoes, dark green vegetables (e.g., broccoli, spinach)
D	<ul style="list-style-type: none"> • Helps keep bones and teeth healthy and strong because it helps the body absorb calcium • Helps keep immune system healthy • Helps maintain normal blood pressure 	<ul style="list-style-type: none"> • Protein foods: fatty fish, egg yolk, liver • Fortified foods: cereals, milk • Mushrooms • Sunlight: The human body makes vitamin D from sunlight. <p>***Older people are at a greater risk for vitamin D deficiency.</p>
E	<ul style="list-style-type: none"> • Antioxidant: protects cells from damage • Necessary for the immune system and nervous system to work properly • Keeps red blood cells healthy 	<ul style="list-style-type: none"> • Oils • Nuts and seeds • Vegetables: dark green vegetables, avocados • Whole grains
K	<ul style="list-style-type: none"> • Necessary for blood clotting • Reduces risk of bone fractures and osteoporosis 	<ul style="list-style-type: none"> • Vegetables: dark green vegetables (e.g., broccoli, Brussels sprouts, kale, spinach), cabbage, cauliflower <p>***If you are taking a blood thinner, it is important to eat the same small amount (½ a cup) of green vegetables every day. Talk to your doctor about this.</p>

B12	<ul style="list-style-type: none"> • Helps the body make red blood cells • Necessary for proper nerve cell function 	<ul style="list-style-type: none"> • Protein foods: meat, liver, poultry, fish, eggs • Dairy products • Fortified cereals <p>***People who are over the age of 50 are at risk for vitamin B12 deficiency because their stomachs produce less acid, which results in decreased absorption of this vitamin.</p> <p>***If you are over 50 years old, are deficient in vitamin B12 and cannot obtain enough of this vitamin from foods, talk to your doctor about taking a vitamin B12 supplement.</p>
B6	<ul style="list-style-type: none"> • Necessary for proper function of the nervous system • Helps the body make red blood cells 	<ul style="list-style-type: none"> • Protein foods: meat, liver, poultry, fish, eggs, legumes, nuts and seeds • Dark green vegetables • Grains: whole grains and fortified cereals
Thiamin	<ul style="list-style-type: none"> • Helps the body convert carbohydrates into energy • Necessary for the heart, muscles and nervous system to function properly 	<ul style="list-style-type: none"> • Protein foods: meat, liver, fish, legumes, soy • Grains: whole grains, fortified cereals • Dark green leafy vegetables
Niacin	<ul style="list-style-type: none"> • Helps the body release energy from foods • Helps maintain healthy skin • Important for nerve function 	<ul style="list-style-type: none"> • Protein foods: meat, poultry, fish • Fortified cereals
Riboflavin	<ul style="list-style-type: none"> • Helps the body convert carbohydrates into energy • Essential for making red blood cells • Important for vision 	<ul style="list-style-type: none"> • Protein foods: meat, liver, poultry, seafood, eggs, legumes, nuts • Dairy products • Dark green vegetables • Fortified cereals
Folate	<ul style="list-style-type: none"> • Helps the body make red blood cells • Necessary to make DNA 	<ul style="list-style-type: none"> • Protein foods: liver, legumes, sunflower seeds • Dark green vegetables • Orange juice • Grains: whole grains, fortified cereals

Supplements

- **Benefit:** Can help you meet vitamin and mineral requirements and avoid deficiencies.
- **Risk of toxicity,** especially for Vitamins A and D
- Ask your doctor to look at the results of your blood work to see if you have any vitamin and/or mineral deficiencies. If you have deficiencies and cannot obtain the nutrients from foods, then discuss taking a supplement with your doctor.

Minerals

Mineral	What It Does	Good Sources
Calcium	<ul style="list-style-type: none"> • Helps keep bones and teeth healthy • Protects against osteoporosis • Needed for normal blood clotting • Needed for normal muscle and nerve function 	<ul style="list-style-type: none"> • Dairy products • Dark leafy greens (e.g., collard greens, kale, spinach, Romaine lettuce, broccoli) • Protein foods: fish with bones (canned salmon, sardines), legumes, almonds, sesame seeds • Fortified foods: orange juice, soy products (e.g., tofu)
Phosphorous	<ul style="list-style-type: none"> • Helps maintain healthy bones and teeth • Helps the body release energy from foods 	<ul style="list-style-type: none"> • Dairy products • Protein foods: meat, poultry, fish, eggs, legumes • Whole grains
Iron	<ul style="list-style-type: none"> • Necessary to make hemoglobin in the blood and myoglobin in the muscle, both of which carry oxygen to cells • Involved in energy metabolism • Helps keep your immune system healthy • Helps regulate cell growth and differentiation 	<ul style="list-style-type: none"> • Protein foods: organ meats, red meat, poultry, fish, eggs, legumes, nuts, seeds • Dark leafy greens (e.g., collard greens, kale, spinach, Romaine lettuce, broccoli) • Grains: whole grains and enriched grains
Copper	<ul style="list-style-type: none"> • Antioxidant • Needed for iron to function in the body • Helps keep bones, connective tissues, lungs and blood vessels healthy • Helps with wound healing • Protects your nerves 	<ul style="list-style-type: none"> • Protein foods: seafood, liver, legumes, nuts • Whole grains and cereals • Dark green leafy vegetables
Zinc	<ul style="list-style-type: none"> • Helps to keep your immune system strong • Helps with wound healing 	<ul style="list-style-type: none"> • Protein foods: organ meats, meat, poultry, eggs, seafood, legumes, soybeans, nuts • Grains: whole grains, fortified grains • Dairy products
Selenium	<ul style="list-style-type: none"> • Antioxidant • Helps with immune function 	<ul style="list-style-type: none"> • Protein sources: meat, poultry, seafood, eggs, Brazil nuts • Whole grains
Magnesium	<ul style="list-style-type: none"> • Helps keep your muscles, nervous system, immune system, heart, bones and teeth healthy • Regulates blood clotting • Needed for energy metabolism 	<ul style="list-style-type: none"> • Whole grains • Protein foods: meat, poultry, fish, legumes, nuts and seeds • Vegetables: dark green vegetables • Fruits • Dairy products

Manganese	<ul style="list-style-type: none"> • Antioxidant • Involved in energy metabolism • Keeps bones strong and healthy 	<ul style="list-style-type: none"> • Whole grains • Fruits and vegetables • Protein foods: legumes, soy products, nuts and seeds
Potassium	<ul style="list-style-type: none"> • Helps your body keep a balance of water and electrolytes • Helps your muscles, nervous system and heart work properly • Helps lower blood pressure 	<ul style="list-style-type: none"> • Dairy products • Fruits: oranges, apricots, bananas, cantaloupe, nectarines, prunes • Vegetables: dark green vegetables, avocado, potatoes with skin, sweet potatoes, pumpkin, legumes, tomatoes • Whole grains
Sodium	<ul style="list-style-type: none"> • Helps your body keep a balance of water and electrolytes • Helps your muscles and nervous system work properly 	<ul style="list-style-type: none"> • Salt • Breads and cereals

Nutrients and Foods

Food Categories	Nutrients
Grains	<ul style="list-style-type: none"> • Whole grains contain: fiber; vitamins (B and E), minerals (iron, zinc, copper, phosphorous, magnesium, manganese) • Fortified cereals contain: vitamins (A, D, and B vitamins) and minerals (iron, zinc)
Fruits and Vegetables	<ul style="list-style-type: none"> • Dark green vegetables contain: vitamins (A, C, E, K, B vitamins) and minerals (iron, calcium, copper, magnesium, potassium), fiber • Vitamin A: orange colored fruits and vegetables, dark green vegetables • Vitamin C: citrus fruits, berries, tomato, pepper, dark green vegetables • Vitamin E: dark green vegetables, avocado • Calcium: dark green vegetables, fortified orange juice
Dairy Products	<ul style="list-style-type: none"> • Vitamins: A, D and B vitamins • Minerals: calcium, phosphorous, zinc, magnesium, potassium, sodium • Protein
Protein Foods	<ul style="list-style-type: none"> • Iron, zinc, magnesium, and B vitamins: meat, poultry, fish, seafood, beans, nuts and seeds • Vitamin D: fatty fish, egg yolk, liver • Calcium: legumes, fish with bones (canned salmon, sardines), nuts and seeds, tofu • Vitamin E: nuts and seeds

7: Nutrition for Older Adults

Eating Better & Simpler

Tip: to Make Eating Alone More Enjoyable

- **Make eating special:** decorate table (nice table cloth, flowers); use nice dishes; sit by a window; put on music
- **Eat food when it's hot.**
- **Eat with people around you:** eat lunch in the park; share meals with neighbors, family or friends; eat at a local senior center or church/synagogue
- If you are over the age of 60 and are homebound, you can have food delivered to your home by contacting community programs, like **Meals on Wheels**.

Tip: to Make Food Taste Better

- Try different seasonings to add flavor to foods.
- Try a new fruit and/or vegetable every week.
- Combine foods in new ways.
- Try new recipes.

Stay Hydrated to Prevent Dehydration

- Older adults tend to feel less thirsty and are at risk of becoming dehydrated.
- Symptoms of dehydration: headache, fatigue, dark urine, dry skin
- Do not wait until you feel thirsty; drink a little bit regularly throughout the day.
- Drink a glass of water in the morning and during each meal.
- Always carry a water bottle.
- Drink water before, during and after physical activity.
- You can drink water, herbal tea and/or whole-fat milk/kefir.
- Limit caffeine and alcohol, which can make you lose water.
- You need about 1 ml of water for every calorie you consume, so if you consume 2,000 calories a day, you need 2,000 ml (2 liters) or 8 cups of water.
- Soups, fruits and vegetables have a high water content.
- Electrolytes (minerals including sodium, chloride, potassium, magnesium and calcium) are lost in sweat. Replenish electrolytes by consuming foods, like dairy products (e.g., cottage cheese, milk), fruits (e.g., banana), vegetables (e.g., leafy greens, sweet potato), nuts and seeds.

Way: to Alleviate Constipation

- **Stay hydrated**
- **Stay active:**
 - Walk around your neighborhood.

- Join clubs/groups (e.g., a local senior center or church) to socialize and engage in physical activities with others.
- **Consume more fiber.** Fiber promotes bowel movements.

For Chewing Problems, Make Food, Softer

- Eat cooked rather than raw vegetables.
- To eat fresh fruits and vegetables:
 - Cut fruits/vegetables into small pieces.
 - Grate fruits/vegetables.
 - Bake an apple in the oven.
- Eat apple sauce and canned fruits (to reduce sugar, choose fruits canned in water, not in juice).
- Eat ground or shredded meat *OR* replace meat with soft protein items like fish, eggs and cooked legumes.

Tip, to Make Shopping Easier

- Shop with a friend, family members or neighbors.
- Call stores to see if they will deliver to your home for free.
- Find a volunteer to help you.
- Make a list of what you need to buy and put it on your refrigerator; take a copy of this list with you to the store.

Tip, to Make Cooking Easier

- Cook ahead and freeze leftovers that you can heat and eat later.
- Always have frozen or canned fruits, vegetables and beans on hand to add to meals.

Save Money

When Shopping

- Look for sales.
- Use coupons and discount cards.
- Compare prices at different stores.
- Buy food products with the lowest **unit price**: the cost of one serving of a food item; posted below the food item in supermarkets
- Buy food with cash, not credit cards, so that you are aware and in control of how much you are spending.
- Stick to your budget.
- Eat before going food shopping, so that you will not be tempted to buy foods that you do not need.
- Instead of brand names, buy generic or store brands. (At least try them out!)
- Buy whole, nutrient-dense, non-processed foods (whole-grains, fruits, vegetables, whole-fat dairy products, eggs, fish, chicken) to get more nutrients for your money.
- Avoid processed foods, snack foods and sweetened beverages, because they are low in nutrients, and are thus a waste of money.
- Buy cheaper foods, like beans, peas and rice.
- Clean out your refrigerator once a week.
- Plan meals ahead of time. Make a shopping list and buy only foods on the list. You can also plan meals with foods that are on sale. Do not buy more food than you need.
- Do not buy more perishable foods (meat/poultry/fish/eggs and dairy products) than you will use by the “use-by” date.
- Buy in bulk only foods that you use regularly so that they do not spoil or foods that can be stored for long periods of time like flour, sugar, grains, pasta and cereals.
- Shop with a friend and share some foods.
- **To save on protein:**
 - Buy cheaper protein-containing foods, such as (legumes, eggs and whole-grains.
 - Include larger amounts of vegetables, legumes and whole-grains in meals; eat small amounts of meat, poultry and fish.
- **To save on produce (fruits and vegetables):**
 - Buy whole produce; pre-cut, pre-washed and ready-to-eat foods cost more.
 - Buy small amounts of fresh fruits and vegetables a few times a week to keep them fresh and nutrient-rich.
 - Buy local produce that is in season, which is when it is more flavorful and cheaper.
 - Fresh or frozen – buy whatever is less expensive.
 - Buy frozen produce when fresh ones are out of season.
 - Buy produce at different stages of ripeness to have some today and some later.
 - Potatoes and onions sold in bags tend to be cheaper.
- **To save on grains:** Buy oats instead of cereal. If buying cereal, buy it in bulk.



When Preparing/Cooking Food

- Cook from scratch instead of buying ready-made meals.
- Cook in bulk and freeze leftovers that you can heat and eat later.
- Always have frozen or canned fruits and vegetables (including beans) to add to meals.
- Use whatever foods you have creatively to make meals.
- Make your own fruit salad.
- Make your own smoothies by blending fruit, water and/or milk in a blender.
- Stew older vegetables or put them into soup instead of throwing them out.
- **Make your own desserts:**
 - Freeze fresh fruits.
 - Add fruits to yogurt.
 - Make whole-grain oatmeal cookies.



Organize Your Kitchen



Tips to Organize Kitchen Cabinets

Steps

- 1) Take everything out of cabinets and wipe each shelf starting from the top.
- 2) Throw out expired items. Give away items that are not expired, but will not be used.
- 3) Store frequently-used items in easy-to-reach places. Items that are rarely used can be stored further away (e.g., high shelves, back of cabinets, closet).

Maintain Organized Kitchen Cabinets

- Sort through the kitchen cabinets once a week.
- Clean a little bit at a time so that you do not feel overwhelmed.
- Make a list of supplies that you need to purchase.

Storage Tips to Create More Space in Kitchen Cabinets

- Store cutting boards, soap, gloves, drying rack and towels on counter near the sink.
- Keep cooking/serving utensils in a jar on the counter near the stove.
- Store dishes, cups/glasses and utensils in drawers near the sink.
- You can store pots and pans in lower cabinets near the stove.
- Put drawer dividers inside cabinets to organize small items (e.g., utensils).
- Group similar products together and store in one location (e.g., grains, canned foods, oil and vinegar, spices, tea and sugar, snacks, condiments).
- Stack items vertically. Place stackable racks into cabinets and stack items, like cans, boxes, jars, plates, bowls and cups. Stack smaller plates on top of larger plates.

- Store grains, cereal, flour and sugar in plastic containers with tightly-fitting lids.
- Keep herbs and spices in a spice rack in a drawer.
- Store cleaning supplies (e.g., dishwashing soap, sponges) in bins under the sink.
- Have a separate area for the garbage can and recycling bin(s).

Organize Your Refrigerator

Benefits

- **Makes it easier to find foods**
- **Saves you money:** helps keep food fresh longer and prevents spoilage

First Steps

- 1) Remove all items from the refrigerator and clean refrigerator shelves (starting from the top).
- 2) Put all refrigerated items in the same place in the kitchen.
- 3) Sort everything into groups/categories (e.g., produce, meats, dairy products, condiments).
- 4) Throw away any food items that are spoiled, expired, have been cross-contaminated or will not be consumed before they spoil.
- 5) Group similar food items together and organize by compartment (e.g., vegetables in the bottom crisper drawers).

Refrigerator Storage Tips

- **Prevent Cross Contamination:**
 - Store cooked and ready-to-eat foods on the top shelves.
 - Keep raw meat/chicken/seafood in plastic bag on lowest shelf of the fridge to prevent juices from dripping on and contaminating other foods.
- **How to Organize Your Refrigerator Shelves:**
 - Place larger/taller items in the back of shelves so that you can see all the foods in your refrigerator.
 - Put the healthiest foods (e.g., fruits and vegetables) at eye level, so that you will see them first when you open the refrigerator and they will be easily accessible.
 - Put older items in the front and the newest/freshest food items in the back so that you use the older ones first.
 - Store dairy items on the top shelf (where it is colder) instead of storing them in the refrigerator door (the warmest place in the refrigerator).
 - Store eggs in their original cartons so that they stay fresh longer.
- **Place cooked foods in clear containers** so that you can see what is in your fridge.

Keeping it Organized!

- Clean a little bit at a time as needed (e.g., when there's a spill).
- **Check expiration dates at least once a week**, especially for perishable items (e.g., dairy products, meat, poultry) that spoil faster. Throw out expired or spoiled foods.

8: Food Safety & Storage

Food Safety Basics

Foodborne Illness

- **Pathogens** (e.g., bacteria, viruses, parasites) that cause foodborne illness are most likely found in:
 - Uncooked, fresh fruits and vegetables
 - Animal products: unpasteurized dairy products or juices, soft cheeses (e.g., Brie), raw or undercooked eggs/meat/poultry/seafood
 - Raw, uncooked sprouts
- Do not taste food to see if it's still good. **You can't tell by sight, smell, or taste if food is unsafe!** Pathogens do not affect the food's taste, smell or appearance.
- It usually takes 1 to 3 days for you to get sick after eating a food.
- **Symptoms:** nausea, vomiting, diarrhea, fever
- Older adults are at greater risk for foodborne illness.
- Keep cold foods cold and hot foods hot. Bacteria grow quickly in the **“danger zone” (40-140° F)**. If food was left out at a temperature between 40 and 140°F for more than 2 hours, throw it out even if it looks and smells good.
- **Remember: When in doubt, throw it out!** If you are not sure if the food is spoiled, throw it out. If the food smells or looks different, it is usually spoiled or on its way to being spoiled.

Food Safety When Shopping

- Do not buy foods after the **“Sell By”** date.
- The product is not safe to consume after the **“Use By”** date.
- **“Best Before”** or **“Best By”** dates are recommended for best flavor or quality, and are *not* a purchase or safety date. (**Exception:** Eggs should not be eaten after the **“Best Before”** date to prevent salmonella contamination).
- Do not buy cracked eggs.
- Make sure cans do not have dents, cracks or bulging lids.
- Put raw meat/poultry/seafood into plastic bags before placing them in the shopping cart to prevent cross-contamination.
- Pick up perishable, frozen and refrigerated foods last, and go directly home from the grocery store so you can refrigerate the food quickly.

Food Safety – 4 Steps

Clean

- WASH hands with warm, soapy water for at least 20 seconds before and after handling food and after using the bathroom and handling pets.
- WASH cutting boards, dishes and utensils with hot, soapy water (or in the

- dishwasher – except for wooden cutting boards) after working with each food item.
- **KEEP** countertops and the refrigerator clean: Use paper towels if possible. If you use cloth towels, wash them in hot water in the washing machine or in hot soapy water.
- **WASH** all fruits and vegetables under running water even if you do not eat the skin. Do **not** use soap/chemicals to avoid consuming the residue. Before cooking/eating vegetables: remove outer leaves and wash under running water; scrub vegetables with tough skins under running water with hands or clean brush; dry after washing.
- **CLEAN** lids of canned goods before opening the can.

Separate: Don't Cross-Contaminate

- **SEPARATE** raw meat/poultry/seafood/eggs from other foods while shopping (in shopping cart and grocery bags), cooking or storing foods in the refrigerator.
- **USE** one cutting board for produce and another one for raw meat/poultry/seafood.
- **KEEP** raw meat/poultry/seafood away from other items.
- **STORE** raw meat/poultry/seafood in containers/plates on the bottom shelf of the refrigerator to prevent juices from dripping onto other foods.
- **DO NOT** place cooked food on a plate that previously held raw meat/poultry/seafood/eggs until you have washed it with hot soapy water.

Cook

- To kill foodborne illness-causing bacteria, make sure that food is cooked to a safe internal temperature. You can use a food thermometer to measure the internal temperature of cooked foods: check temperature in several places to make sure food is thoroughly cooked; put the thermometer in the thickest part of the meat/chicken.
- Cook eggs until both the yolk and whites are firm; do not eat raw eggs or eggs with runny yolks.
- **BRING** sauces/soups/gravies to a boil when reheating.

USDA Recommended Safe Minimum Internal Temperatures

Foods	Temperature
Poultry, ground poultry or stuffing	165°F
Ground meat, eggs and egg dishes	160°F
Meat roasts/steaks and seafood	145°F

*Cook fish to 145°F or until flesh is opaque (not see-through/does not pass light) and separates easily with a fork.

*Reheat leftovers to 165°F.

Is It Done Yet?

You can't tell by looking. Use a food thermometer to be sure.

USDA Recommended Safe Minimum Internal Temperatures						
						
Steaks & Roasts 145 °F	Fish 145 °F	Pork 160 °F	Ground Beef 160 °F	Egg Dishes 160 °F	Chicken Breasts 165 °F	Whole Poultry 165 °F

Chill

- COOL the refrigerator to 40°F or below (freezer to 0°F or below). Use a thermometer in the fridge/freezer to check the temperature regularly.
- PUT leftovers, cooked food and perishable foods (meat/poultry/seafood/eggs) in the fridge/freezer within 2 hours of cooking or purchasing.
- STORE foods in fridge in shallow containers for quick cooling.
- To cool foods quickly before storage, you can place the container in ice-water.
- THAW frozen food by either placing it in the refrigerator or under cold running water. Cook foods immediately after thawing.
- Marinate foods in the refrigerator.
- DO NOT overstuff the fridge since cold air must circulate to keep food safe.

Did You Know?

Do not pour marinade from raw meat onto cooked food;

- This will spread pathogens/germs.
- You can use the marinade only if you bring it to a boil just before using.

Be Safe When Eating Out

- **Make sure the restaurant/store is clean;** if the kitchen is dirty, the food is not safe.
- **Make sure food is thoroughly cooked.**
 - Ask if the food contains uncooked ingredients (e.g., meat/poultry/seafood/ eggs).
 - Make sure meat/poultry/seafood/eggs are well done and not raw or partially cooked.
- **Make sure food is hot.** If the meal you ordered is not hot enough, send it back!

Food Storage & Safety Basics

Perishable vs. Non-Perishable Foods

- **Perishable foods** (dairy products, eggs, raw meat/poultry/seafood) should be consumed soon after purchasing, especially once opened.
- **Non-Perishable foods** can be stored for a long time and do not have to be refrigerated.
- **Categories and Examples of Non-Perishable Foods**
 - **Canned foods:** fish, vegetables, fruits, soups, peanut butter, jelly, mustard, pickles
 - **Dry foods:** bread, rice, flour, oatmeal, cereal, pasta, crackers, beans
 - **Dehydrated foods:** ready-to-eat foods can be rehydrated with boiling water

General Food Storage Tips

- Store dry foods (e.g., cereal, pasta, rice, flour, dry beans/peas/lentils) in airtight hard plastic or glass containers to protect from moisture, insects and rodents. Store in a cool, dark, dry place (e.g., kitchen cabinet).
- Keep whole fruit on the table, counter or in the fridge. Keep cut-up produce in the fridge.
- Store bread in a cool, dry place for a few days or in the fridge to prevent mold growth.
- Cook chicken/fish, grains, pasta and vegetables ahead of time; then store leftovers in the fridge (in airtight containers) or in the freezer (in plastic freezer bags).
- Use labels to date foods when putting them in the fridge/freezer.
- Do not store perishable foods in the fridge door, which is the warmest place in the refrigerator. You can store condiments in the door.

Egg Storage Safety Tips

- Do not buy or eat eggs that are not refrigerated, cracked or past their sell-by date.
- Do not eat eggs after the “**Best Before**” date because of the threat of salmonella.
- Store eggs in their original carton in the refrigerator.
- Cook eggs thoroughly until the yolks are hard or at least not runny.

Grain Storage Safety Tips

- **Bread:**
 - Can be stored for a few days at room temperature.
 - Has a longer shelf-life when stored in the refrigerator.
 - Lasts 2-3 months when stored in the freezer.
- **Grains and cereals:** store in tightly-closed containers at room temperatures to keep out moisture and insects.
- **Flour can be stored in:**
 - Sealed plastic/glass containers in a cool, dry, dark place or in the fridge
 - Sealed plastic containers or freezer bags in the freezer for long-term storage
 - ***Store whole-wheat flour in the fridge or freezer to prevent rancidity of the fat.
 - **Tip from a HAFOP member:** Put bay leaves in flour to help keep bugs out.

Oil

- Exposure to heat/oxygen/ light will cause oil to become oxidized and eventually rancid; oil can become rancid even before its taste and smell change.
- **To prevent oil from oxidation:**
 - Oils other than extra-virgin olive oil can be stored in the fridge. Extra-virgin olive oil should be stored at room temperature in a dark cabinet away from heat.
- Return refrigerated oil to room temperature before using.

Herbs and Spices

- Store dried herbs/spices in airtight containers in a cool, dark, dry place (e.g., cupboard) away from light, heat (e.g., stove, microwave, dishwasher) and moisture.
- Whole dried herbs/spices can be stored for a long time in the fridge. Label containers of herbs/spices with the date when you bought them. A change in color or odor means the spices/herbs have lost their flavor and need to be thrown out.
- Store fresh herbs wrapped in paper towels in an open plastic bag in the fridge.

Safety & Storage Tips For Produce

Shopping Tips

- Choose produce with a fresh scent; an odd smell may mean that the produce is old.
- Avoid produce with mold, bruises or cuts.
- Green leafy vegetables and carrots should be crisp and firm; wilted or discolored ones are not fresh. To keep produce fresh, buy only the amount that you will use in a week.
- Buy loose produce instead of packaged when possible to have control over selection.
- Look at the color to determine ripeness.
- When buying fruits, buy ripe ones to use right away and some under-ripe ones to use in a few days.
- Pick fruits and vegetables that are of medium size since this is more natural. Produce of unusually large size can have growth hormones in it.
- When buying fresh cut produce, choose items that are refrigerated or surrounded by ice.

Washing Tips

- Do not wash produce until you are about to eat or prepare it to prevent spoilage.
- Before eating, cutting, or cooking: wash all fresh and pre-packaged produce under running cool water; do ***not*** use soap or any chemicals, so that you do not consume them!
- Scrub produce with tough skins under running water with a clean produce brush.
- Lettuce and cabbage: remove and discard outer leaves and wash the other leaves well.
- Before eating small fruits (e.g., berries): rinse and drain in a colander.

Storage Tips

• **Dry Storage of Vegetables:**

- Do not store potatoes, onions, bananas and watermelon in the fridge. In the fridge: potatoes lose their flavor or become mushy, bananas turn brown; watermelon loses flavor.
- Store potatoes and onions in a dark, cool, and dry place (e.g., in the closet or cabinet).
- Store bananas and watermelon on the countertop and use within a few days.

• **Storing Produce in the Refrigerator:**

- Do not wash produce before storing in the fridge to prevent spoilage.
 - Store fresh produce in the crisper drawers, which maintain the right humidity and temperature to keep the produce fresh longer and help delay spoilage.
 - Store whole produce in plastic bags with holes in the fridge so that it lasts longer.
 - Store fruits and vegetables separately, because fruits give off ethylene gas, which is a chemical that can cause vegetables to spoil.
 - Vegetables with a high water content (e.g., lettuce, tomatoes, spinach) have shorter storage times than those with a lower water content (e.g., turnips).
 - Refrigerate cut or peeled fresh produce within 2 hours; store in sealed glass containers or tightly wrapped in plastic wrap on upper refrigerator shelves for 1 to 2 days.
 - Throw away cut/peeled produce left at room temperature for more than 2 hours.
 - Discard cooked vegetables after they have been in the refrigerator for 4 days.
- If you do not eat fresh vegetables soon after you purchase them, buy frozen produce.

• **Ripening of Fruit:**

- When fruits are ripening, they breathe and give off ethylene gas, which promotes ripening. Putting fruit into the refrigerator will slow ripening, because the lower temperature will slow breathing; therefore, allow fruit to ripen on the counter at room temperature before putting it into the fridge. To further speed up ripening, put fruit into a brown paper bag.

- **To reduce browning of cut fruit:** (1) add lemon juice; (2) put in refrigerator

9: Organic & Locally Grown Foods

Organic Foods

Definition and Labels

- **In the U.S., organic foods are produced without:**
 - Pesticides: chemicals used to protect crops from damage by pests (e.g., insects)
 - Fertilizers
 - Hormones
 - Antibiotics
 - Preservatives: prevent food from spoiling
 - Genetic engineering: altering the DNA (genetic material) of foods
 - Irradiation: radiation of food to protect it from insects/ microbes *OR* to slow ripening
- In order to be labeled as organic in the U.S., animal products have to come from animals given organic feed, not given hormones or antibiotics, and had access to the outdoors.
- **Did you know?** “Natural” does *not* mean “organic.” Natural means that the meat was “minimally processed” (e.g., raw beef), but the animal could have been given antibiotics and hormones.
- **A food can only be labeled as organic if it is USDA certified:**
 - **100% Organic:** “completely organic or made with 100% organic ingredients”
 - **Organic:** “contain at least 95% organic ingredients”
 - **Made with organic ingredients:** “contain at least 70% organic ingredients”

***Foods containing less than 70% organic ingredients cannot be labeled “organic.”
- Foods at farmer’s markets may be organic even without a label, so ask how food was grown/raised!

Benefits of Organic Foods

- Contain no pesticides
- Organic food is often more fresh: often comes from local small farms
- Organic farming helps preserve the environment.
- Animals labeled organic were raised without hormones/antibiotics and have more space to move; therefore, these animals are less likely to get sick and do not need antibiotics.

Limitations of Organic Foods

- Typically more expensive.
- Tend to spoil faster since they contain no preservatives.
- Appearance (e.g., bumps, unusual shape/color, smaller sizes) may be unappealing.
- Fertilized with manure that has harmful microorganisms.
- Possible pesticide contamination during: growth (from other farms), shipping or in-store
- **Organic food products are not necessarily healthy. Read food labels** for calories, fat, sugar and sodium content.

The “Dirty Dozen” and the “Clean 15”



SHOPPER'S GUIDE TO PESTICIDES

DIRTY DOZEN		CLEAN 15	
<i>Buy These Organic</i>		<i>Lowest in Pesticides</i>	
WORST	1 Celery	BEST	1 Onions
	2 Peaches		2 Avocado
	3 Strawberries		3 Sweet Corn
	4 Apples		4 Pineapple
	5 Blueberries		5 Mangos
	6 Nectarines		6 Sweet Peas
	7 Bell Peppers		7 Asparagus
	8 Spinach		8 Kiwi
	9 Kale		9 Cabbage
	10 Cherries		10 Eggplant
	11 Potatoes		11 Cantaloupe
	12 Grapes (Imported)		12 Watermelon
	13 Grapefruit		
	14 Sweet Potato		
	15 Honeydew Melon		

 ENVIRONMENTAL WORKING GROUP
www.foodnews.org

EWG is an environmental health research organization (www.ewg.org).

Recommendations

- All the foods you eat do ***not*** have to be organic.
- You do not have to buy organic avocados, bananas, pineapples, kiwis, mangoes, watermelons, grapefruits, sweet potatoes and onions, because you do not eat the outer skin which has the pesticides.
- The produce items listed as one of the “Clean 15” also do not have to be organic.
- Foods that are on the “Dirty Dozen” list are best to buy organic, especially those at the top of the list.
- Buy organic chicken and milk and grass-fed meat to avoid hormones and antibiotics.

Benefits of Locally Grown Produce

- Fresh; harvested when ripe; flavorful
- Good for environment (transporting foods long distances releases carbon dioxide).
- Better nutritional value (foods that travel long distances lose a lot of nutrients).
- The money you spend stays in local communities, helping local farmers.

Wrap-Up

I hope you enjoyed this book and find it useful and practical. It would make me happy to know that you use a copy of this book as a reference and guide to help you eat better. I hope that the explanations have helped to clear up any misconceptions that you may have had about nutrition, that you learned a lot of new information, and that you find the tips and ideas throughout the book helpful. If your copy ends up with lots of notes and turned-down corners, that's even better. Most of all, my hope is that you will be able to apply the information in this book in your lives, that it has relevance for you, and that it helps you make better choices when it comes to food so that you can optimize your health.

Sincerely,

Viktoriya Shchupak

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The following is a list of websites and resources that I used to gather information and illustrations for this book:

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