



Session 18: More Volume, Fewer Calories

We have discussed many important nutrition topics to help you build new skills and follow a healthy eating pattern.

You learned from using Nutrition Facts labels, calorie and fat counters, menus, menu boards, and displays that all foods and drinks provide a certain number of calories per serving. Now you can learn some new ways to think about where your calories are coming from.

When you make food choices, think about:

The difference in calories for the same amount (volume) of food.

For example:

- 1 cup of raw spinach = 7 calories
- 1 cup of premium ice cream = 500 calories



It's the same amount of food, but a big difference in calories.

The amount (volume) of food you get for the calories you spend.

For example:

- 1 slice of apple pie = 360 calories
- 6 apples = 360 calories



The same calories, but a big difference in the amount (volume) of food.

Adding volume to your meals and snacks

You can learn ways to feel fuller on fewer calories by adding more volume to your meals.

This approach is called “Volumetrics” (Rolls, B.J. (2012). The Ultimate Volumetrics Diet. William Morrow, New York, New York).

The main idea in “Volumetrics” is to add volume to your meals. You do this by eating foods that are:

- Lower in fat
- Higher in fiber (such as beans, split peas, lentils, fruits, vegetables)
- Higher in water content (such as broth-based soups, fruits, vegetables)

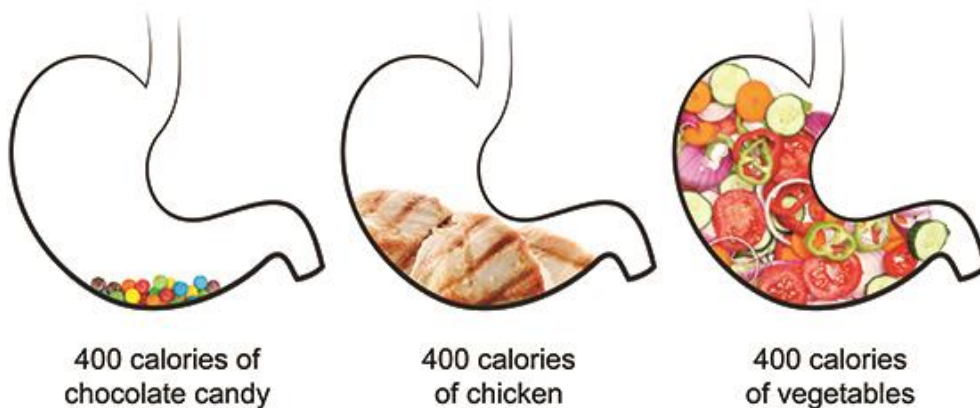
Note: Just drinking more water has not been shown to have the same effect.

Eating lower fat foods that are higher in fiber and water content will:

- Encourage a plant-based diet
- Provide many helpful nutrients
- Follow the recommendations of MyPlate and the 2015 Dietary Guidelines

This “Volumetrics” way of eating is helpful in weight management because it allows you to:

- Eat a greater amount or volume of food
- Consume fewer calories overall
- Enjoy a satisfying portion of food
- Feel fuller on fewer calories





How to Increase Volume in Your Meals

1. Eat vegetables

- Start your meals with a salad, raw vegetables, vegetable juice, or a clear broth-based vegetable soup.
- Experiment with new vegetables. Try some “new” kinds of greens in your salad. Try grilled or oven roasted vegetables.
- For a snack, choose raw vegetables with hummus or a low-fat dressing.
- Have fresh, frozen or canned vegetables on hand to add to soups, casseroles, chili, and pasta or rice dishes. (Add spinach, diced carrots, and extra onions to chili. Add broccoli to baked ziti. Add plenty of vegetables to jars of tomato sauce).
- To reduce sodium, use fresh, frozen, or canned vegetables without added salt.

2. Eat fruit

- Start your meal with fruit.
- Add fruit to your favorite yogurt, cereal, cooked rice, and tossed salad.
- Keep frozen fruit in your freezer; blend with yogurt for a great smoothie.
- Choose whole fruits, fruits canned in juice, and frozen fruits without added sugar.
- Replace part of the oil in baked goods with unsweetened applesauce.
- Fruit is a sweet way to end your meal.

3. Eat broth-based soups (about 100 calories per cup)

- Make your own soup. Add plenty of vegetables.
- Remove fat from the top of chilled leftover soup before reheating and eating.
- To reduce sodium, use reduced sodium broth. Flavor with herbs and spices rather than salt.
- Add extra vegetables or beans to prepared soups.

Note: “Volumetrics” research studies report that starting a meal with a serving of fruit, vegetable, or 1 cup of broth-based soup helps people eat less at the meal.

4. Eat beans, split peas, and lentils

- Add beans (black, kidney, chickpea, soybean) or lentils to soups, stews, chili, salads, pasta, rice, casseroles, and pasta sauces.
- Enjoy split pea soup, lentil soup, and chili with kidney beans.
- Use hummus as a dip or sandwich spread.
- To reduce sodium, use dried beans that have been soaked and cooked or canned beans that have been rinsed and drained.

5. Eat whole grains rather than ones that are highly refined

MyPlate recommends that at least half of the grains eaten each day should be whole grains, such as:

- High fiber ready-to-eat breakfast cereal.
- Cooked oatmeal or whole grain cereal.
- 100% whole wheat bread, buns, bagels, pita, English muffins, tortillas, and crackers.
- Brown rice, barley, bulgur, whole wheat couscous, farro, quinoa.
- Popcorn that is low-fat or air popped.

Note: It is important to *substitute* whole grain products for refined grain products, rather than *adding* whole grain products, in order to stay within your calorie goals.

6. Eat small amounts of nuts

Nuts are a good source of fiber but also high in calories and fat.

Use a small amount:

- Added to cooked cereal.
- On tossed salads in place of cheese or croutons.
- Added to yogurt.
- Sprinkled on cooked vegetables.

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Research studies have shown that people tend to eat about the same amount or volume of food each day. It is the amount of food in your stomach that determines how full you feel.

If you “volumize” your meals, you can eat more food. This will leave you feeling fuller and more satisfied.

If you try to rely on just eating less, you may be left feeling hungry and deprived.

By increasing the volume of food, you will consume fewer calories, enjoy a satisfying portion of food, and keep hunger in check.



Satiety

Satiety means how full you are feeling. The more satisfied you feel, the easier it will be to stay close to your calorie goals and manage your weight.

Adding volume is just one way to feel more satisfied after a meal. Here are some other ways:

Eat foods high in protein at each meal.

- Protein may help you feel fuller longer.
- Choose lean protein foods from MyPlate's Protein and Dairy Groups. Examples include lean meats, chicken, seafood, eggs, low-fat dairy products, and beans, or small servings of nuts or peanut butter.

Eat high fiber foods instead of simple carbs.

- Simple carbs (sugar, sweets, highly refined grains) are digested quickly so you may feel hungry again very soon after eating.
- High fiber foods digest more slowly so you feel fuller longer.
- Foods with 3 grams of fiber/serving are a **good source** of fiber; those with 5 grams or more are an **excellent source**.

Stay within your fat gram goal (but don't go too low).

- Fats delay stomach emptying so you feel fuller longer.
- Eating too little fat during the day decreases satiety so increases feelings of hunger.

Divide calories throughout the day.

- Eating at regular intervals throughout the day increases feelings of satiety. It is usually best to eat every 3-4 waking hours.
- Experiment with timing of your meals and snacks to learn what helps you stay the most energized and satisfied.

Drink water.

- Stay well-hydrated. Dehydration increases hunger.
- Drink water and other calorie-free beverages.
- Limit sugar-sweetened beverages that contain few nutrients. Liquid calories are less satisfying than those from food.

Eat slowly and mindfully. Make meals last about 20 minutes.

- Enjoy every bite so you feel both physically and mentally satisfied.



**Practice:
Help Sam Feel Less Hungry**

Sam reports feeling hungry during the day.

What changes could he make to his meal and snacks to help him feel fuller longer?

Sam's Menu	Ways to feel less hungry
Breakfast	
Plain bagel with jelly	
Orange Juice	
Black Coffee	
Lunch	
Tossed Salad with	
Fat-free dressing	
2 sugar cookies	
Sweetened Iced Tea	
Snack	
Candy bar	
Dinner	
Spaghetti with tomato sauce	
Garlic bread	
Wine	
Snack	
Pretzels	



To Do:

Check the boxes when you complete each item:

The Basics:

- Keep track of your weight.
- Record what you eat and drink using your preferred method. Come as close as you can to your calorie and fat gram goals.
- Record your physical activity using your preferred method. Come as close as you can to your activity goals.
 - Be physically active for at least 150 minutes per week.
 - Aim for an average of at least 50,000 steps per week.
 - Include resistance training at least 2 times per week.
- Sit less. Be aware of long periods of sitting and break them up. Keep moving throughout the day.

What's New:

- Practice adding volume to your meals (see pages 3-5).
- Experiment with other ways to feel more satisfied after a meal (see page 6).

Did you feel fuller and more satisfied at the end of the meal?

Did you notice any difference in your calorie intake?

Session 18: Resources

Roasted Vegetables

Light and Fresh Vegetable Soup



Roasted Vegetables

Classic Roasted Vegetables

(adapted from Weight Watchers® New Complete Cookbook)

2 medium red bell peppers, seeded and cut into 8 wedges
2 medium zucchini, trimmed and cut into ¼ inch slices
1 medium Vidalia or other sweet onion, cut into 8 wedges
1 pound asparagus, trimmed
3 cloves garlic, minced
4 teaspoons olive oil
Salt and pepper to taste
(optional: ½ teaspoon dried basil)

Directions:

- Preheat oven to 450° F.
- Spray 2 baking sheets or oblong pans with cooking spray.
- In a large bowl, place all vegetables, garlic, oil, salt and pepper (and basil, optional). Toss well to evenly coat with seasonings.
- Divide the vegetables between the 2 baking sheets or oblong pans.
- Bake, tossing occasionally, until tender and lightly browned, 25-30 minutes.
- Serve immediately.

Note: *Leftover vegetables plus hummus make a great sandwich!*

Note: *This recipe works well with just broccoli and/or cauliflower and red onion.*

Servings = 4 servings of 1 cup each

One serving (1 cup) = 107 calories; 5 fat grams

Source: Weight Watchers® New Complete Cookbook (Wiley Publishing, Inc., 2008)



Vegetable Soup

Light and Fresh Vegetable Soup

2 teaspoons olive oil
4 cloves garlic, minced
5 cups low-fat or fat-free chicken broth
2 sprigs thyme
½ cup frozen green peas, thawed
1 cup thinly sliced red bell pepper
1 cup cut fresh asparagus--(1 ½ -inch long pieces)
1¾ cups sliced Swiss chard or spinach
1½ cups cooked penne pasta

Directions:

- Heat olive oil in large saucepan over medium heat. Add garlic and sauté 1 minute.
- Add the broth and thyme, and bring to a boil. Cover, reduce heat, and simmer 10 minutes.
- Add Swiss chard, bell pepper, and peas; cover and simmer 5 minutes.
- Add the asparagus, cover and simmer 2-4 minutes or until the asparagus is just tender.
- Stir in the pasta, and cook 1 minute.

Servings = 4 servings of 2 cups each

One serving (2 cups) = 150 calories, 3 grams fat

Source: 'Volumetrics: Feel Full on Fewer Calories' by Barbara Rolls, PhD. (HarperCollins Publishers, 2000)