

Session 2.

MAINTAIN A HEALTHY WEIGHT: THE ENERGY BALANCE EQUATION

What's the Session All About?

Session 2 introduces the concept of energy balance, and explores two issues that have a big impact on the equation—portion size and time spent in physical activity every day.

Why is This Topic Important?

Whenever you eat or drink something, ENERGY (another word for calories) is coming IN. At the same time, you burn calories when your body carries out basic functions, like breathing, digesting, and growing, and in daily activities, like walking, housework, or playing basketball. So, ENERGY is always going OUT also.

For adults, energy balance means that the ENERGY IN calories equal the ENERGY OUT calories. Maintaining energy balance is essential to maintaining a healthy weight over time. Energy balance is a little different in children because they are still growing. For them, energy balance happens when the amount of energy IN and energy OUT supports natural growth without extra weight gain.



Portion Distortion Quiz

You've probably noticed that food portions in restaurants and other places have grown in size and provide enough food for at least two people. Larger portion sizes can lead to bigger waistlines and weight gain.

Take the Portion Distortion Quiz below to see if you know how today's portions compare to the portions available 20 years ago, and about the amount of physical activity required to burn off the extra calories provided by today's portions. The answers are provided at the end of the quiz.

1. A **bagel** 20 years ago was 3 inches in diameter and had 140 calories. How many calories do you think are in today's bagel?
 - a. 150 calories
 - b. 250 calories
 - c. 350 calories
2. A **cheeseburger** 20 years ago had 333 calories. How many calories do you think are in today's cheeseburger?
 - a. 590 calories
 - b. 620 calories
 - c. 700 calories
3. A 6.5-ounce portion of **soda** had 85 calories 20 years ago. How many calories do you think are in today's portion?
 - a. 200 calories
 - b. 250 calories
 - c. 300 calories
4. 2.4 ounces of **French fries** of 20 years ago had 210 calories. How many calories do you think are in today's portion?
 - a. 590 calories
 - b. 610 calories
 - c. 650 calories
5. A portion of **spaghetti and meatballs** 20 years ago had 500 calories. How many calories do you think are in today's portion of spaghetti and meatballs?
 - a. 600 calories
 - b. 800 calories
 - c. 1,025 calories

6. A cup of **coffee** with milk and sugar 20 years ago was 8 ounces and had 45 calories. How many calories do you think are in today's mocha coffee?
- a. 100 calories
 - b. 350 calories
 - c. 450 calories
7. A **muffin** 20 years ago was 1.5 ounces and had 210 calories. How many calories do you think are in a muffin today?
- a. 320 calories
 - b. 400 calories
 - c. 500 calories
8. Two slices of **pepperoni pizza** 20 years ago had 500 calories. How many calories do you think are in today's large pizza slices?
- a. 850 calories
 - b. 1,000 calories
 - c. 1,200 calories
9. A **chicken Caesar salad** had 390 calories 20 years ago. How many calories do you think are in today's chicken Caesar salad?
- a. 520 calories
 - b. 650 calories
 - c. 790 calories
10. A box of **popcorn** had 270 calories 20 years ago. How many calories do you think are in today's tub of popcorn?
- a. 520 calories
 - b. 630 calories
 - c. 820 calories

Thank you for taking the Portion Distortion Quiz. We hope it was fun and insightful. Check out more on portion distortion at <http://hp2010.nhlbin.net/portion/>. We also hope that next time you eat out, you will think twice about the food portions offered to you.

Answers

1. c. 350 calories for a 6 inch bagel. If you rake leaves for 50 minutes you'll burn the extra 210 calories.*
2. a. 590 calories. You'll need to lift weights for 1 hour and 30 minutes, to burn the extra approximately 257 calories.*
3. b. 250 calories for a 20-ounce soda. If you work in the garden for 35 minutes you will burn the extra 165 calories.**
4. b. 610 calories for a 6.9-ounce portion of French fries. If you walk leisurely for 1 hour and 10 minutes, you will burn the extra 400 calories.**
5. c. 1,025 calories for a portion consisting of 2 cups of pasta with sauce and 3 large meatballs. If you houseclean for 2 hours and 35 minutes, you will burn approximately 525 calories.*
6. b. 350 calories for a 16-ounce cup of coffee. If you walk approximately 1 hour and 20 minutes, you will burn the extra 305 calories*
7. c. 500 calories for a 5-ounce muffin. If you vacuum for approximately 1 hour and 30 minutes you will burn the extra 310 calories*
8. a. 850 calories for 2 large slices of pizza. If you play golf (while walking and carrying your clubs) for 1 hour, you will burn the extra 350 calories**
9. c. 790 calories for a 3 cup portion. If you walk the dog for 1 hour and 20 minutes, you will burn the extra 400 calories.**
10. b. 630 calories for a tub of popcorn. If you do water aerobics for 1 hour and 15 minutes, you will burn the extra 360 calories.**

* Based on a 130-pound person

** Based on a 160-pound person

Snacks—Calories or Less

A healthy eating plan:

- emphasizes fruits, vegetables, whole grains, and fat-free or low-fat milk and milk products;
- includes lean meats, poultry, fish, beans, eggs, and nuts; and
- is low in saturated fats, *trans* fats, cholesterol, salt (sodium), and added sugars.

Try these tasty and easy snacks to satisfy your hunger between meals. They fit right into a healthy eating plan and each has 100 or fewer calories. The key thing is to **pay attention to portion sizes**. Larger portions mean more calories.

Amount	Fruits	Calories
1 large	orange	100
1/2 large	grapefruit	53
1 medium	apple	72
1 small	banana	90
1	frozen fruit bar	67
1/4 cup	raisins	84
1/2 cup	canned fruit cocktail, in own juice	62
1/2 cup	orange juice	54
1/2 cup	red seedless grapes	52
1 cup	whole strawberries	46
	Vegetables	
1 cup	low-sodium vegetable juice	53
1 cup	cherry or grape tomatoes	27
1 cup	raw cauliflower	25
2 cups	assorted vegetables (1 cup broccoli florets/1 cup sliced red pepper with 2 tbsp. fat-free ranch dressing)	89
2 1/4 cups	salad (2 cups green/red leafy lettuce, 1/4 cup cucumber slices, 2 wedges tomato, 2 tbsp. fat-free Italian dressing)	39
5	baby carrots	18
5 rings	green pepper	10
10 small	celery sticks	6

Bread, Cereals, Grains, Rice and Pasta		
1/2 cup	oat circles breakfast cereal	54
1/2	whole-wheat bagel (3 1/2 inches in diameter)	90
1/2	cinnamon raisin English muffin with 1 tsp. of jam	68
3 cups	air-popped popcorn	90
4	whole-wheat crackers, unsalted	71
2	graham cracker squares	60
2	brown rice and multigrain rice cakes	70
2	gingersnaps	60
1	fig bar	56
Milk, Cheese, Yogurt		
1/2 cup	fat-free vanilla yogurt	96
1/2 cup	fat-free frozen yogurt	99
1/2 cup	1% low-fat cottage cheese	81
1 cup	fat-free milk	91
4 ounces	fat-free chocolate pudding	100
1 ounce	part-skim mozzarella string cheese	72
1 ounce	low-fat cheddar cheese	49
Meat, Chicken, Fish, Beans, Eggs		
3 ounces	water-packed tuna	99
2 ounces	turkey breast	84
8 large	fresh or frozen steamed shrimp	44
1 large	hardboiled egg	78
3 tbsp.	hummus	69
Other Ideas		
1	6-inch corn tortilla with 1 ounce low-fat cheddar cheese, melted	100
5	celery sticks with 1 tbsp. peanut butter	100
2	tbsp. light cream cheese on 1/2 English muffin	100
8	baked tortilla chips, with 3 tbsp. salsa	86
10	almonds, unsalted	80
1/2	ounce sunflower seeds, unsalted	78

Source: USDA National Nutrient Database for Standard Reference, Release 19

We Can! Try Tips To Eat Well and Move More

Choose to take small steps today! Try these tips to eat well and move more and see how easy taking small steps toward a healthier life can be.

Eating Well (ENERGY IN)

- Drink water before a meal.
- Eat half your dessert, or choose fruit as dessert.
- Avoid food portions larger than your fist.
- Drink diet soda instead of regular soda.
- Eat off smaller plates.
- Don't eat late at night.
- Skip buffets.
- Grill, steam, or bake instead of frying.
- Share an entree with a friend.
- Eat before grocery shopping.
- Choose a checkout line without a candy display.
- Make a grocery list before you shop.
- Drink water or low-fat milk over soda and other sugary drinks.
- Flavor foods with herbs, spices, and other low-fat seasonings.
- Keep to a regular eating schedule.
- Eat before you get too hungry.
- Don't skip breakfast.
- Stop eating when you are full.
- Snack on fruits and vegetables.
- Top your favorite cereal with apples or bananas.
- Include several servings of whole-grain foods daily.
- If main dishes are too big, choose an appetizer or a side dish instead.
- Ask for salad dressing "on the side."
- Don't take seconds.
- Try a green salad instead of fries.
- Eat sweet foods in small amounts.
- Cut back on added fats or oils in cooking or spreads.
- Cut high-calorie foods like cheese and chocolate into small pieces and only eat a few pieces.
- Use fat-free or low-fat sour cream, mayo, sauces, dressings, and other condiments.
- Replace sugar-sweetened beverages with water and add a twist of lemon or lime.
- Every time you eat a meal, sit down, chew slowly, and pay attention to flavors and textures.
- Try a new fruit or vegetable (ever had jicama, plantain, bok choy, star fruit, or papaya?)
- Instead of eating out, bring a healthy, low-calorie lunch to work.
- Ask your sweetie to bring you fruit or flowers instead of chocolate.

ENERGY OUT: Physical Activity

Each activity in the following table burns approximately 150 calories*:

Examples of moderate amounts of physical activity		
Common Chores		Sporting Activities
Washing and waxing a car for 45–60 minutes		Playing volleyball for 45–60 minutes
Washing windows or floors for 45–60 minutes		Playing touch football for 45 minutes
Gardening for 30–45 minutes		Walking 1 ³ / ₄ miles in 35 minutes (20 minutes/mile)
Wheeling self in wheelchair 30–40 minutes		Basketball (shooting baskets) 30 minutes
Pushing a stroller 1 ¹ / ₂ miles in 30 minutes		Bicycling 5 miles in 30 minutes
Raking leaves for 30 minutes		Dancing fast (social) for 30 minutes
Walking 2 miles in 30 minutes (15 minute/mile)		Water aerobics for 30 minutes
Shoveling snow for 15 minutes		Swimming laps for 20 minutes
Stair walking for 15 minutes		Basketball (playing game) for 15–20 minutes
		Bicycling 4 miles in 15 minutes
		Jumping rope for 15 minutes
		Running 1 ¹ / ₂ miles in 15 minutes (10 minute/mile)
	More Vigorous Less Time	

Source: www.surgeongeneral.gov/topics/obesity/calltoaction/fact_whatcanyoudo.htm

Activity	Calories Burned Per 30 minutes*
Walking (leisurely), 2 miles per hour	85
Walking (brisk), 4 miles per hour	170
Gardening	135
Raking Leaves	145
Dancing	190
Bicycling (leisurely) 10 miles per hour	205
Swimming Laps, medium level	240
Jogging, 5 miles per hour	275

*For a healthy 150-pound person. A lighter person burns fewer calories; a heavier person burns more.

Moving More (ENERGY OUT)

- Walk your children to school.
- Take a family walk after dinner.
- Join an exercise group and enroll your children in community sports teams or lessons.
- Replace a Sunday drive with a Sunday walk.
- Do yard work. Get your children to help rake, weed, plant, etc.
- Get off the bus a stop early and walk.
- Work around the house. Ask your children for help doing active chores.
- Walk the dog to the park.
- Go for a half-hour walk instead of watching TV.
- Pace the sidelines at kids' athletic games.
- Choose an activity that fits into your daily life. Being physically active with your family is a great way to spend time together.
- Park farther from the store and walk.
- Use an exercise video with your kids if the weather is bad.
- Avoid labor-saving devices, such as a remote control or electric mixers.
- Play with your kids 30 minutes a day.
- Dance to music. Play your favorite dance music for your children and have them play their favorites for you.
- Make a Saturday morning walk a family habit.
- Walk briskly in the mall.
- Choose activities you enjoy—you'll be more likely to stick with them. Ask children what activities they want to do.
- Explore new physical activities.
- Acknowledge your efforts with non-food related rewards, such as a family day at the park, lake, or zoo.
- Take the stairs instead of the escalator.
- Swim with your kids.
- Turn off the TV and play ball at the park.
- Take your dog on longer walks.
- When walking, go up the hills instead of around them.
- Use a family activity planner to make time each day for activity.
- Buy a set of hand weights and play a round of Simon Says with your kids—you do it with the weights, they do it without.

Source: Adapted from www.smallstep.gov