



Balancing Food and Activity—An Energy Balance Exercise

Directions: Choose a snack—one or several foods that give you a total of between 150 and 250 Calories. Then use the chart on the other side to plan enough physical activity to burn up all the Calories from your snack.

Energy IN: Snack Foods

Food	Serving Size	Calories (rounded to 5's)
Baby Carrots	10 carrots	40
Broccoli, raw	½ cup	10
Celery, raw	1 stalk	5
Cucumber	½ cup slices	5
Apple	1 medium	80
Banana	1 medium	105
Fruit cocktail, canned in juice	½ cup	60
Grapes, seedless	1/2 cup	55
Kiwifruit	1 medium	45
Orange	1 medium	65
Peach	1 medium	35
Strawberries, fresh	1 cup	45
Peanut butter	1 Tablespoon	95
Peanuts, salted	1.1 oz. (small snack package)	195
Sunflower seeds, roasted,	1 oz. (small snack package)	175
Popcorn, 94% fat free butter flavored	3 cups	60
Pretzels	1 oz. (small snack bag)	110
Potato chips, plain	1 oz. (small snack bag)	150
Tortilla chips	1 oz. (7 big chips)	150
Salsa	3 Tablespoons	25
Hot Cheetos	1 oz. (small snack bag)	170
Hershey Kiss	9 pieces	230
Milky Way	1.9 oz (1 regular candy bar)	230
Snickers	2 oz. (1 regular candy bar)	270
Skittles	2.3 oz (1 regular package)	260
Fruit roll-up	1 roll (1/2 oz.)	50
Chocolate chip cookies	2 small	100
Crackers, Ritz	4 crackers	70
Crackers, Saltines	5 crackers	60
Crackers, Wheat Thins	8 crackers	70
Cheese, American	1 oz. (1 slice)	105
Milk, fat free skim	1 cup	80
Milk, chocolate 1%	1 cup	150
Apple juice	1 cup	115
Koolaid	1 cup	105
Gatorade	1 cup	65
Coke or other soda	1 cup	100
Water	1 cup	0



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Energy OUT: Physical Activity

Activity	Calories Burned per Minute* (approximate) <i>(Figures gathered from multiple health education sources.)</i>
Sleeping or lying quietly	1
Watching television or eating	1.5
Walking slowly	2.5
Walking at a medium pace	3
Walking fast	3.5
Dancing	4
Push ups/ sit ups	4
Bicycling fast	4.5
Shooting baskets	5
Swimming fast	6
Playing basketball	7
Running in place	7
Jumping rope	8.5
Climbing stairs	9
Running very fast	10

Here are some examples to get you used to using the information above and get you ready for what comes next.

1. How much energy would you use (in other words, how many calories would you burn) if you ran very fast for 5 minutes?
 - a. Running very fast burns 10 calories per minute. Multiply that by the 5 minutes you would run to get your answer.
 $10 \text{ Calories per minute} \times 5 \text{ minutes} = 50 \text{ Calories}$

2. How much energy would you use if you swam fast for 10 minutes then shot baskets for 10 minutes?
 - a. Swimming fast burns 6 Calories per minute. Multiply that by 10 minutes.
 - b. Shooting baskets burns 5 Calories per minute. Multiply that by 10 minutes.
 - c. Add the two answers together.
 $(6 \text{ Calories per minute} \times 10 \text{ minutes}) + (5 \text{ Calories per minute} \times 10 \text{ minutes}) =$
 $60 \qquad \qquad \qquad + \qquad \qquad \qquad 50$
 $= \qquad \qquad \qquad 110 \text{ Calories total}$



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Balancing Energy IN and Energy OUT: Now It's Time to Figure It Out

Use the tables on the first 2 pages to find information about the food and activity you choose, then put that information into the tables below to decide if you can exercise off the snack foods you chose in a reasonable amount of time.

Energy IN: Multiply the numbers in the second and third columns to find Energy IN for each food, then add the Energy IN numbers (if you ate more than 1 food) to get the total Calories in your snack. (Number of servings you plan to eat x Calories per serving = Energy IN)

Example

Food You Chose and Amount	Number of Servings	Calories Per Serving	Energy IN (Calories)
1 cup fruit cocktail	2 (It's 2 because the chart shows that 1 serving is ½ cup.)	60	$(2 \times 60) = 120$
1 cup fat free skim milk	1	80	$(1 \times 80) = 80$
Total Energy IN (Add the numbers in the last column.)			$120 + 80 = 200$

Now, you try.

Food You Chose and Amount	Number of Servings	Calories Per Serving	Energy IN (Calories)
Total Energy IN (Add the numbers in the last column.)			

Finally, check your choices. Is your total Energy In between 150 and 250 Calories? If so, great! Go on to Energy Out. If not, go back and adjust your snack food until the Calories are in between 150 and 250.

Energy OUT: Now, decide what activities you want to do to burn off your snack food and how many minutes you will do them. Be reasonable—most people can't run fast for two or more hours! Then multiply the Calories per minute by the number of minutes you will be active to find Energy OUT.

Example

Activity You Chose	Calories per Minute	Number of Minutes	Energy OUT (Calories)
Playing Basketball	7	10	$(7 \times 10) = 70$
Jumping Rope	8.5	10	$(8.5 \times 10) = 85$
Walking (medium)	3	15	$(3 \times 15) = 45$
Total Energy OUT (Add the numbers in the last column.)			200



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Now, you try.

Activity You Chose	Calories per Minute	Number of Minutes	Energy OUT (Calories)
Total Energy OUT (Add the numbers in the last column.)			

Compare: Does your Total Energy IN match your Total Energy OUT?

Total Energy IN = _____

Total Energy OUT = _____

- **If they match**, give yourself a big pat on the back—you're finished, and you understand something about energy balance.



- **If they don't match**, how do you think you can adjust your eating and/or activity to make them balance?



- **If Energy IN is more than Energy OUT**, you may do one or both of these things:
 - choose lower Calorie foods or less food,
 - choose to exercise longer or more intensely. Doing both would be best, but you choose—it's up to you.
- **If Energy IN is less than Energy OUT**, you may do one or both of these things
 - choose higher Calorie foods or more food,
 - choose to exercise for less time or less intensely (although cutting back on exercise is often not a good idea).



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