

# Calorie Lab

Name \_\_\_\_\_

**Purpose:** To obtain a rough estimate of the number of calories you need per day based on your age, sex, size and activities, and to compare this figure to your average daily diet.

**Procedure:**

## Part I: Your Caloric Need

A calorie is usually thought of as a unit of heat. One calorie is the amount of heat required to raise the temperature of one from of water one degree Celsius. One thousand calories are collectively known as a kilocalorie and as a Calorie. One kilocalorie = 1 Calorie = 1000 calories. Food value is measured in Calories. Food Calories are a measure of the energy content of a specified portion of a given food.

Each day you must take in a definite number of Calories if you are to maintain a constant physical condition. People vary in their caloric requirements primarily because of age, sex, size, and daily physical activities. This worksheet will help you compute your Caloric need.

- Convert your height from feet and inches into centimeters. 1 inch = 2.54 cm,  
so height in cm = height in in x 2.54. \_\_\_\_\_ cm
- Convert your weight to kilograms. 1 kg = 2.2 lbs.  
so mass in kilograms = weight in lbs / 2.2 \_\_\_\_\_ kg

3. Use figure 1 to determine your surface area in square meters. \_\_\_\_\_ m

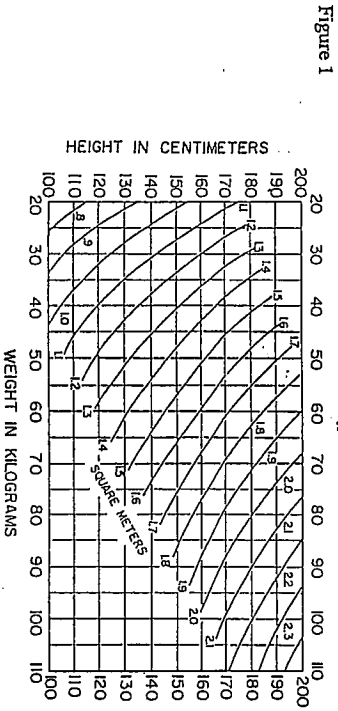


Figure 1. Diagram for determining the body surface area when the weight and height are known. (From Dubois, E. F.: Basal Metabolism in Health and Disease, 3rd ed., Lea A. Febiger.)

4. Use figure 2 and your age and sex to determine your normal basal metabolic rate (BMR). \_\_\_\_\_ Cal/m<sup>2</sup>/hr

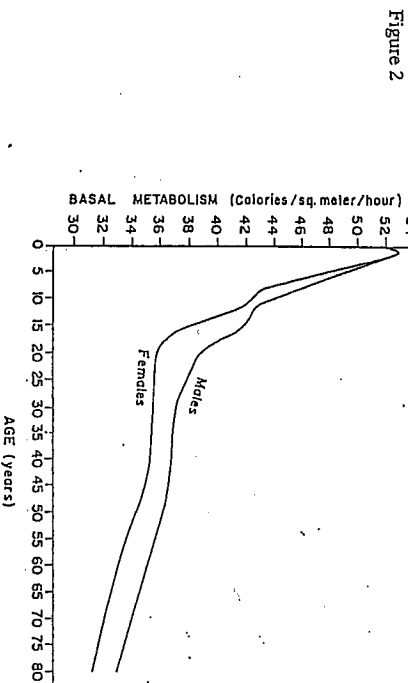


Figure 2. Normal basal metabolic rates of males and females at different ages. (From PHYSIOLOGY OF THE HUMAN BODY, Fifth Edition by Arthur G. Guyton. Copyright © 1979 by W. B. Saunders Company. Reprinted by permission of CBS College Publishing.)

5. Multiply your BMR by your surface area to determine your basal energy requirement (BER). \_\_\_\_\_ Cal/hr

The number of Calories / hour you calculated in step 5 for a person of your sex, size and build represents the number of Calories / hour you need to merely stay alive. In addition (depending on the food type combination you eat) you need an average of 10% more to stimulate the body to use your food and maintain body temperature.

- Add 10% of your BER to your BER to get your dynamic BER.  
Dynamic BER = \_\_\_\_\_ Cal/hr
- Multiply your dynamic BER by 24 hr / day to get your dynamic daily BER.  
Daily dynamic BER = \_\_\_\_\_ Cal / day





Food	Amount	Calories	Food	Amount	Calories
Sherbet	1 scoop	120	Pretzel	1 large	140
Sundaes, chocolate with nut & whipped cream	average	350	Pretzels, 3 ring	1 small	10
Turnover, apple	medium	275	Ritz cracker	1	15
			Ry-Krisp	1	20
Fruits			Saltines	1	15
Apple	1 medium	70	Vanilla water	1	15
Banana	1 small	85			
Grapes	30 medium	50	Soups		
Orange	1 medium	70	Bean with pork	1 cup	170
Peach	1 medium	40	Chicken noodle	1 cup	80
Pear	1 medium	40	Clam chowder, Manhattan	1 cup	80
			Cream of chicken with milk	1 cup	180
Sandwiches			Pea, split	1 cup	145
Cheese sandwich	1	280	Tomato with milk	1 cup	170
Ham sandwich	1	320	Vegetable with beef broth	1 cup	80
Ham and swiss sandwich	1	570			
Hamburger on bun	1	400	Puddings, Jello		
Hero sandwich	1	800	Butterscotch pudding	½ cup	210
Hot dog and bun	1	280	Chocolate pudding	½ cup	220
Peanut butter sandwich	1 tbap.	330	Gelatin, fruit, D-Zerta	½ cup	10
Pizza, cheese	½ pie	380	Jello, plain	1 serving	65
			Jello, with fruit	½ cup	75
Munchies			Tapoca pudding	½ cup	135
Animal crackers	1	10	Vanilla pudding	1 cup	150
Cashews	6-8	90			
Chocolate chip Cookie	small bag	120	Salads		
Fritos corn chips	1	50	Lettuce with french dressing	1 wedge	130
Ginger snap	1	30	Mixed green, plain	1 cup	35
Graham cracker	1	30	Mixed green with blue cheese	1 cup	180
Onion rings, fried	10 rings	75	Tossed salad	1 cup	120
Oreo	1	40			
Peanuts	15-17	85			
Potato chips	8-10	110			

Source: Adapted from U.S. Department of Agriculture materials and information provided on packages.