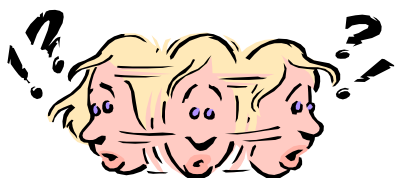


HOW DO YOU REALLY KNOW HOW MANY CALORIES YOU NEED?



For more information, contact Gale Begeman, RD, CSCS, Nutrition Counselor, at the Campus Health Service, 621-4550, or go to the CHS website, www.health.arizona.edu, click on Health Education On-line Library.

Estimating Your Daily Calorie Requirement

The amount of calories you need each day is influenced by many factors:

Genes – take a good look at your family – what is their body, bone and weight structure like? Ask your parents what they looked like at your age.

Age – your body undergoes physiological changes as you age, your metabolism slows down, you recuperate slower as you get older, your muscles need more time to heal and grow.

How much you eat – low calorie diets or high intensity exercise (1-2 hours or more per day) coupled with insufficient calories for that activity level will lower your metabolic rate. Humans are able to adapt their metabolism to match the amount of calories coming in. This adaptation occurs easier in women than in men and occurs much faster with the increase in number of diets. In other words, the more often you go on a low calorie diet, the more you will lower your metabolism. For more information – See FEAST OR FAMINE handout.

Your weight/height – heavy, big bodies need more calories because they have more muscle and bone to maintain. Small bodies need less (fewer) calories.

How much and how often you exercise – athletes and recreational exercisers who train more than 1 hour each day need more calories to maintain optimum performance. Your metabolism stays elevated after each exercise period, the more intense the exercise, the longer it stays elevated, requiring more calories.

Your metabolism can fluctuate on a daily basis, due to activity, food intake and health status. It can also fluctuate over time based on your age, genes and nutritional status. For females, metabolism is 500 calories higher during ovulation (mid-cycle).

There are several methods that estimate your calorie needs. The most accurate is indirect calorimetry, which measures the consumption of oxygen (reflects energy used while resting.) Several equations are also used to estimate daily calorie needs. While these equations are useful, they are estimations at best – your

individual calorie needs may be much greater or much less than predicted.

Protein Activity Factor: The amount of protein needed each day depends on the weight and activity of the individual. That amount is then set at 15% of the total daily calories. The following example is based on a moderately active person weighing 150 pounds.

1. Determine Protein Activity Factor:

Recreation/Sedentary = .4 gms/pound of body weight

Light Daily Muscle Use = .5 gms/pound of body weight

Runners/Heavy Body Sports = .6 - .9 gms/pound of body weight

2. Calculate gms of protein needed each day.

Ex: $150 \times .5 \text{ gms/pound} = 75 \text{ gms}$

Your weight (lbs.) _____ x _____ = _____ gms protein/day

3. Calculate the number of protein calories needed each day.

Ex: $75 \text{ gms/pound} \times 4 \text{ kcal/gm} = 300 \text{ calories}$

Your protein gms _____ x 4 = _____ cal.

4. Calculate the total number of calories needed each day. Protein is set at 15% of total calories.

Ex: $300 \text{ calories} / .15 = 2000 \text{ calories/day}$

Protein calories/day _____ / .15 = _____ = total calories/day

Basal Metabolic Rate (BMR) Plus Activity

Factor: This method determines the basal metabolic rate and adds an activity rate based on a person's weight.

1. Multiply the weight in pounds times 10 for the basal metabolic rate (BMR - calories needed if you slept all day).

Ex: $150 \times 10 = 1500 \text{ calories/day}$

Your weight _____ x 10 = _____ BMR calories/day

2. Multiply the weight times the activity factor given below.

3 = sedentary

5 = moderate activity

7 = heavy activity

10 = intense activity

Ex: $150 \times 5 = 750 \text{ calories/day}$

Your weight _____ x your activity factor _____ = _____ activity calories

3. Add the result of #1 and #2.

Ex: $1500 + 750 = 2250 \text{ calories needed each day for a moderately active person weighing 150 pounds.}$

Your BMR _____ + your activity calories _____ = _____ total calories needed

These two methods give a moderately active 150 pound person a daily calorie range of 1950 to 2250 calories. This person's actual requirement could be anywhere from 1500 (low metabolism) to 3500 (high metabolism) calories. Males from 15-25 years often will have a metabolism that can adjust to even higher calories - the more they eat, the more they will burn calories, making it difficult to gain weight. General guidelines: For weight loss- subtract 300 calories/day and add activity to burn an additional 200-300 calories/day. For weight gain- add 500-1000 calories/day and lift weights productively 2-3 times/week.

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