

1 4 9) 11 - 4 - 8 3

WEIGHTY QUESTIONS

A Lesson For Teenagers

Objectives:

To compare weights and heights of teenagers.

To understand the concept of energy balance--calorie input vs. calorie output.

To become familiar with the caloric content of some foods.

To become familiar with calories used during different kinds of exercise.

Opener: Unfinished Sentences

Ask teens to finish open-ended sentences on paper:

- 1) If I were to change my weight...
- 2) In five years I want to look...
- 3) If I wanted to lose weight I would...
- 4) People my age eat food that is...
- 5) My favorite way to exercise is...

A group discussion of this activity can focus on these questions:

Why do people want to lose weight?
(e.g. to feel better? to look better?)

Why do people want to gain weight?
(e.g. to feel better? to look better?)

What are some ways to change your weight?
(e.g. by changing eating and exercise habits)

Activity: Comparing Height and Weight (Optional)

The "Check Out the Body" chart shows actual heights and weights of normal, healthy teenagers in the U.S. This unfortunately doesn't mean that these weights are desirable, but the chart helps teens evaluate their own weights in relation to others.

Because some teens are sensitive about their height and/or weight, you as a discussion leader should watch the teens reactions and interactions closely to avoid hurt feelings.

Before handing out the chart, discuss growth patterns. All people follow the same general sequence of growth in height and weight: very rapid growth during the first year of life, slower growth during childhood, and a period of faster growth during adolescence. After that period, growth again slows. Help the teens feel comfortable about their present height. Explain that there is a wide variation in heights during the teen years because of normal differences in timing of growth. For some teens the growth spurt comes early. For others it comes later.

Guide the teens through the instructions for "Check Out the Body" (4H 9371). Discussion questions are included with each step.

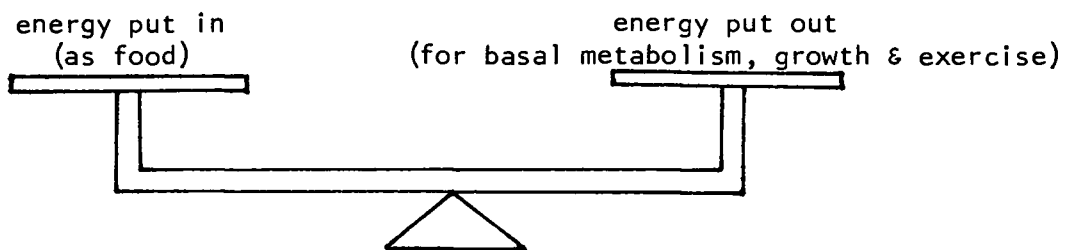
1. A heavy vertical line should be drawn from the bottom to the top of the chart along the line representing age. Point out the wide range of heights for teens at each age.
2. Have the teens mark an "X" in the top part of the chart where the line for their height crosses their age line. Discuss the question.
3. Then have them mark an "X" in the bottom of the chart where the line for their weight crosses their age line. Discuss the questions.

Ask teens to note what weight range (____ to ____ pounds) is characteristic for others their age in their height category. Discuss reasons why a person's weight and height may not correspond (i.e. why a "tall" person may weigh the same as an "average" height person or a "short" person may weigh what an "average" person would normally weigh). Some reasons might be:

- A person may be over or underweight
- A person may be very muscular (which increases weight but doesn't mean that person is "fat")
- Differences in body build may result in desirable weights outside of the ranges.

Discussion: What is the Best Way to Change Weight?

Weight control is a matter of balance. Body build, stage of growth, and exercise habits will determine the number of calories you need. To stay at a constant weight, the calories in foods eaten must equal the calories needed by the body for basal metabolism (functioning of internal organs), for growth, and for muscular work(exercise).



Weight is gained when more energy is put in than is put out. So, to gain weight you will have to eat more calories than you are using.

Weight is lost when more energy is put out than is put in. To lose weight, it is necessary to use more calories than are in the food you eat. This can be done by eating less and exercising more. A weight loss of 1 pound a week is safest for your health. One pound of fat is equivalent to 3500 calories. To lose 1 pound a week without exercising more, you will have to eat 500 fewer calories each day ($3500 \div 7 = 500$).

Activity: Calories in Foods

choose a, b or c

a) The Calorie Game (for groups of 10-12)

Materials needed: Dairy Council food models
(available to Extension groups through the County
Extension office)
(available to teachers from the Oregon Dairy Council)

Divide the group into teams of 3-4 youth. One "contestant" from each team guesses the number of calories in a food (represented by a food model) selected by the leader. The team that is closest without going over loses an "ounce." Continue until everyone has had a chance to be a contestant.

b) Calories in Snack Foods

Measure out 100 calorie portions of some snack foods such as:

- 1 cup cola-type beverage
- 2 sandwich cookies (vanilla or chocolate) 1 3/4" x 3/8" thick
- 2 Tablespoons peanuts
- 9 potato chips (1 3/4" x 2 1/2")
- 2 1/2 medium caramels
- 1 Tablespoon peanut butter
- 1 medium banana
- 2/3 cup whole milk
- 1 1/2 medium apples

c) Have the teens decide individually what low calorie foods they would like. Then ask the group to decide which of their choices is lowest in calories. Look up the actual caloric values.

Discussion: How Many Calories Are Used When You Exercise?

Energy expenditure depends on body weight and the amount and kind of activity. More calories are used when a person is heavy and when the activity is strenuous.

Use the following chart to compare the calories used by average young adults.

Type of Activity	Calories/Minute
Sleep (basal)	1.0-1.2
Driving a car	2.8
Canoeing 2.5 mph	3.0
Cycling 5.5 mph	4.5
Tennis	7.0
Swimming	5.0-11.0
Football	8.9
Skiing on level 3.7 mph	9.9

Activity: Exercising

Have the teens try some of the accompanying exercises. Start at a slow pace if they are unaccustomed to strenuous exercise.

SUGGESTED EXERCISES

1. **WAIST WHITTLES:** Stand with legs about 4 inches apart, raise right arm, left hand on hip. Bend to the left side, slide left hand down leg as far as possible. Raise body until standing straight again. Bend to the left side.
2. **BEND AND STRETCH:** (increases flexibility) Stand erect, with feet 12 inches apart, arms overhead. Bend trunk forward and down, keeping knees straight. Stretch gently in an attempt to touch your right hand to your left foot then your left hand to your right foot. Return to starting position.
3. **ARM CIRCLES:** (firms upper arm and bust) Stand with feet about 12 inches apart and arms outstretched. Rotate arms in circles, backwards.
4. **BENT KNEE SIT-UPS:** (strengthens abdominal muscles) Lie on back with knees bent, hands clasped behind neck. Sit up; touch right elbow to left knee. Next time touch left elbow to right knee. Return to starting position.
5. **KNEE TO NOSE TOUCH:** (stretches lower back, strengthens upper back and hip muscles) On hands and knees, try to touch nose with right knee, then extend leg backward parallel with floor while raising head. Do not arch back. Repeat with the left leg.
6. **SIDE LEG RAISE:** (strengthens muscles on side of hip and thigh) Lying on side, raise and lower upper leg as high as you can. Repeat with the other leg.
7. **LEG SPLITS:** (strengthens muscles on insides of thighs) Lying on back, raise knees to chest; extend legs until perpendicular to floor. Slowly lower legs to the sides in a V position; raise legs until together again.
8. **LEG LIFT:** (strengthens muscles on front of thigh) Lying on back, arms at sides, raise alternate legs perpendicular to floor.
9. **KNEE PUSH-UPS:** (strengthens arms, shoulders and chest muscles) Lie on floor, face down; hands on floor under shoulders, palms down. Push upper body off floor until arms are fully extended and body is in straight line from head to knees. Lower until chest touches the floor.
10. **RUN AND HOP:** (cardiovascular endurance; strengthens heart muscles, legs and hips) Run in place, lift feet 4 inches high (left plus right is 1 count). After each 50 counts jump up and down 10 times lifting feet 4 inches off floor.

Activity: Energy Expenditure

Ask teens to guess the number of minutes of exercise that is necessary for a 70 kilogram (154 pound) man to use the calories in some specific foods:

FOOD	CALORIES	WALKING (min)	RIDING BICYCLE (min)	SWIMMING (min)	RUNNING (min)	RECLINING (min)
Apple, large	101	19	12	9	5	78
Bread, white enriched 1 slice	65	12	8	6	3	50
Carbonated beverage 1 glass	106	20	13	9	5	82
Carrot, raw	42	8	5	4	2	32
Cheese, cheddar 1 oz	111	21	14	10	6	85
Doughnut	151	29	18	13	8	116
Ice cream 1/6 quart	193	37	24	17	10	148
Malted milk shake	502	97	61	45	26	386
Milk 1 glass	166	32	20	15	9	128
Pizza, cheese 1/8	180	35	22	16	9	138
Apple pie 1/6 pie	377	73	46	34	19	290

(Reference: Frank Konishi, "Food Energy Equivalents of Various Activities,"
Journal of the American Dietetic Association 46:186 1965)

Note: It's important to be aware of the nutrients you are getting in proportion to the calories. For the same number of calories, you get more nutrients in milk than in carbonated beverages. Likewise, you get more nutrition per calorie when you choose cheddar cheese rather than a doughnut.

For Additional Information:

- "Calories and Weight" (Agriculture Information Bulletin No. 364) 1974-\$1.00

- "Food and Your Weight" (Home and Garden Bulletin No. 74) 1973-35¢

For sale from Superintendent of Documents, U.S. Government Printing
Office, Washington, D.C. 20402

-Calories are listed on many food labels.