

## **MSU Extension Publication Archive**

Archive copy of publication, do not use for current recommendations. Up-to-date information about many topics can be obtained from your local Extension office.

Behavioral Control: A New Self-help Approach to: Weight Control

Michigan State University

Cooperative Extension Service

Anita Dean, Department of Food Science and Human Nutrition

(N.D.)

8 pages

The PDF file was provided courtesy of the Michigan State University Library

**Scroll down to view the publication.**

# Behavioral Control:

A new self-help approach to:

# Weight Control

BASEBALL, SEAT BELTS AND WEIGHT CONTROL all have one thing in common. Each requires individual behavioral controls to produce beneficial results.

1. **A young pitcher** enters the "majors" after an outstanding high school and minor league career. He has a wide variety of deliveries including fastballs, curveballs, sinker balls, knuckle balls, change-of-pace and even "blooper" pitches. His first two appearances on the mound are successful. His next two are disasters. The coach tells him he is "telegraphing" each pitch which is giving the opposing batters the edge. He is informed that he must alter or disguise the motions he goes through prior to each delivery.

2. **A retired couple** buys a new car. An annoying buzzer rings as they drive out of the lot. The salesman explains they must first fasten their seat belts before starting the car.

3. **A married couple** looks at old wedding pictures and is dismayed at how much weight they've put on since that time. Their physician prescribes a low-calorie diet, more exercise and a ban on between-meal snacks.

Some form of behavior modification will be required on the part of each of these individuals. Each will need to change habits built up over a lifetime.

For the pitcher and the retired couple, the adverse behavioral patterns were relatively easy to identify and correct. The physical motions involved were easily altered and the problems eliminated. Not so with the overweight young homemaker faced with an ever-expanding waistline.

Eating habits are among the most persistent and hardest to control of all the habits we develop in our lifetime. They are deeply imbedded in one's life experiences and are subject to myriad psychological, sociological and economic forces. They are part of our whole life style, our whole way of living.

Eating patterns are also contagious. Psychologists tell us no one is singularly responsible for his own behavior. People are the products of their environments, the subjects of all the circumstances and influences that have surrounded their lives. Just as there are no "self-made men," there are no completely "self-made," obese people.

Did your family place a great deal of emphasis on food? Was your mother especially proud of her cooking?

Did she show her love for you by baking favorite cakes and pies when you came home from school?

Were you rewarded with sweets or other favorite foods when you behaved well?

Were you praised for cleaning up your plate and scolded for wasting food?

In short, did you learn to overeat?

This raises the question: "If I'm not individually responsible for my poor eating habits, can I be expected to control them or even be aware of what I am doing wrong?"

The answer is "yes" for these reasons:

1. Adverse eating habits and activity patterns **are observable.**
2. Adverse eating habits and activity patterns **can be isolated.**
3. Adverse eating habits and activity patterns **can be altered and controlled.**

Or, put another way (if we are indeed serious about losing weight):

1. Adverse eating habits and activity patterns **must be observed.**
2. Adverse eating habits and activity patterns **must be isolated.**
3. Adverse eating habits and activity patterns **must be altered and controlled.**

The road to weight control is rough. As much as we'd like to believe otherwise, there are still no safe shortcuts to good health and weight control.

By Anita Dean, Department of Food Science and Human Nutrition

MICHIGAN STATE UNIVERSITY



New information has been uncovered, however, through studies by Dr. Albert Stunkard, psychiatrist at the University of Pennsylvania, and psychologists Stanley Schachter of Columbia University and Richard Stuart of the University of Utah. Their research indicates overweight people are very susceptible to what are called "food cues."

Behavioral control teaches us how to spot these cues, eliminate the ones that can be eliminated and deal with the others in ways that make them less tempting. But it works only if we stick to it. "It is," says Dr. Stuart, "a lifelong program."

Any comprehensive weight control program should include these three essential elements:

1. management of food intake.
2. management of physical activity.
3. behavioral control of eating.

Behavioral control of eating (No. 3 above) is perhaps the most unique and least understood of the three elements. It is the last two subjects that we will focus on throughout the remainder of this bulletin.

We invite you now to enroll in the "Weight Control College of Behavioral Knowledge."

**WEIGHT CONTROL COLLEGE  
OF BEHAVIORAL KNOWLEDGE  
A NEW SELF-HELP  
APPROACH TO WEIGHT CONTROL**

Name \_\_\_\_\_

Age \_\_\_\_\_ Height \_\_\_\_\_ Body Frame \_\_\_\_\_

Present Weight \_\_\_\_\_ Ideal Weight\* \_\_\_\_\_

Congratulations! You are now officially enrolled in the Weight Control College of Behavioral Knowledge.

1. If there is no significant difference between your present and ideal weight, you may skip all classes and continue doing whatever it is that you are doing well.

2. If there is a significant difference between your present and ideal weight, attendance at all classes and completion of all work assignments is required.

Grab a pencil and let's go to our first class!

**Class No. 1: MOTIVATION**

Why do you want to lose weight? Is it just to look better? Are there also some health benefits? Are you tired of always feeling hungry? Want the approval of family and friends?

List the reasons why you want to lose weight which are most important to you personally. Be honest and be specific.

\*See Weight Chart on page 8.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

Remind yourself of these daily. These are the reasons why you are attempting to lose weight, the benefits you hope to achieve. See weight comparisons on page 8).

Some form of reward system can often provide powerful incentives and help to persons who are trying to lose weight. To be effective, these rewards should be (1) meaningful to you, and (2) granted soon after you have established a new, beneficial behavioral pattern.

You can reward yourself for (1) establishing new and appropriate eating habits, (2) performing physical activities which expend more energy than was formerly the case or (3) losing a specific number of pounds.

Often, the best kind of reward is one that gives points based on successful changes in bad habits. The points are then "converted" into an incentive award (a new dress or sports jacket) at intervals. In this way, you can reward yourself immediately and often.

Below is a list of five such rewards. Rank them according to your own preference.

Reward	Rank
A night out at the movies . . . . .	_____
A dinner in a restaurant . . . . .	_____
A new outfit . . . . .	_____
An appointment to have your hair styled . . . . .	_____
A compliment from your family . . . . .	_____
A new sports jacket . . . . .	_____

Now make a list of other rewards that would motivate you. Be reasonable and practical. (Who wouldn't like a trip to Paris, but how many can afford it?)

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

Discuss this list with your family. They may come up with suggestions. Use this opportunity to get some commitments from them also.

**NOTE:** Any time you can involve others in your weight control program, you increase your chance of success. Explain to others what you are doing and why. Their understanding and cooperation are important to your success. Chances are, they will be pleased to help you and in a good position to do so.

### Class No. 2: PHYSICAL ACTIVITY MANAGEMENT

In general, few people are aware of the unusually low level of physical activity associated with modern living in America.

Even military personnel have been observed to spend 88 percent of their day in "sedentary" activities, 10 percent in "light-to-medium" activity and only 2 percent in "heavy" work.

While the telephone company tells us how great it is to add home extension telephones to save 70 miles of walking per year, the weight-conscious person should view this as an expensive leisure. It can cost up to as much as 15 excess pounds of body fat in 10 years.

Department stores providing elevators and escalators, but poorly lit stairwells cater to the convenience but not the health of their customers. The same is true for electric golf carts, power lawn mowers, snow blowers, electric garage doors, carving knives, ice crushers, can openers and toothbrushes. Parking lots have virtually eliminated walking from shopping trips for many shoppers.

In the present day world, most of us can get a moderate level of physical activity each day only by planning a deliberate exercise program or giving up some routine conveniences. For an employee, such activities could include using the coat rack on another floor, using the toilet at the far end of the hall, or parking the car at the extreme end of the lot. For all of us, it could mean sitting instead of lying down, standing instead of sitting, walking instead of standing and even jogging instead of walking. Each of these can appreciably increase the amount of energy we use over a period of a year.

Below is a list of some activities under the headings of light, moderate and heavy activity.

**Light activity**—dancing (slow step), gardening (light), golf, table tennis, volleyball, walking (3 miles per hour).

**Moderate activity**—badminton (singles), cycling (9.5 miles per hour), dancing (fast step), gardening (heavy), swimming (30 yards per minute), tennis (singles), walking (4.5 miles per hour).

**Heavy activity**—calisthenics (vigorous), climbing up and down stairs, cycling (12 miles per hour), handball, jogging, skipping rope, stationary jogging, swimming (4<sup>+</sup> yards per minute).

### Homework Assignment:

Using the above description as a guide, keep a record of the number of minutes engaged in light, moderate and/or heavy exercise each day. Continue this record for a period of one or two weeks. Don't try to change your present routine. This record will provide a profile of your present physical activity pattern.

The following activities contribute to overweight and obesity.

- 1. Driving or riding in a car (instead of walking).
- 2. Riding on elevators and escalators (instead of using stairs).
- 3. Using power tools (instead of regular hand tools).
- 4. Watching TV excessively.
- 5. Watching sports (instead of participating in them).

List other habits or behaviors that decrease your activity and energy expenditure:

- 6. \_\_\_\_\_
- 7. \_\_\_\_\_
- 8. \_\_\_\_\_
- 9. \_\_\_\_\_
- 10. \_\_\_\_\_

Now check those that you have decided to change.

### Class No. 3: FOOD INTAKE INVENTORY

This weight control program starts without dieting. Instead of dieting, keep a careful record of what you eat for a week or two. Record the amount and type of food eaten, as well as information about time, location, eating companions, mood and activities while eating. Use the Food Intake Inventory on page 6.

This record will serve several purposes. It will help you:

- 1. identify your major inappropriate eating habits.
- 2. establish guidelines for more appropriate eating behavior.
- 3. identify the situations and cues that lead you to over-participate at the "calorie counter."
- 4. be both aware of, and measure, habit changes as they occur.

Are you an in-between meal eater? Where and

when do you do most of your over-eating? Do certain types of activities lead you to eat unwisely? Are certain moods more likely to result in overeating than others?

How did you feel when you were consuming that bag of potato chips? Tired? Depressed? Bored? Anxious or angry? Are there certain times in the day, or days in the week, when you are more susceptible to overeating? Are there certain foods which should be absolute "no-no's"? Do you habitually snack when sewing, for example, or when watching TV?

If one of these is your problem, an important way to avoid overeating associated with a particular activity or location is to make eating a pure experience—don't combine it with another activity! Get started by using the "Food Intake Inventory" to record the circumstances of your eating habits. While taking this inventory, don't try to change your normal eating habits. The more detailed this record, the more you will get out of it.

#### Class No. 4: BEHAVIOR MANAGEMENT

As you have already guessed, "Behavioral Control" offers no magic formula for solving a weight control problem. Nor is it an invitation to change your whole life style or way of living.

Behavioral Control is your opportunity to find out what is harmful in your present daily eating and activity habits. Then you can lessen the impact of these habits by substituting other, beneficial behaviors. This, say psychologists, is using a positive approach. In other words, "Accentuate the Positive" in order to "Eliminate the Negative."

There are no universal prescriptions where behavior is concerned. What is good for the goose might not be good for the gander. What is filet mignon to one may be warmed-over goulash to another. Each one must try each notion on for size and decide independently whether it fits comfortably into one's own "preordained" life style. Better to concentrate on fewer items and have a reasonable chance of success than to bite off more than we can chew and choke on the whole program.

Psychologists suggest many ways to interrupt and control "unconscious eating behavior." A few of these are listed below:

- 1. Don't buy high-calorie, especially tempting foods. Reduce temptation.
- 2. Shop only from a list. Take only enough money to pay for the items on your list.
- 3. Shop only after eating a full meal.
- 4. Don't serve high-calorie "extras" at meals, including jams, peanut butter, honey, salad dressings, gravies, sauces, etc.
- 5. When you clean the table, clean plates directly into the garbage.

- 6. Buy foods in a form requiring considerable preparation.
- 7. Eat one unit of food at a time. Return food to the proper storage area, so it will take considerable effort to get a second portion.

List other measures you can think of that will help to control excessive eating.

- 8. \_\_\_\_\_
- 9. \_\_\_\_\_
- 10. \_\_\_\_\_
- 11. \_\_\_\_\_
- 12. \_\_\_\_\_

Put an "X" next to those you are going to add in your own weight control program.

There are other types of behavior that will assist you in reducing your rate of eating and result in consuming less food. Here are a few:

- 1. Chew each mouthful thoroughly and slowly.
- 2. Put your fork or spoon down after every third bite.
- 3. Swallow food completely before putting more food on the utensil.
- 4. Plan short delays during each meal.

It is clear that each of these behavioral changes must be practiced before you will feel comfortable using them.

List others you feel could be included in this category.

- 5. \_\_\_\_\_
- 6. \_\_\_\_\_
- 7. \_\_\_\_\_
- 8. \_\_\_\_\_

Check each of the items you are going to include in your own program.

There is an endless list of enjoyable activities to substitute for food in "Eat Now—Pay Later" situations. Here are a few:

- |   |   |
|---|---|
| <input type="checkbox"/> 1. Clean the medicine cabinet or workbench | <input type="checkbox"/> 6. Read                    |
| <input type="checkbox"/> 2. Take a shower or bath                   | <input type="checkbox"/> 7. Telephone               |
| <input type="checkbox"/> 3. Garden                                  | <input type="checkbox"/> 8. Sew or mend             |
| <input type="checkbox"/> 4. Run errands                             | <input type="checkbox"/> 9. Exercise                |
| <input type="checkbox"/> 5. Write letters                           | <input type="checkbox"/> 10. Balance your checkbook |
|   | <input type="checkbox"/> 11. Listen to music        |

Can you add to this list?

- 12. \_\_\_\_\_
- 13. \_\_\_\_\_
- 14. \_\_\_\_\_
- 15. \_\_\_\_\_
- 16. \_\_\_\_\_

Check those you are going to include in your program.

### Class No. 5: REVIEW

Dr. Stuart has shown that written records are essential in developing self control to achieve goals you set for yourself. In his book, "Act Thin, Stay Thin," he points out that written records can help you obtain an accurate picture of your food related feelings (urges) and bring them under control. He suggests tracking your "urges to eat" throughout the day so you can be on guard and ready to make choices that will turn you away from food.

Time of Day	Level of Urge to Eat (High, Moderate, Low)	Did You Eat? (No) (Yes)	Alternative Activity

**1. Keep a food intake sheet.** You can't correct your bad eating habits unless you know what they are. Keep a careful record of what you eat for a week or two. Make it as detailed as possible. Write down what you ate, the time you ate, how long it took, where you ate, with whom you ate and, if you ate alone, your mood when you ate.

**2. Pinpoint your eating problems.** Pay attention to your eating speed. Check the places where you do most of your over-eating: kitchen, den, living room, bedroom? Determine what times of the day you are most apt to overindulge. How did you feel when you ate? Were you bored, hungry, depressed? Zero in on the times you ate. Are you a late-night snacker or an all-day picker?

**3. Make eating a pure experience.** People often unconsciously create their own food cues. If you're eating more in the den and bedroom, it's because you've taught yourself to be hungry in those rooms. If you snack a lot when you sew, it's because you've conditioned yourself to associate this activity with snacking. When you eat, do nothing but eat. It will train you to become hungry only in certain places and at certain times.

**4. Curb bad eating habits.** There are a number of ways to curb eating rates: (a) put the fork down after every third bite and leave it down until you've chewed and then swallowed; (b) pause for five minutes or so in the middle of the meal; (c) cut your food into small pieces and thoroughly chew and swallow each piece before going on to the next.

To curb a snacking problem, try some other alternate set of activity. If you always snack at 4 p.m., go for a walk at that time or take up a new hobby and devote your afternoon hours to it. Choose an activity you really like. Use a smaller set of plates; it will make your portions at dinner time seem larger.

**5. Reduce your temptations.** Avoid impulse buying. Make a shopping list and take only enough money to buy the items on it. Include lots of low-calorie foods and snacks that require preparation. You are less tempted to eat if you have to spend 10 or 15 minutes preparing the food.

**6. Enlist your family support.** Involve your family. Explain your aims and objectives. Tell them you want their moral support. Explain that you may even ask them to make a few sacrifices such as agreeing to have fewer snacks in the house.

**7. Cope with your emotions.** Don't use food as a tranquilizer. Jogging and other activities are a better way to work off anger or frustration. A phone call to a friend is a lot more comforting and far less fattening than a piece of blueberry pie.

**8. Take it slowly.** Don't starve yourself. Aim at a gradual weight loss of one, or, at the most, two pounds per week.

**9. Get more exercise.** If you are athletic, jog or do calisthenics. If you are not an athlete, try walking. Ask a friend to help in your exercise program. Incorporate exercise into your daily routine. Park your car a quarter of a mile from the office. Take the stairs rather than the elevator.

**10. Pre-plan the handling of special situations.** Resist the lure of a restaurant menu. Make up your mind what you are going to have before you go out. Tell the waiter not to put bread or relish tray on your table. If you are going to a church social, wedding or party, eat something substantial so you won't arrive hungry. Avoid temptation while you are there. Dance a lot, engage in conversation. In short, keep yourself busy.

### A FINAL THOUGHT

A dessert or a cocktail or two each day may undermine your weight control program. A recent study of dieting adults found that successful dieters consumed 1,511 calories, while unsuccessful dieters averaged 1,748 calories per day. This small 237 calorie difference can be found to represent as little as one rich dessert.

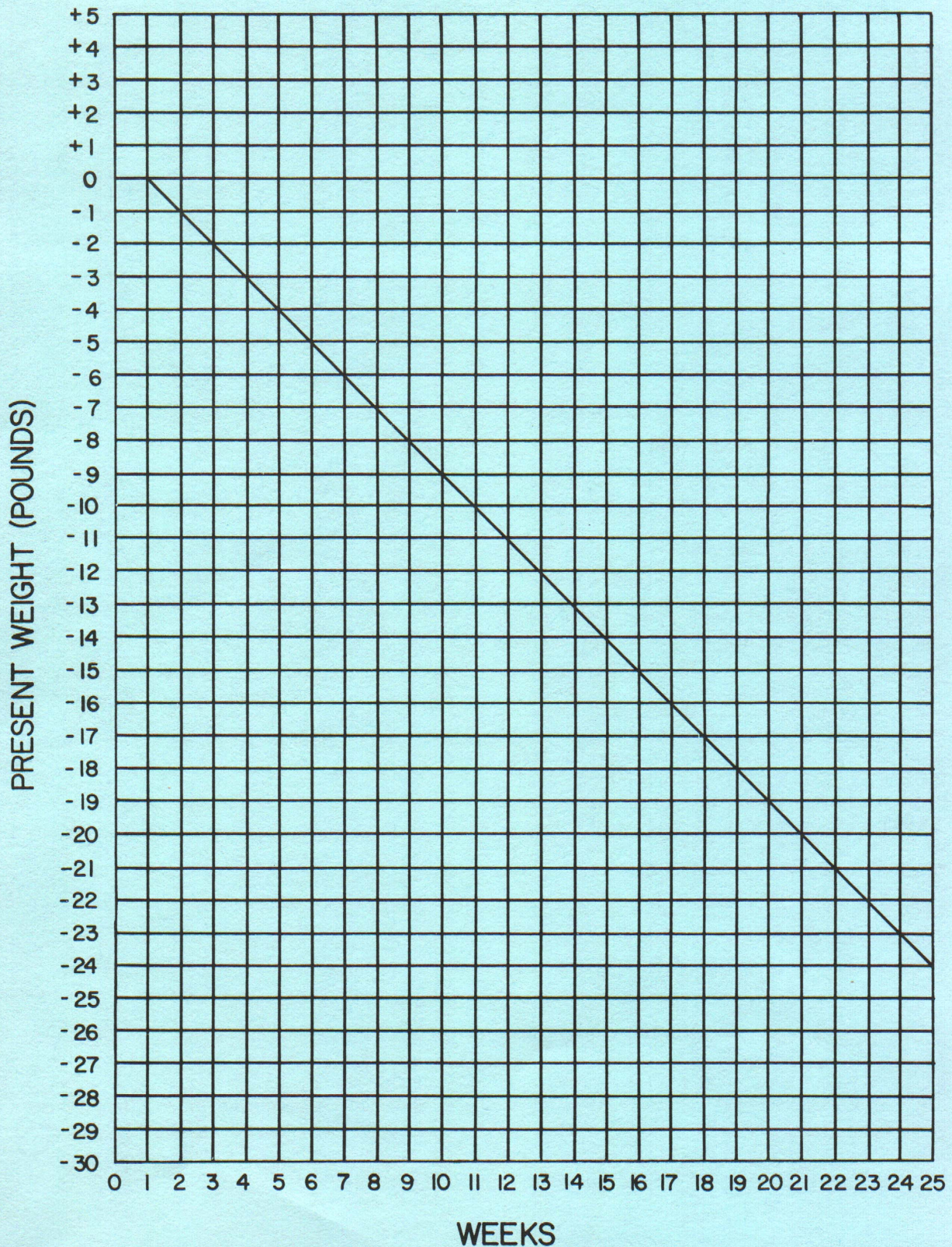
**FOOD INTAKE INVENTORY FORM**

FOOD	HOW MUCH? TIME?	WHERE ARE YOU? Home (specify room) Work Restaurant Recreation Activity Engaged In	WHO IS WITH YOU	HOW DO YOU FEEL? A-Anxious F-_____ B-Bored G-_____ C-Tired D-Depressed E-Angry

# RECORD YOUR WEIGHT BY THE WEEK

If you lost one pound per week for 24 weeks, the graph line of your weight reduction would be a straight diagonal line as shown above.

Weigh without clothing before breakfast on the same day each week. Plot your present weight at zero the first week and weigh on the same day each week thereafter.





# Weight Comparisons

Height (without shoes)	Weight (without clothing)		
	small	Physical build medium	large
MEN	Pounds	Pounds	Pounds
5 ft 3 in.	118	129	141
5 ft 4 in.	122	133	145
5 ft 5 in.	126	137	149
5 ft 6 in.	130	142	155
5 ft 7 in.	134	147	161
5 ft 8 in.	139	151	166
5 ft 9 in.	143	155	170
5 ft 10 in.	147	149	174
5 ft 11 in.	150	163	178
6 ft	154	167	183
6 ft 1 in.	158	171	188
6 ft 2 in.	162	175	192
6 ft 3 in.	165	178	195

Height (without shoes)	Weight (without clothing)		
	small	Physical build medium	large
WOMEN	Pounds	Pounds	Pounds
5 ft	100	109	118
5 ft 1 in.	104	112	121
5 ft 2 in.	107	115	125
5 ft 3 in.	110	118	128
5 ft 4 in.	113	122	132
5 ft 5 in.	116	125	135
5 ft 6 in.	120	129	139
5 ft 7 in.	123	132	142
5 ft 8 in.	126	136	146
5 ft 9 in.	130	140	151
5 ft 10 in.	133	144	156
5 ft 11 in.	137	148	161
6 ft	141	152	166

Reproduced from Food and Your Health, USDA Publication 547.

## REFERENCES

### Behavioral Control

1. *Slim Chance in a Fat World*. Stuart, Richard and Davis, Barga. 1972. Research Press Co., CFS, P.O. Box 3177, Champaign, Ill. 61820
2. *Act Thin, Stay Thin—How to Lose Weight and Keep it Off*. Stuart, Richard, W. W. Norton and Co., Inc., 500 Fifth St., N.Y., N.Y. 10036
3. *Eating Slim—A Treatment Manual for Effective Weight Control through Behavior Therapy and Nutrition Education*. Paulsen, B. K., William Beneke, and C. Moore, 1976. Lincoln Univ., Jefferson City, Mo. 65101. Extension Publication, 211 Whitten Hall, Univ. of Missouri, Columbia, Missouri 65201
4. *Learning to Eat—Behavioral Modification for Weight Control*. Ferguson, James M., 1975, Bull Publishing Co., P.O. Box 208, Palo Alto, Calif. 94301 (Leader Manual—\$4.95; and Student Manual—\$5.95).
5. *Habits, Not Diets—The Real Way to Weight Control*. Ferguson, James, M.D., 1976, Bull Publishing Co., P.O. Box 208, Palo Alto, Calif. 94302
6. *I Almost Feel Thin*. Stunkard, Albert, M.D., Bull Publishing Co., P.O. Box 208, Palo Alto, Calif. 94301

### Foods and Nutrition

1. *Food and Your Weight*. HG74, 1977. Superintendent of Documents, U.S. Gov. Printing Off., Washington, D.C. 20402
2. *Calories and Your Weight: The U.S.D.A. Pocket Guide*. AIB 364, Office of Communication, U.S. Dept. of Agr., Washington, D.C. 20250
3. *Guide to Calorie Control*. E-782, Michigan State Univ., MSU Bulletin Office. P.O. Box 231, East Lansing, Mi. 48824

4. *Choosing Food for Health*. E-855, Michigan State Univ., MSU Bulletin Office. P.O. Box 231, East Lansing, Mi. 48824
5. *Fats, Diets and Your Health*. E-1192, 1978, Michigan State Univ., MSU Bulletin Office. P.O. Box 231, East Lansing, Mi. 48824
6. *Snacking—A Matter of Management*. E-899, Michigan State Univ., MSU Bulletin Office. P.O. Box 231, East Lansing, Mi. 48824
7. *Eat Right, Feel Right*. E-898, Michigan State Univ., MSU Bulletin Office. P.O. Box 231, East Lansing, Mi. 48824
8. *The Fat Counter Guide*. Deutsch, Ronald M., 1978, Bull Publishing Co., P.O. Box 208, Palo Alto, California 94301. (\$1.95 plus handling charge of \$.50 for single copies).

### Exercise and Activity

1. *Movement Patterns for Living—An Activity Guide*. Janet A. Wessel, DHPER, Revised, 1978. (Order from Foods and Nutrition Specialist, 201 Wills House, MSU, East Lansing, Mi. 48824.)
2. *The Fitness Challenge in the Later Years*, DHEW #S.R.S. 73-2082, Supt. of Documents. U.S. Gov. Printing Off. Washington, D.C. 20402
3. *Adult Physical Fitness*, simple exercise programs for men and women 088F. Consumer Information Center, Pueblo, Colo. 81009. \$.70.
4. *Exercise and Weight Control*, 032F. How to balance food intake and physical activity. Includes chart showing calories used per hour for different activities. Consumer Information Center, Pueblo, Colo. 81009. \$.35.
5. *Nutrition, Weight Control, and Exercise*. Frank Catch and William McArdle. Houghton Mifflin Co. Boston. 1977.

Cooperative Extension Service Programs are open to all without regard to race, color, creed, or national origin. Issued in furtherance of cooperative extension work in agriculture and home economics, acts of May 8, and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Gordon E. Guyer, Director, Cooperative Extension Service, Michigan State University, East Lansing, MI 48824. 2PIR-2M-2:82-DG-MP. Price 35 cents.