A Healthy Weight PROGRAM

SMART Portions

LSU AgCenter Research & Extension

Lesson III - Your Smart Activity Portions

Key concepts:

- Benefits of Exercise
- Getting Started Right
- Fitness Planning and Goals
- Safety in Exercising
- Homemade Workouts
- Managing Stress With Exercise

Eye-opening activity:

- Test Your Endurance (refer to Parlay Fact Sheet)
- Test Your Flexibility (refer to Parlay Fact Sheet)
- Test Your Strength (refer to Parlay Fact Sheet)
- Pay Attention to Your Heart Rate (refer to Parlay Fact Sheet)
- Taking Your Pulse (refer to Parlay Fact Sheet)

Background Information:

- Why start walking? (refer to AgCenter Fact Sheet: EFNEP Benefits of Exercise)

Suggested learning activities

(refer to Walking Exercise Program fact sheet) The Walking Exercise Program was designed for any age level from 30 years of age up to 50+ years of age. This program also can be used for the excessively overweight along with healthy eating. The program encourages walkers to gain "points" for walking completed in a week's time span. The goal for each participant is to earn at least 25 points per week. The progressive chart guides the participant through the walking program. The success of the program may be documented in an exercise journal. An optional program is the AgCenter fact sheet, Walking Program.

Project partially funded by the United States Department of Agriculture, Food and Nutrition Service, through the Louisiana Department of Social Services, Food Stamp Program.

Louisiana State University Agricultural Center, William B. Richardson, Chancellor
Louisiana Agricultural Experiment Station, David Boethel, Vice Chancellor and Director
Louisiana Cooperative Extension Service, Paul D. Coreil, Vice Chancellor and Director

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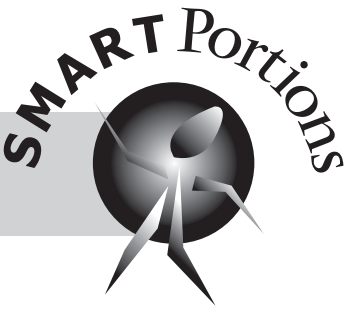
Fact Sheets for Discussion:

Parlay Fact Sheet: Test Your Endurance
Parlay Fact Sheet: Test Your Flexibility
Parlay Fact Sheet: Test Your Strength
Parlay Fact Sheet: Pay Attention to Your Heart Rate
Parlay Fact Sheet: Taking Your Pulse
AgCenter Fact Sheet: Benefits of Exercise
AgCenter Fact Sheet: Beginner's Walking Program
Parlay Fact Sheet: Sensible Shoes
Parlay Fact Sheet: Eating Before Exercise
Parlay Fact Sheet: How Energy Works
Parlay Fact Sheet: Why Warm Up? Why Cool Down?
Parlay Fact Sheet: Fitness Essentials
Parlay Fact Sheet: Developing a Personal Fitness Plan
Parlay Fact Sheet: Setting Fitness Goals
Parlay Fact Sheet: Fit at Any Age
Parlay Fact Sheet: Fitting Fitness Into a Busy Schedule
Parlay Fact Sheet: Exercise and Weight Control
Parlay Fact Sheet: Warning: Being Out of Shape Is Hazardous to Your Health
Parlay Fact Sheet: Exercise Makes Your Cardiovascular System Healthier
Parlay Fact Sheet: Tips for Exercising Safely
Parlay Fact Sheet: Are You Overtraining?
Parlay Fact Sheet: RICEing Fitness Injuries
Parlay Fact Sheet: Replacing Fluids Lost From Exercise
Parlay Fact Sheet: Stretching for Flexibility
Parlay Fact Sheet: Strength Training Is Important, Too
Parlay Fact Sheet: A Homemade Workout: Choosing Exercise Equipment for Your Home
Parlay Fact Sheet: Walking
Parlay Fact Sheet: Running and Jogging
Parlay Fact Sheet: Low-Impact Aerobic Dance
Parlay Fact Sheet: Swimming
Parlay Fact Sheet: Anaerobic Metabolism: When You Need Instant Energy
Parlay Fact Sheet: Aerobic Metabolism: Energy With Oxygen
Parlay Fact Sheet: Stress Management Tool–Exercise
AgCenter Fact Sheet: Weight-Loss Plateaus and Pitfalls
AgCenter Fact Sheet: So, You Want to Spot Reduce?
AgCenter Fact Sheet: What You Need to Know to Purchase a Treadmill
AgCenter Fact Sheet: Everything in Moderation



AgCenter Fact Sheet: Making Time for Exercising is Easy
AgCenter Fact Sheet: Exercise and Menopause
AgCenter Fact Sheet: Exercise and Type 2 Diabetes
AgCenter Fact Sheet: Exercise and Hypertension
AgCenter Fact Sheet: Exercise and Arthritis
AgCenter Fact Sheet: Exercising with Heart Disease
AgCenter Fact Sheet: Active Seniors Enjoy Life More

Support Materials

National Institute of Diabetes and Digestive and Kidney Diseases
www.niddk.nih.gov

American Heart Association
www.americanheart.org

American Society of Exercise Physiologists
www.css.edu/users/tboone2/asep/toc.htm

American College of Sports Medicine's Health & Fitness Journal
www.health-fitjrnl.com

Women's Exercise Research Center
www.gwu.edu/~exsci/werc.html

Cooper Institute of Aerobics Research
www.cooperinst.org

References

The Walking Exercise Program found in The New Aerobics for Women by Kenneth Cooper.

Test Your Endurance

THE STEP TEST

In order to establish fitness goals, it helps to assess your physical strengths and weaknesses. The following test can help you determine your endurance: the length of time you can perform a repeated action before becoming fatigued.

NOTE: If you're over 40, a smoker, currently leading an inactive lifestyle or have a personal or family history of heart disease or other chronic medical conditions, check with a healthcare professional before performing this test. If at any point during this activity, you experience pain, discomfort or shortness of breath, discontinue the exercise immediately.

Heartbeats per Minute	Level of Endurance
Over 125	Poor
121–125	Fair
111–120	Average
91–110	Good
90 and Below	Excellent

The Step Test

To perform this test, you'll need a sturdy stepladder, stool or box (one that can support your full body weight) approximately 12 inches high. Alternating your feet, step on and off the stool 24 times a minute, one up-and-down step about every 2½ seconds. Continue stepping up and down for three minutes, keeping the pace of 24 steps a minute. As soon as you're done, check your heart rate by counting your pulse (on your wrist or neck) for 10 seconds and multiply that sum by six to determine heartbeats per minute. Then refer to the table at left to judge your level of endurance.

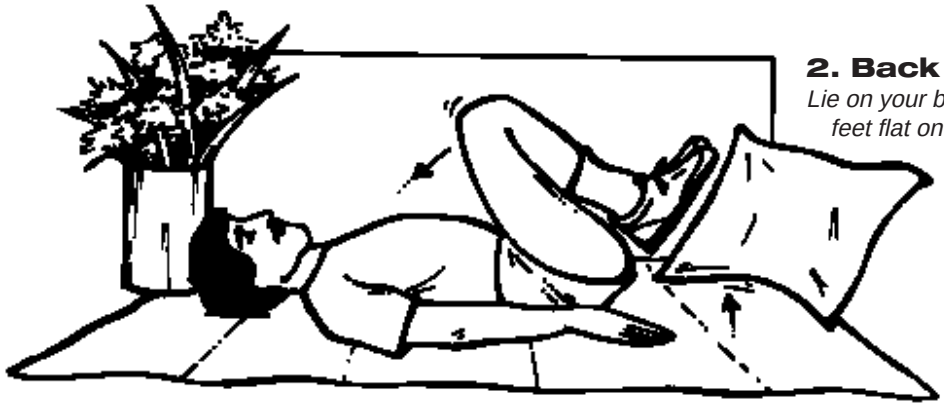
Reach and Pull Tests

1. Hand-to-Shoulder Reach

From a standing position, bend your left arm at the elbow and reach behind and across your back. Try to stretch your left hand to your right shoulder blade without arching your back or bending your head forward. Hold for 20 to 40 seconds. Repeat the sequence, touching your right hand to your left shoulder blade.

Test Your Flexibility

In order to establish fitness goals, it helps to assess your physical strengths and weaknesses. These tests can help you determine your flexibility—your ability to move freely without strain or resistance.



2. Back Stretch

Lie on your back with knees bent and feet flat on the floor. Slowly raise your knees to touch your chest. Hold for 20 to 40 seconds.

3. Quadriceps Pull

Lie on your stomach with knees bent. Slowly touch your heels to your buttocks. You can hold onto your ankles to assist your stretch. Hold for 20 to 40 seconds.

Results

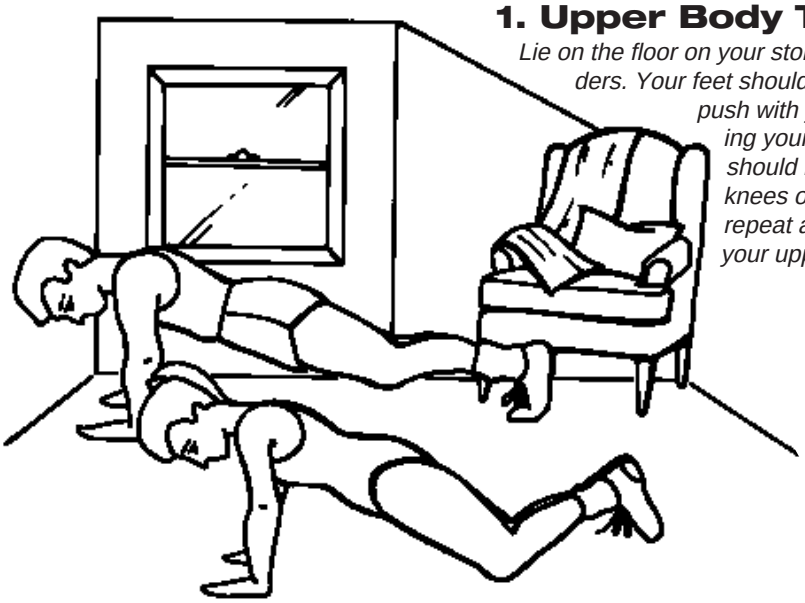
If you were able to perform each of the above tests without feeling strain or discomfort, you pass the flexibility test. If you were unable to touch hand to shoulder blade, knees to chest or feet to buttocks, you'll benefit by incorporating gentle stretching exercises into your regular activity program. Use these tests to monitor your progress. All exercise programs should include flexibility exercises.

NOTE: If you're over 40, a smoker, currently inactive or have a personal or family history of heart disease or other chronic medical conditions, check with your healthcare professional before performing these tests. If at any point during this activity you experience pain, discomfort or shortness of breath, discontinue the exercise immediately. When performing these tests, never try to stretch past the point of tightness or resistance.

Resistance Tests

Test Your Strength

In order to establish fitness goals, it helps to assess your physical strengths and weaknesses. The following tests can help you determine your overall strength—the ability of your muscles to resist a progressively increased load. Use these tests to monitor your progress.



1. Upper Body Test

Lie on the floor on your stomach, hands placed palm-down next to your shoulders. Your feet should form a right angle to the floor. As you exhale, slowly push with your hands to raise your torso from the floor, keeping your back straight and your elbows slightly bent. (Men should keep their legs straight; women should keep bent knees on the floor.) Slowly lower yourself to the floor and repeat as many times as you can. Then refer to the table for your upper body strength level.

Number of Repetitions*	Level of Strength
0–9	Poor
10–19	Average
20–29	Good
30 and over	Excellent

** People under age 35 should add two to each of the repetition ranges.*

2. Abdominal Strength Test

Lie with your back and feet on the floor, keeping your knees bent and your arms crossed over your chest. As you exhale, look toward the ceiling and slowly raise your shoulders off the floor as far as you can without straining. Relax. Repeat as many times as you can. Then refer to the table for your abdominal strength level.

Number of Repetitions*	Level of Strength
0–15	Poor
15–30	Average
31–45	Good
45 and over	Excellent

** People under age 35 should add two to each of the repetition ranges.*

NOTE: If you are over 40, a smoker, currently inactive or have a personal or family history of heart disease or other chronic medical conditions, check with your healthcare professional before performing these tests. If at any point during this activity you experience pain, discomfort or shortness of breath, discontinue the exercise immediately. When performing these tests, never try to stretch past the point of tightness or resistance.

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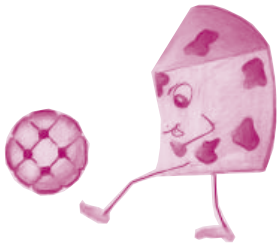
Benefits of Exercise

Exercise ....

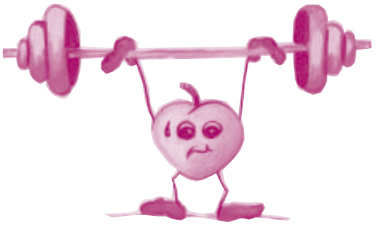
- increases the strength and capacity of your heart, blood vessels and lungs.
- improves the circulation of oxygen and nutrients to your brain and body cells.
- reduces emotional stress, depression, anxiety and muscle tension.
- improves sleep habits and reduces insomnia.
- increases stamina, endurance and resistance to illness.
- builds self-confidence and a sense of well-being.
- decreases constipation problems.
- may reduce the incidence of migraine headaches.
- improves control of diabetes.



You'll Feel Better and Have More Energy

You'll Look Better

As part of the aging process, we lose muscle and gain fat. Exercise helps you to keep the muscle and lose the fat, resulting in a firmer, trimmer figure. Exercise also helps improve your posture.



Your Bones Will Be Stronger

Regular exercise helps prevent loss of calcium from the bones, which may result in osteoporosis. Exercise also strengthens muscles, keeps joints supple and combats stiffness. Exercise may help preserve full range of motion in people with arthritis.

You'll Control Your Weight

Healthful eating and physical activity are essential for controlling your weight. Exercise helps control your weight by....

Burning Calories and Fat

Exercise accelerates weight loss by increasing the calories you burn. Exercise decreases body fat stores and promotes fat burning. New research suggests regular exercise promotes fat burning and decreases body fat stores because it causes us to burn more fat than carbohydrates for energy. When we don't exercise, we burn a higher percentage of carbohydrates for energy than fat.

To burn fat and build muscle, the American College of Sports Medicine recommends:

- aerobic exercise 30 - 45 minutes, 4-5 times a week and
- strength training 20 - 30 minutes, 2-3 times a week.

Different activities burn different amounts of calories. The important factor is to exercise regularly so you'll burn these calories on a regular basis.

Regulating Appetite

Research suggests exercise can help control appetite and usually doesn't stimulate appetite. Regular physical activity also changes your appetite so you want lighter, lower-fat foods.

Preserving and Building Muscle

If you lose weight without exercise, you lose both fat and muscle. Exercising regularly and cutting back on fat will help you lose mostly fat. Exercise builds muscle which requires more calories than fat to perform its work. The more muscle you have, the more calories you burn.

Increasing Metabolic Rate

Dieting and weight loss slow down your metabolism (calories you burn daily). This is bad news because your body then uses fewer calories at a time when you want to burn more calories. Exercising during a diet may help offset this drop in metabolic rate.

Keeping Weight Off

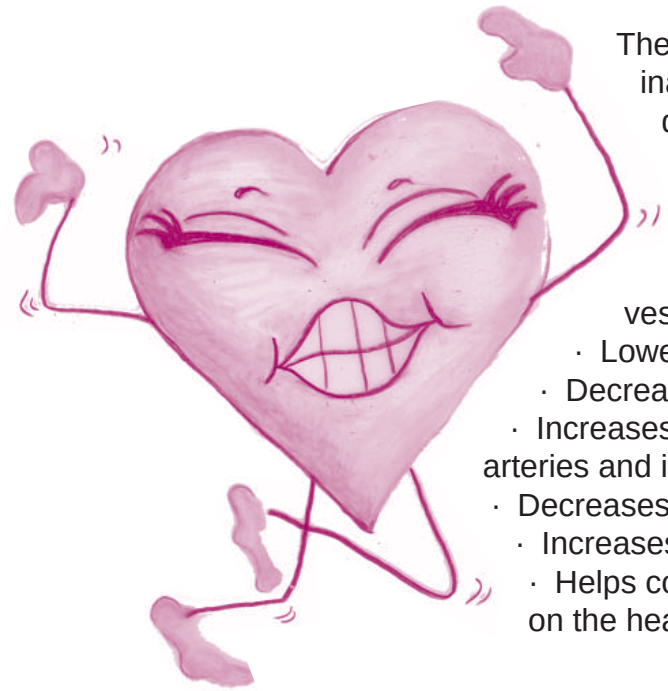
Exercise is the factor which best predicts who will lose weight and keep it off. If dieters are followed a year or more after a program, those who are exercising tend to be the ones who keep weight off. The sense of well-being that accompanies regular exercise seems to be an important key to successful weight maintenance.

Physical Activity Chart

Activity	Calories Per Hour	Time Needed to Burn 250 Calories	Activity	Calories Per Hour	Time Needed to Burn 250 Calories
Walking (4 mph) (15 min per mile)	400	37 minutes	Swimming (crawl, 45 yd/min)	530	30 minutes
Jogging (6 mph) (10 min per mile)	600	25 minutes	Jogging (5.5 mph) (11 min per mile)	650	23 minutes
Aerobic Dance	345	45 minutes	Biking (13 mph)	650	23 minutes
Skating (moderate)	345	45 minutes	Jogging (7 mph) (8.5 min per mile)	850	18 minutes

These figures are for a 150-lb. person. If you weigh more, you'll burn more calories in the same time; if you weigh less, you'll burn fewer calories.

You'll be Heart-Healthy



The American Heart Association now lists physical inactivity as one of the leading risk factors for heart disease along with high blood pressure, smoking and high serum cholesterol.

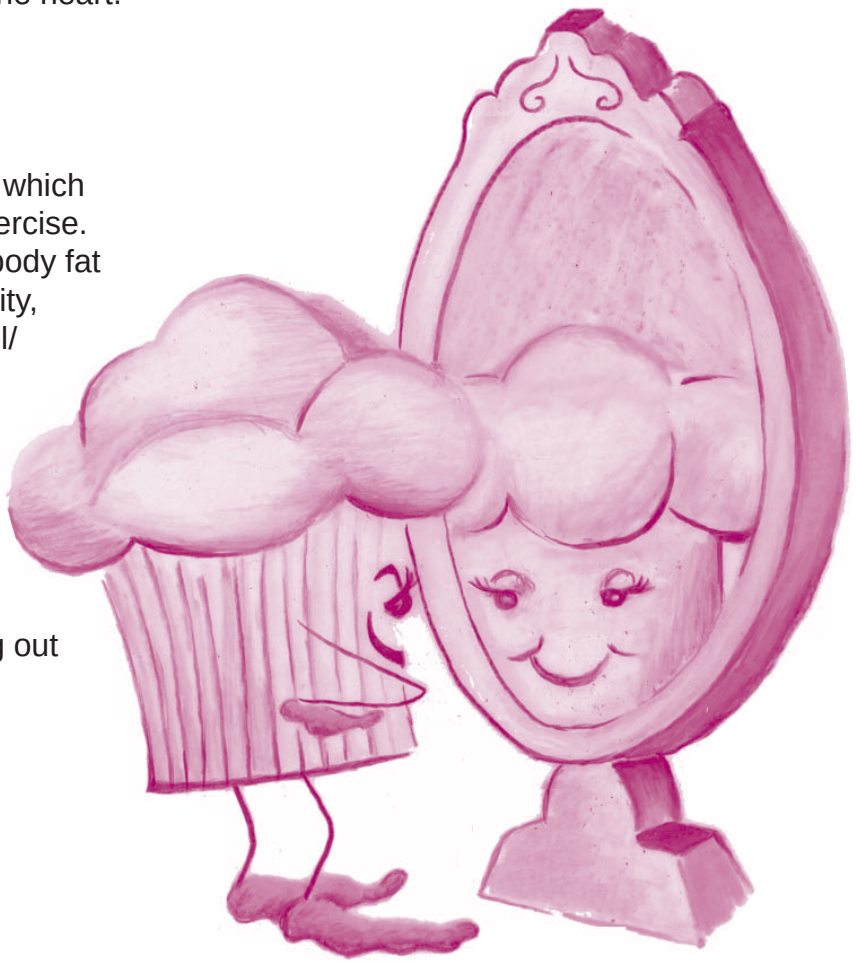
Exercise....

- Increases the efficiency of your heart, blood vessels and lungs.
- Lowers resting heart rate.
- Decreases blood pressure.
- Increases blood flow by enlarging the diameter of coronary arteries and increasing the number of blood vessels.
- Decreases blood cholesterol, triglycerides and glucose.
- Increases beneficial HDL-cholesterol blood levels.
- Helps control excessive weight which places an extra burden on the heart.

You'll Age Better

Research suggests that several factors which affect how we age are influenced by exercise. These include muscle mass, strength, body fat percentage, metabolism, aerobic capacity, blood pressure, blood sugar, cholesterol/ HDL ratio, bone density and regulation of internal body temperature.

For example, preserving muscle mass and strength can mean the difference in living independently or requiring nursing home care as we age. Even simple tasks such as tying shoes, getting to the bathroom or taking out the garbage are impossible if we don't have sufficient muscular strength.



You'll Be More Effective in Everything You Do

Studies show that people who exercise regularly usually perform better no matter what they do. Regular exercisers have more energy, productivity and increased ability to handle stress. Some research has shown that exercise may also make you smarter.

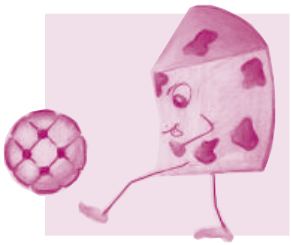
Types of Exercise

A combination of aerobic exercise and anaerobic conditioning exercise will help to promote fitness.

Anaerobic Exercise (Muscular Strength)

- Increases muscle tone and strength
- Builds muscle and helps you burn body fat

Strength is your muscles' ability to apply force. For muscular strength, do shoulder shrugs, push-ups, knee lifts, or use free weights or weight machines.



Aerobic Exercise (Endurance)

- Strengthens the heart, blood vessels and lung capacity
- Builds endurance through sustained vigorous activity *(walking, jogging, dancing, swimming, bike riding, raking, etc.)*
- Promotes oxygen transport through the body, leading to fitness and fat burning.

Flexibility

- Flexibility is the ability to move and stretch your muscles to their full extent. You should be able to move, bend, stretch and twist easily. *For flexibility, try stretching exercises like crawl strokes, arm circles, finger stretching and reaching.*

Amount of Exercise

Dietary Guidelines for Americans recommendations:

• Be physically active for at least 30 minutes most days of the week.

• Increasing the intensity or the amount of time that you are physically active can have even greater health benefits and may be needed to control body weight. About 60 minutes a day may be needed to prevent weight gain. 60 to 90 minutes may be needed to sustain weight loss.

• Children and teenagers should be physically active for 60 minutes every day, or most every day.

The 30 minutes of exercise don't need to be done in one session to get many health benefits. Divide the 30 minutes into three, 10-minute sessions a day if this suits your schedule better. *Examples of moderate physical activity for healthy U.S. adults:*

• walking briskly (3-4 mph)
• mowing lawn with power mower
• dancing
• home care, general cleaning
• fishing, standing/casting

Walking is a great way to increase physical activity. It's easy to do, doesn't require expensive equipment (except good shoes) and can be done year-round.

Keep these points in mind when exercising:

• If you're a man over 40 or a woman over 50, consult your doctor before starting an exercise program.

• Exercise moderately and routinely.

• Increase exercise gradually.

• Warm up before and cool down after exercise.

• Drink plenty of water before, during and after your workout.

• If you stop exercising because of illness, start back slowly.

• Choose an exercise you enjoy, and get started.

Made available by Beth Reames, PhD, LDN, RD, Specialist, Nutrition and Health

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Beginner's Walking Program

Walking briskly can be a great exercise. It doesn't require special facilities or equipment other than sturdy, properly fitting shoes with cushioned soles and arch supports that help protect the ankle and knee joints. You don't have to worry unduly about injuries, and walking can fit into almost any schedule.

If a particular week's schedule is overly tiring, repeat it for another week before going on to the next level. **Do at least three exercise sessions each week.** You do not have to complete the walking program in 12 weeks.

	Warm Up	Walk Briskly	Cool Down	Total Time
Week 1	5 min	5 min	5 min	15 min
Week 2	5 min	7 minutes	5 min	17 min
Week 3	5 min	9 minutes	5 min	19 min
Week 4	5 min	11 minutes	5 min	21 min
Week 5	5 min	13 minutes	5 min	23 min
Week 6	5 min	15 minutes	5 min	25 min
Week 7	5 min	18 minutes	5 min	28 min
Week 8	5 min	20 minutes	5 min	30 min
Week 9	5 min	23 minutes	5 min	33 min
Week 10	5 min	26 minutes	5 min	36 min
Week 11	5 min	28 minutes	5 min	38 min
Week 12	5 min	30 minutes	5 min	40 min

Adapted from Exercise and Your Heart, National Heart, Lung and Blood Institute, U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health, 1993.

Week 13 and on:

Check your pulse periodically to see if you are within your target zone. As you get more in shape, try to be within the upper range of your target zone.

Gradually increase your brisk walking time to 30 to 60 minutes, three or four times a week. Remember that your goal is to get the benefits you are seeking and enjoy your activity.

Warm Up

Warming up prepares the body for more intense activity to come and decreases the likelihood of straining or pulling a muscle. The warm-up can start with stretching exercises to loosen muscles, tendons, ligaments and joints. After stretching, there should be a brief period of moderate exercise to prepare the body for more strenuous activity in general. The more strenuous the activity, the longer and more vigorous the warm-up period should be.

Cool Down

Exercise should never end abruptly. Gradually slowing down your exercise activity is as important as warming up. Cooling down helps prevent sudden changes in your cardiovascular system. Cool down should last 5 to 10 minutes or until your heart rate is within 10 to 20 beats of your pre-exercise heart rate. Stretching as a part of cooling down after vigorous exercise helps prevent your muscles from tightening up and minimizes muscle discomfort. It also helps maintain and improve flexibility.

Target Zone

Age	Target Heart Rate Zone
20 years	100-150 beats per minute
25 years	98- 148 beats per minute
30 years	95-142 beats per minute
35 years	93-138 beats per minute
40 years	90-135 beats per minute
45 years	88- 131 beats per minute
50 years	85- 127 beats per minute
55 years	83- 123 beats per minute
60 years	80- 120 beats per minute
65 years	78-116 beats per minute
70 years	75- 116 beats per minute

Reference: Step by Step Walking Program, National Heart, Lung and Blood Institute, National Institutes of Health, 2000

Here's how to check to see if you are within your target heart rate:

1. Right after you stop moving, take your pulse: Place the tips of your first two fingers lightly over one of the blood vessels on your neck, just to the left or right of your Adam's apple. Or try the pulse spot inside your wrist just below the base of your thumb.
2. Count your pulse for 10 seconds and multiply the number by 6.
3. Compare the number to the correct grouping below: Look for the age grouping that is closest to your age and read the line across. For example, if you are 43, the closest age on the chart is 45; the target zone is 88-131 beats per minute.

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www.lsuagcenter.com

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Walking Exercise Program

Note: The goal of the walking program is to earn at least 25 points per week.

Under 30 Years of Age

Week Number	Distance in Miles	Time Goals in Minutes	Frequency per Week	Points per Week
1	1.0	16	5	5
2	1.0	14	5	5
3	1.5	22	5	10
4	1.5	21	5	10
5	2.0	30	5	15
6	2.0	28	5	15
7	2.5	36	5	20
8	2.5	35	4	26
9	3.0	43	4	32
10	3.0	42	4	32

30 - 49 Years of Age

Week Number	Distance in Miles	Time Goals in Minutes	Frequency per Week	Points per Week
1	1.0	18	5	5
2	1.0	16	5	10
3	1.5	24	4	14
4	1.5	23	5	17.5
5	2.0	32	4	20
6	2.0	30	5	25
7	2.5	38	4	26
8	2.5	37	4	26
9	3.0	45	4	32
10	3.0	44	4	32

50+ Years of Age

Week Number	Distance in Miles	Time Goals in Minutes	Frequency per Week	Points per Week
1	1.0	20	5	5
2	1.0	18	5	5
3	1.5	27	5	10
4	1.5	26	5	10
5	2.0	36	5	15
6	2.0	34	5	15
7	2.5	42	5	20
8	2.5	40	5	20
9	2.5	37:30	4	26
10	3.0	48	5	25

Walking Maintenance Program Possibilities

Distance in Miles	Time Requirement	Frequency per Week	Points per Week
2.0	24:01-30:00	6	30
or			
3.0	36:01-45:00	4	32
or			
4.0	48:01-60:00	3	33
or			
4.0	60:01-80:00	5	35

Progressive Walking Program for the Excessively Overweight Individual

(To Be Used in Conjunction with Dieting)

Week Number	Distance in Miles	Time Goals in Minutes	Frequency per Week	Points per Week
1	2.0	40:30	3	3
2	2.0	39:00	3	9
3	2.0	38:00	4	12
4	2.0	37:00	4	12
5	2.0	36:00	5	15
6	2.0	35:00	5	15
7	2.5	45:00	5	20
8	2.5	43:00	5	20
9	3.0	52:00	5	25
10	3.0	51:00	5	25

When you're exercising to lose weight, the length of each exercise session is key. Work out at a pace that you can sustain for more than half an hour. Why? During the first few minutes of each workout, your body is burning mainly carbohydrates. Only as your exercise period continues does adipose tissue become the predominant fuel supply. Thus the intensity of your effort is less critical than time when you're focusing on weight loss.

Project partially funded by the United States Department of Agriculture, Food and Nutrition Service, through the Louisiana Department of Social Services, Food Stamp Program

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