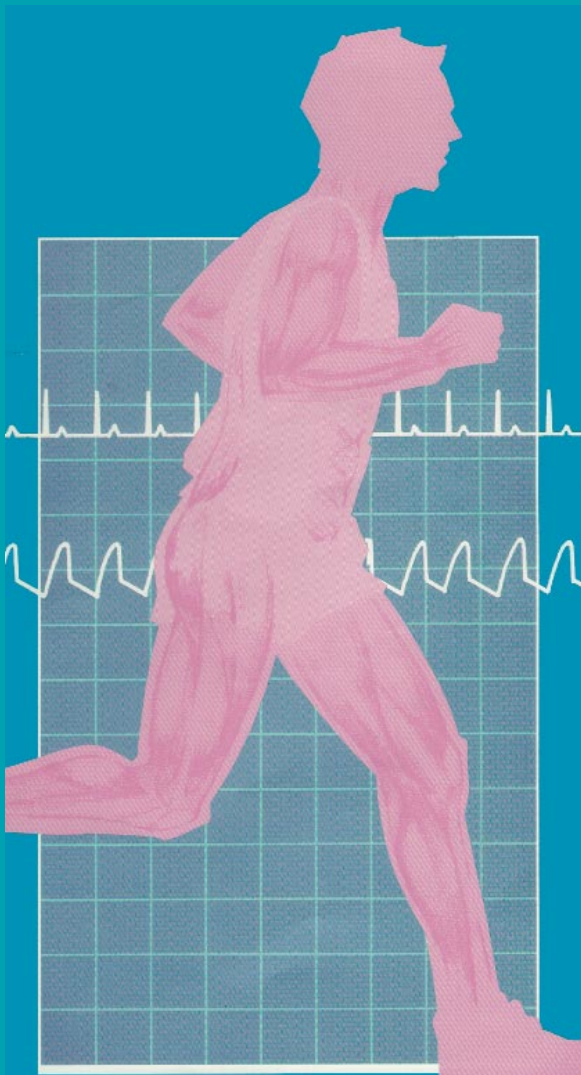


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# ***FITNESS:*** ***A Way of Life***

***A Physical Therapist's Perspective***



***American Physical Therapy Association***

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## *Fitness: A Way of Life*

What is being "fit"?



**W**e would all like to be physically fit, but how many of us know what "fit" really means? Does playing softball twice a week make us fit? Or swimming at the neighborhood pool? Or walking to and from work? What amount of activity is enough to keep us fit? Do we all need to follow the same fitness program or are we all different?

Physical therapists answer these kinds of questions all the time. Realizing that each individual is unique, physical therapists have developed specific methods to determine how fit *you* are, and what types of activities *your* optimum level of fitness.

While each individual is unique, physical therapists support the Surgeon General's statement that everyone may substantially improve their health and quality of life by doing moderate-intensity physical exercise for at least 30 minutes every day. Physical therapists encourage people of all ages to begin a program of daily regular exercise to help prevent cardiovascular disease and musculoskeletal disorders.

Physical therapists are uniquely qualified to develop personalized conditioning programs that, if followed properly, will help prevent injury and promote fitness. Physical therapists would be the first to say they would rather see you *before* you embark on a fitness program, than *after* you have sustained a painful injury.

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This brochure is not intended as a substitute for professional health care.

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This brochure is designed to increase your understanding of fitness from a total body perspective—the approach used by physical therapists. Total fitness is achieved by matching your body and lifestyle to a fitness program that you will enjoy, a fitness program that can become a *way of life*.

## Six Elements of Fitness

The American Physical Therapy Association wants you to understand the total body approach to fitness by looking at the six elements of fitness:

1. Aerobic Capacity
2. Body Structure
3. Body Composition
4. Body Balance
5. Muscular Flexibility
6. Muscular Strength

We'll now look at each of these elements from the physical therapist's perspective, see how a therapist evaluates your body in terms of these elements, and find out how that evaluation can help you achieve overall fitness.

### *Fitness Is*

Fitness as defined by physical therapists is an ongoing state of health whereby all systems of the body are conditioned to withstand physical stress and are able to perform at an optimum level without injury. A person who is physically fit has a properly aligned body structure; flexible and strong muscles; an efficient heart and healthy lungs; a good ratio of body fat to lean body mass; and good balance.

Note that the above definition does not say, "A person who is fit can run *X* amount of miles in *X* minutes." Being fit is just that—a state of being. What activities you choose to perform to achieve and maintain a state of fitness are really up to you!

. . . And, as an added bonus, physical fitness also contributes to mental fitness. There's nothing like being in tip-top shape to give you a positive outlook on life.

## Aerobic Capacity

Aerobic capacity is an index of your cardiovascular system's ability to transport oxygen to working muscles, where the oxygen is used as fuel to produce energy for movement.

You can improve your aerobic capacity by achieving what is called an *aerobic response*. Although the level necessary to achieve an aerobic response varies with each individual, it is usually reached by exercising at 60 to 80 percent of your maximum heart rate. This ideal rate for exercise (60–80 percent of maximum) is called your *target heart rate*. Exercising at your target heart rate should be maintained for 20 to 30 minutes and occur at least three times a week for you to attain aerobic fitness.

There are many different types of activities that can generate an aerobic response. Walking can be an excellent activity that is a particularly good aerobic exercise. Some other aerobic activities include jumping rope, swimming, running, cross-country skiing, hiking, aerobic dancing, and bicycling.



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## Target Heart Rate

To estimate your target heart rate, you must first determine your maximum heart rate. This is done by subtracting your age from 220. If a check-up by your physician indicates no problems, your target heart rate is 60 to 80 percent of your maximum rate. For example: If you are 20 years old, your maximum heart rate is 200. Your target heart rate is 60 to 80 percent of 200, or 120 to 160 beats per minute.

You can monitor your target heart rate by finding your pulse—either lay your fingertips on the palm side of your wrist or lightly against the side of your voice box—and count the pulse for 15 seconds; then multiply this number by four to get your pulse rate in beats per minute.

As you continue to exercise regularly, you will find that it takes more effort to reach your target heart rate. This is a good sign and means that your heart and lungs are getting stronger and that your aerobic capacity is improving.

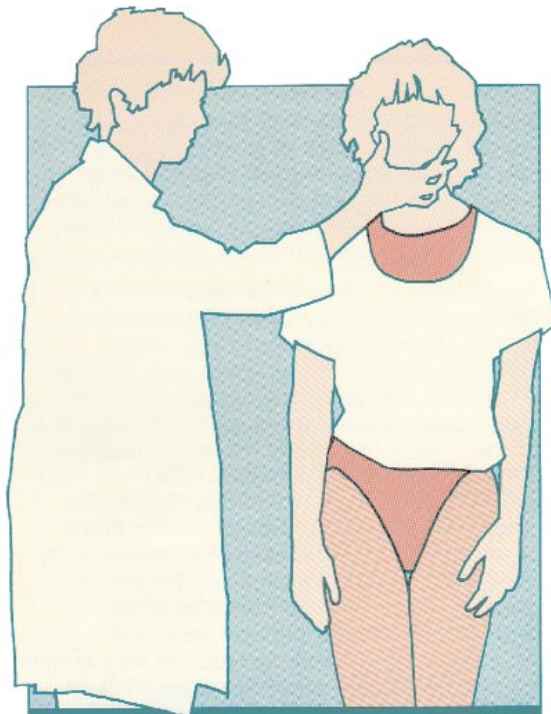
## Resting Heart Rate

Another clear indicator of improved aerobic fitness is your resting heart rate. Take your pulse first thing in the morning, while you are still lying in bed. As your aerobic fitness level improves, your resting heart rate should decrease. This occurs because as your heart becomes a better pump, it can pump more blood with each beat, supplying your muscles with more of the oxygen they need. (Resting heart rates rarely go below 50 beats per minute and are usually between 60 to 100 beats per minute.)

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## Body Structure

A physical therapist evaluates your body structure by looking for structural malalignments in upper and lower extremities (arms and legs), the head, neck, and trunk. The therapist will check your overall posture by



looking at your head, neck, shoulders, spine, pelvis, knees, and feet, from front, side and back views.

Even a small imbalance in the way you stand—too much weight on one foot, your shoulders “slouched” forward—may lead to pain and injury when you start exercising. If any problems are identified in the evaluation, the physical therapist may give you some exercises to strengthen weak muscles or improve the flexibility of tight muscles, teach you to become more aware of your posture while standing and walking, or recommend specific footwear.

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## Body Composition

Body composition is the ratio of body fat to lean body mass (bones and muscles). You cannot determine your body composition simply by weighing yourself on a standard scale. In fact, body composition measurements

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tend to be a much better indicator of your current fitness level than your body weight. Some people who weigh a lot are not fat; they just may be muscular and muscles weigh more than fat. Conversely, a person who maintains a seemingly “ideal” weight may actually be carrying too much fat.

Your physical therapist can determine your body composition by taking fat measurements at various places on your body. Although ideal body fat levels vary with each individual, it is generally accepted that the ideal range of body fat is approximately 10 to 15 percent of total body mass for males and 15 to 22 percent for females; seasoned athletes often have much less. It is at the ideal fat-to-lean ratio that your body is its most efficient. An excessive fat-to-lean body composition puts unnecessary weight on your skeletal structure during exercise without helping you perform your task. Muscles at least work *for* you; fat just weights you down. (On the other hand, insufficient body fat isn't good for your health either and is common among some athletes and adolescents.)

. . . And don't be discouraged if you gain a few pounds when you begin your fitness program—the extra weight means you're building up your muscles as you lose the fat!

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## *Body Balance*

A physical therapist will check your balance by having you stand, with your eyes closed, on one leg for a brief period of time, then on the other. Although this seems a simple test, it may indicate if you have a neurological (nervous system) problem. Neurological testing evaluates the balance controlled by your brain.

Even a minor balance problem may place you at risk for possible injury. If a problem is identified, your therapist may give you some exercise tips that will help to improve your balance.

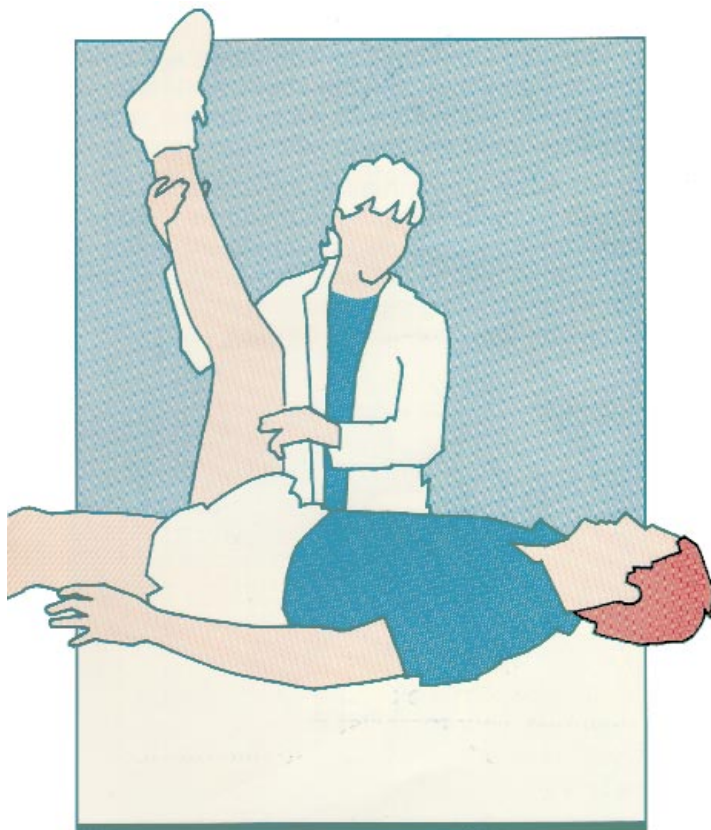
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## *Muscular Flexibility*

Your muscles should be flexible to allow for the full range of motion required by life's many activities, such as stretching, lifting, reaching, and bending. Muscles should be able to lengthen without too much effort, allowing your body and limbs to move efficiently in many different ways.

Just as muscles can be stretched, due to their elastic nature, they can also become shortened when adapting to long periods of inactivity. A shortened or inflexible muscle may be more susceptible to stress and injury.

A physical therapist can determine your flexibility by measuring how far you can move your arms, legs and torso. The therapist will notice if you have any specific areas of “tightness” and will suggest some gentle exercises to increase flexibility.



## Muscular Strength

In addition to being flexible, your muscles should be able to exert force and control movement. For example, flexible muscles will help you bend over to pick up a box, but it's your muscular strength that enables you to lift it.

The physical therapist will determine the strength of your major muscle groups by having you perform weight-resistance exercises and tests.

If your muscles need strengthening, you may embark on a strength-training program designed by your therapist. Usually these exercises do not require heavy lifting or strenuous exercise. You may only need to work with and-weights to strengthen one arm, or do strengthening exercises to bring muscles on one side of your body in balance with the other.

Strengthening exercises should condition those muscles that will be used to perform the activity of your choice. If you want to be a long-distance runner, you should condition your leg muscles to withstand stress for long periods of time.



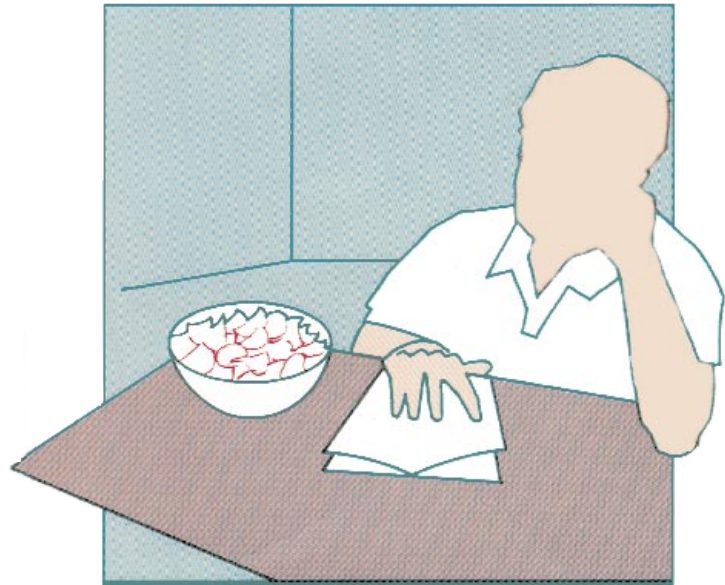
## Additional Factors that Affect Fitness

It is important to be aware of, and tell your physical therapist about, any aspects of your lifestyle that may be considered risk factors to your fitness.

Do you:

- Smoke cigarettes?
- Eat "junk" food regularly?
- Take stimulants (drugs, caffeine, even vitamins)?
- Drink alcohol excessively?
- Have a stressful job?
- Feel depressed, lack motivation?
- Have a family health history that includes heart disease, diabetes, or high blood pressure?

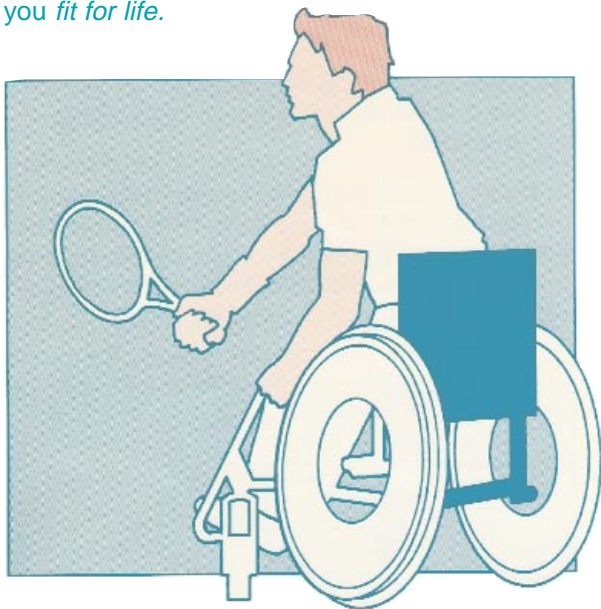
Although some of these factors may seem unrelated to your fitness, they may have an effect on your general state of well-being, and may pose risks that should be considered when developing your fitness program.



## Fitness for People With Disabilities

There are many ways in which a physical therapist can tailor-make a fitness program for people with disabilities.

The goal of anyone involved in a fitness program is to be at a level appropriate for his or her unique capacity. Your physical therapist is eager to help you meet your challenge and benefit from a fitness program that will keep you *fit for life*.

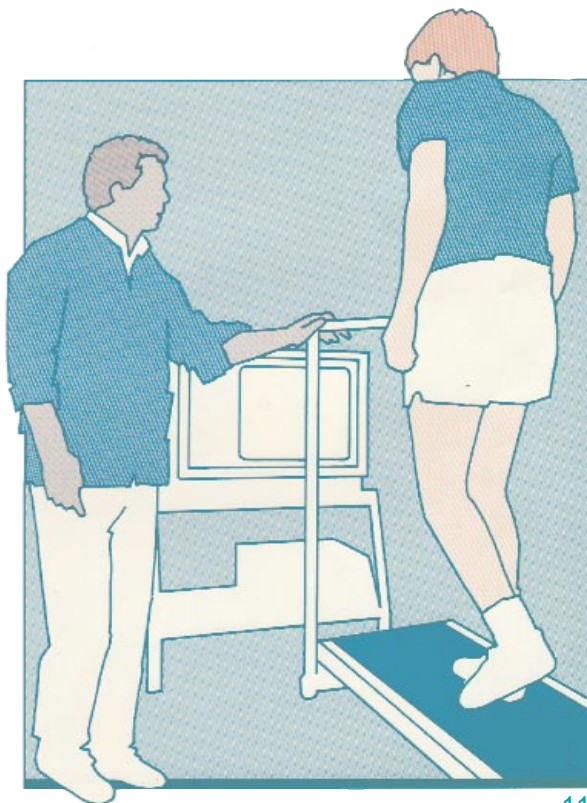


## Starting Your Fitness Way of Life

1. Decide what sports and activities you most enjoy. Do you play tennis? Swim? Jog? Do you enjoy walking? Make a list of your favorite activities, then list next to these activities a time when you feel you could perform them during an average week.
2. Consult a physical therapist who specializes in sports and orthopaedic physical therapy. To find an appropriate physical therapist near you, look in the yellow pages of your

phone book, ask your physician or local hospital, or contact the local chapter of the American Physical Therapy Association. You'll be surprised how many physical therapists are ready to serve you right in your own area.

3. Ask your physical therapist to give you a fitness evaluation. This will determine your present level of fitness, based on the six elements of fitness as described in this brochure. The therapist will check your aerobic capacity, body structure, body composition, body balance, muscular flexibility, and muscular strength. The therapist will tell you what you need to do to improve your present condition.
4. Share the list you developed in Step 1 with your physical therapist. Together, you can choose activities for a balanced fitness program. Your choices should be based on



your favorite activities and lifestyle, and on how much time during each week you want to commit to being fit.

5. Begin your fitness program, monitoring your progress based on the suggestions in this brochure, and the advice of your physical therapist. If you suffer an injury, no matter how minor you think it is, tell your physical therapist. It may be helpful in deciding what activities are best for you.
6. Although you may emphasize one area of conditioning as you develop your individualized fitness program, remember that total fitness requires a total body approach. Balance your program with activities that concentrate on the six elements of fitness: aerobic capacity, body structure, body composition, body balance, muscular flexibility, and muscular strength.

Achieving and maintaining fitness is a lifelong commitment. Perhaps you are currently active in sports; but what will you be doing 20 years from now? Your state of fitness need not lessen with age. Just because you may become less active as you grow older, you needn't resign yourself to being less fit.

As you become comfortable with your fitness program—enjoy yourself! Notice how much better you move, breathe and feel. You were meant to be fit! It's just a matter of knowing where to start, and how to get to where you want to be. Remember—fitness *is* a way of life!



## About APTA

The American Physical Therapy Association is a national professional organization representing more than 73,000 physical therapists, physical therapist assistants and students throughout the United States.

Physical therapists are vital members of the multidisciplinary health care team. They provide treatment and can refer clients to other health care specialists.

APTA serves its members and the public by increasing the understanding of the physical therapist's role in the health care system and by fostering improvements in physical therapy education, practice and research.

### Other APTA Brochures Include:

- Fit Kids
- Fit Teens
- For The Young At Heart: Exercise Tips for Seniors
- For Women Of All Ages
- Taking Care Of Your Back
- Taking Care Of Your Foot And Ankle

Bulk quantities available. Send for The APTA Resource Catalog via Internet to: [svctr@apta.org](mailto:svctr@apta.org) or mail your request to APTA, 1111 North Fairfax Street, Alexandria, VA 22314-1488.

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