

## **Exercise and Lifestyle** (Developed by the President's Council on Physical Fitness and Sports)

### **Making a Commitment**

You have taken the important first step on the path to physical fitness by seeking information. The next step is to decide that you are going to be physically fit. This pamphlet is designed to help you reach that decision and your goal.

The decision to carry out a physical fitness program cannot be taken lightly. It requires a lifelong commitment of time and effort. Exercise must become one of those things that you do without question, like bathing and brushing your teeth. Unless you are convinced of the benefits of fitness and the risks of unfitness, you will not succeed.

Patience is essential. Don't try to do too much too soon and don't quit before you have a chance to experience the rewards of improved fitness. You can't regain in a few days or weeks what you have lost in years of sedentary living, but you can get it back if you persevere. And the prize is worth the price.

### CHECKING YOUR HEALTH

Vigorous exercise involves minimal health risks for persons in good health or those following a doctor's advice. Far greater risks are present by habitual inactivity and obesity.

### DEFINING FITNESS

Physical fitness is to the human body what fine tuning is to an engine. It enables us to perform up to our potential. Fitness can be described as a condition that helps us look, feel and do our best. More specifically, it is: "The ability to perform daily tasks vigorously and alertly, with energy left over for enjoying leisure-time activities and meeting emergency demands. It is the ability to endure, to bear up, to withstand stress, to carry on in circumstances where an unfit person could not continue, and is a major basis for good health and well-being."

Physical fitness involves the performance of the heart and lungs, and the muscles of the body. And, since what we do with our bodies also affects what we can do with our minds, fitness influences to some degree qualities such as mental alertness and emotional stability.

As you undertake your fitness program, it's important to remember that fitness is an individual quality that varies from person to person. It is influenced by age, sex, heredity, personal habits, exercise and eating practices. You can't do anything about the first three factors. However, it is within your power to change and improve the others where needed.

## KNOWING THE BASICS

Physical fitness is most easily understood by examining its components, or "parts." There is widespread agreement that these four components are basic.

**Cardiorespiratory Endurance** - the ability to deliver oxygen and nutrients to tissues, and to remove wastes, over sustained periods of time. Long runs and swims are among the methods employed in measuring this component.

**Muscular Strength** - the ability of a muscle to exert force for a brief period of time. Upper-body strength, for example, can be measured by various weight-lifting exercises.

**Muscular Endurance** - the ability of a muscle, or a group of muscles, to sustain repeated contractions or to continue applying force against a fixed object. Pushups are often used to test endurance of arm and shoulder muscles.

**Flexibility** - the ability to move joints and use muscles through their full range of motion. The sit-and-reach test is a good measure of flexibility of the lower back and backs of the upper legs.

**Body Composition** is often considered a component of fitness. It refers to the makeup of the body in terms of lean mass (muscle, bone, vital tissue and organs) and fat mass. An optimal ratio of fat to lean mass is an indication of fitness, and the right types of exercise will help you decrease body fat and increase or maintain muscle mass.

## A MATTER OF PRINCIPLE

The keys to selecting the right kinds of exercises for developing and maintaining each of the basic components of fitness are found in these principles:

**Specificity** - pick the right kind of activities to affect each component. Strength training results in specific strength changes. Also, train for the specific activity you're interested in. For example, optimal swimming performance is best achieved when the muscles involved in swimming are trained for the movements required. It does not necessarily follow that a good runner is a good swimmer.

**Overload** - work hard enough, at levels that are vigorous and long enough to overload your body above its resting level, to bring about improvement.

**Regularity** - you can't hoard physical fitness. At least three balanced workouts a week are necessary to maintain a desirable level of fitness.

**Progression** - increase the intensity, frequency and/or duration of activity over periods of time in order to improve.

## MEASURING YOUR HEART RATE

Heart rate is widely accepted as a good method for measuring intensity during running, swimming, cycling and other aerobic activities. Exercise that doesn't raise your heart rate to a certain level and keep it there for 20 minutes won't contribute significantly to cardiovascular fitness.

The heart rate you should maintain is called your Target Heart Rate. There are several ways of arriving at this figure. One of the simplest is: Maximum Heart Rate (220 - age) X 70%. Thus, the target heart rate for a 40 year-old would be 126.

## CONTROLLING YOUR WEIGHT

The key to weight control is keeping energy intake (food) and energy output (physical activity) in balance. When you consume only as many calories as your body needs, your weight will usually remain constant. If you take in more calories than your body needs, you will put on excess fat. If you expend more energy than you take in you will burn excess fat.

Exercise plays an important role in weight control by increasing energy output, calling on stored calories for extra fuel. Recent studies show that not only does exercise increase metabolism during a workout, but it causes your metabolism to stay increased for a period of time after exercising, allowing you to burn more calories.

How much exercise is needed to make a difference in your weight depends on the amount and type of activity, and on how much you eat. Aerobic exercise burns body fat. A medium-sized adult would have to walk more than 30 miles to burn up 3,500 calories, the equivalent of one pound of fat. Although that may seem like a lot, you don't have to walk the 30 miles all at once. Walking a mile a day for 30 days will achieve the same result, providing you don't increase your food intake to negate the effects of walking

If you consume 100 calories a day more than your body needs, you will gain approximately 10 pounds in year. You could take that weight off, or keep it off, by doing 30 minutes of moderate exercise daily. The combination of exercise and diet offers the most flexible and effective approach to weight control.

Since muscle tissue weighs more than fat tissue, and exercise develops muscle to a certain degree, your bathroom scale won't necessarily tell you whether or not you are "fat." Well muscled individuals, with relatively little body fat, invariably are "overweight" according to standard weight charts. If you are doing a regular program of strength training, your muscles will increase in weight, and possibly your overall weight will increase. Body composition is a better indicator of your condition than body weight.

Lack of physical activity causes muscles to get soft, and if food intake is not decreased, added body weight is almost always fat. Once-active people, who continue to eat as they always have after settling into sedentary lifestyles, tend to suffer from "creeping obesity."