

“Moving” Toward a Longer, Healthier Life

by Dr. Lenore Coleman

INTRODUCTION

Many of you are thinking about starting exercise programs. The commitment to exercise will require both time and effort. You must have patience and not expect instant results. If you try to do too much too soon, your chance for failure increases. In this article, I will try to give you some basic information regarding exercise and physical fitness. The main reason you need to incorporate exercise into your daily routine is to decrease your chances of becoming overweight or obese.

Many experts agree that in the United States we are experiencing an obesity epidemic. The prevalence of obesity among adults in the United States has increased from twenty-three percent to thirty-one percent between 1994 and 2000. Based on reported information, fifty-four million U.S. adults were considered obese (BMI > 30kg/m²) and sixty-four percent considered overweight (BMI > 25kg/m²) in 2000. Our youth are also at risk, as nine million children in 2000 were overweight; and weight increase was evident regardless of sex, age, race, and educational status. The obesity epidemic is the result of less physical activity and increased calorie consumption. We are eating more pre-packaged foods and “fast foods,” and drinking higher calorie beverages. Our portion sizes have also increased; therefore, we consume more calories during our meals and snacks. The increase in calories means increased energy intake, causing weight gain.

In 2001 African Americans had a higher rate of obesity (31.1 percent) than other ethnic groups. Reasons for the increase in obesity in African Americans can be attributed to increased fat consumption and less physical activity.

How Is Obesity Measured?

Obesity is measured using the BMI (*Body Mass Index*) or *waist circumference*. BMI is a number that shows body weight adjusted for height. BMI can be calculated with simple math, using inches and pounds, or meters and kilograms. For adults aged twenty years or older, BMI falls into one of these categories: underweight, normal, overweight, obese.

BMI	Weight Status
Below 18.5	Underweight
18.5—24.9	Normal
25.0—29.9	Overweight
30.0 and Above	Obese

BMI *correlates* with the amount of body fat. The relation between the percent of body fat and BMI differs with age and gender. For example, women are more likely to have a higher percent of body fat than men for the same BMI. The goal is to keep your BMI less than 25 kg/m². Table 1 provides your BMI, based on height and weight in pounds.

Whatever your BMI, talk to your doctor to see if you are at an increased risk for disease, and if you should lose weight. Even a small weight loss (just ten percent of your current weight) may help to lower the risk of disease.

Waist circumference is a common measure used to assess abdominal fat content. There is evidence that excess body fat in the abdomen is an independent predictor of risk factors for many chronic diseases, including diabetes and heart disease. Undesirable waist circumferences differ for men and women.

- Men who have a waist measurement greater than forty inches (102 cm) are at risk.
- Women who have a waist measurement greater than thirty-five inches (eighty-eight cm) are at risk.

It is important that you work to achieve your goal for BMI and/or your waist circumference in order to reduce your risk for chronic diseases and complications later in life.

Being Overweight or Obese Can Cause Problems

Overweight and obese individuals (BMI of twenty-five and above) are at an increased risk for many chronic diseases and conditions. Examples include:

- High blood cholesterol, dyslipidemia
- High blood pressure, hypertension—fifty million people
- Diabetes—eighteen million people with diabetes (type 1 and type 2)
- Coronary heart disease—13.5 million people
- Angina pectoris

- Congestive heart failure
- Stroke
- Gallstones
- Cholecystitis and cholelithiasis
- Gout
- Osteoarthritis
- Obstructive sleep apnea and respiratory problems
- Some types of cancer (such as endometrial, breast, prostate, and colon)
- Complications of pregnancy
- Poor female reproductive health (such as menstrual irregularities, infertility, irregular ovulation)
- Bladder control problems (such as stress incontinence)
- Uric acid nephrolithiasis
- Psychological disorders (such as depression, eating disorders, distorted body image, and low self-esteem).

Numerous studies have shown that lost weight can decrease the risk of developing the diseases/conditions mentioned above. The best way to lose weight or not to gain weight is proper nutrition and exercise.

Physical Activity/Exercise

More than 60 percent of U.S. adults do not engage in the recommended amount of daily activity. Approximately 25 percent of U.S. adults are not active at all. Physical inactivity is more common among:

- Women than men.
- African American and Hispanic adults than whites.
- Older than younger adults.
- Less affluent than more affluent people.

Based upon years of research, we now know that increasing our physical activity level generally promotes good health and fewer disabilities later in life. Learning to incorporate exercise into

your daily routine at home and at work will help you to live a longer and healthier life. The more exercise you get, the better you will feel. The most important aspect to a successful exercise routine is that you must do it regularly (rain or shine). We tend to make excuses for not exercising. Some of the common excuses include:

- “I don’t have the time.”
- “I am too old to exercise.”
- “I need special clothing to exercise.”
- “I have joint pain due to arthritis.”
- “People at the gym will think I am fat.”
- “I cannot afford a gym membership.”
- “I don’t know how to exercise.”
- “I don’t want to take time away from my family.”
- “I don’t like to sweat.”

The reality is that you are never too old to exercise. It is not necessary for you to purchase an expensive gym membership or buy special clothes. Simply walking and incorporating more activity into your daily life can improve your fitness level.

There are many benefits to exercise. They include:

- Aerobic exercise burns fat and calories
- Anaerobic exercise, weight training increases muscle tissue, which raises metabolic rate
- Reduces blood pressure
- Reduces LDL and raises HDL
- Decreases blood sugar levels
- Improves insulin sensitivity
- Relieves some types of stress and depression
- Reduces the intensity of menopause and PMS symptoms
- Improves body composition
- Reduces the craving for tobacco
- Improves exercise capacity and stamina

- Increases blood fibrinolytic capacity
- Slows the process of aging

Components of an Exercise Prescription

Before you start exercising, it is important to check with your doctor. If you have certain medical conditions (diabetes, congestive heart failure, coronary heart disease, etc.), exercise can increase your risk of serious injury. Your doctor may give you a special test to make sure that you can tolerate a basic exercise program. In general, exercise improves chronic conditions. When choosing your exercise regimen, pick something that you like to do that does not cause any discomfort. A mixture of weight bearing (walking, jogging) and non-weight bearing (swimming) will reduce your risk of joint injury. When deciding on your exercise routine, you must select the type, duration, frequency and intensity of your exercise program.

TYPE OR MODE OF EXERCISE

Aerobic

The American College of Sports Medicine (ACSM) defines aerobic exercise as “any activity that uses large muscle groups, can be maintained continuously, and is rhythmic in nature.” It is a type of exercise that targets the heart and lungs, and causes them to work harder than at rest. Some examples of aerobic exercise include:

- Walking
- Swimming
- Dancing
- Volleyball
- Tennis
- Bicycling
- Jumping rope
- Jogging
- Stair walking
- Ice or rollerskating
- Downhill or Cross-country skiing

HEALTHYLIVING

Using aerobic equipment (i.e., treadmill, stationary bicycle)

Resistance/Strength Training

Resistance or strength training involves using different muscle groups to lift weights. This type of exercise works against the forces of gravity. These exercises are not limited to lifting huge barbells, but include such things as raising the legs with ankle weights attached.

Benefits of Strength Training through Resistance Exercises

There are numerous benefits to regular strength training, particularly as you grow older. Strength training can help you to control your weight since individuals who have more muscle mass have a higher metabolic rate. Muscle is active tissue that consumes calories, while stored fat uses very little energy. Strength training can provide up to a 15 percent increase in metabolic rate, which is enormously helpful for weight loss and long-term weight control. Studies have shown that lifting weights two or three times a week increases strength by building muscle mass and bone density. It can be very powerful in reducing the signs and symptoms of numerous diseases and chronic conditions—among them:

- **Arthritis**—one study found that strength training decreased pain by 43 percent, increased muscle strength and general physical performance, improved the clinical signs and symptoms of the disease, and decreased disability.
- **Diabetes**—clinical studies have shown that adding resistance training to an established exercise routine can produce dramatic improvements in glucose control that are comparable to taking diabetes medication. People with diabetes that participate in resistance training are stronger, gain muscle, lose body fat, and have less depression.
- **Osteoporosis**—Post-menopausal women can lose 1-2 percent of their bone mass annually. Resistance

training can increase bone density and reduces the risk for fractures among women ages 50-70.

- **Depression**—Strength training provides improvements in depression similar to anti-depressant medications. Currently, it is not known if this is because people feel better when they are stronger, or if strength training produces a helpful biochemical change in the brain. It is most likely a combination of the two.
- **Insomnia**—People who exercise regularly enjoy improved sleep quality. They fall asleep more quickly, sleep more deeply, awaken less often, and sleep longer.
- **Heart Disease**—The risk of heart disease is lower when the body is leaner. One study found that cardiac patients gained not only strength and flexibility, but also aerobic capacity when they did strength training three times a week as part of their rehabilitation program.

DURATION AND FREQUENCY OF EXERCISE

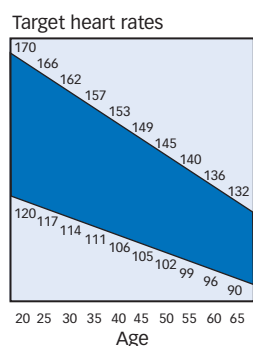
For *aerobic exercises* the current recommendation is 30 minutes of moderate activity “most days of the week” to improve your fitness level and reap the rewards of exercise. Building up to 60 minutes of moderate intensity exercise per day may further reduce the risk of weight gain over time and will provide additional health benefits.

For resistance training to improve overall health and fitness capacity, 3-4 training sessions per week is recommended with 48 hours between training sessions. Older individuals should train at least two days per week, but no more than four. The average duration of the training session should be 30-45 minutes.

INTENSITY

Exercise can be categorized as low, moderate and high intensity. Low intensity exercise is 35-60 percent of Maximum Heart Rate. Moderate intensity exercise is 60-80 percent of Maximum Heart Rate. High intensity exercise is 80-90 percent of Maximum Heart Rate. Measuring your heart rate (beats per minute) can tell you how hard your heart is working and is a good method for measuring the intensity of your exercise. The goal is to raise your heart rate to a certain level and keep it there for at least 20 minutes. The heart rate you maintain is called your target heart rate. You can check your heart rate by counting your pulse for 15 seconds and multiplying the beats by four.

The chart in the center of this page shows the target heart rates for people of different ages. When you are just beginning an exercise program, shoot for the lower target heart rate (60 percent). As your fitness improves, you can exercise harder to get your heart rate closer to the top number (85 percent).



GETTING STARTED

Warm-up—Start every workout with a 5-10 minute warm-up to make your muscles and joints more flexible. Spend 5-10 minutes with light calisthenics and stretching exercises. Use low intensity movement, like knee lifts, walking, arm circles or trunk rotations.

Exercise Routine—include a minimum of two thirty-minute sessions each week of resistance training of all the major muscle groups. Start out with one set of each exercise with 8-10 repetitions. The goal would be to work your way up to three sets of each exercise with 10-15 repetitions. Aerobic exercise should be a minimum of three 30-minute sessions each week with a goal of 45-60 minutes every day.

Cool Down—a minimum of 5-10 minutes of slow walking, low-level exercise, combined with stretching.

HEALTHYLIVING

In summary, increasing your daily physical activity and incorporating exercise into your daily life can improve your health and decrease your risk of chronic diseases. Remember to make exercise fun, work it into your daily calendar, exercise with a partner, and, most of all, don't get discouraged. It can take weeks or even months before you notice a difference. **NBV**

		Body Mass Index Table -BMI (kg/m ²)																																														
WEIGHT	HEIGHT	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	245	250																
5'0"		20	21	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49																
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6'0"		14	14	15	16	16	17	18	18	19	20	20	21	22	22	23	24	24	25	26	26	27	28	28	29	30	31	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49		
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6'4"		12	13	13	14	15	15	16	16	17	18	18	19	19	20	21	21	22	23	24	24	25	26	26	27	28	29	30	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49

To use the chart, simply find the intersection of the row and column for the subject's height and weight. In this chart, the BMI figures are rounded to the nearest whole number.

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