





Exercise Key Recommendations:



According to the *2008 Physical Activity Guidelines for Americans*, you need to do two types of physical activity each week to improve your health—**aerobic and muscle-strengthening**.

For Important Health Benefits




Adults need at least:

| | |
|---|---|
|  | 2 hours and 30 minutes (150 minutes) of moderate-intensity aerobic activity (i.e., brisk walking) every week and |
|  | muscle-strengthening activities on 2 or more days a week that work all major muscle groups (legs, hips, back, abdomen, chest, shoulders, and arms). |

OR

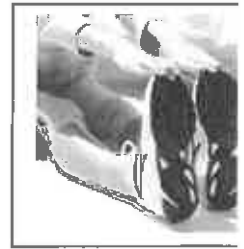
| | |
|---|---|
|  | 1 hour and 15 minutes (75 minutes) of vigorous-intensity aerobic activity (i.e., jogging or running) every week and |
|  | muscle-strengthening activities on 2 or more days a week that work all major muscle groups (legs, hips, back, abdomen, chest, shoulders, and arms). |

OR

| | |
|---|---|
|   | An equivalent mix of moderate- and vigorous-intensity aerobic activity and |
|  | muscle-strengthening activities on 2 or more days a week that work all major muscle groups (legs, hips, back, abdomen, chest, shoulders, and arms). |

10 minutes at a time is fine

We know 150 minutes each week sounds like a lot of time, but you don't have to do it all at once. Not only is it best to **spread your activity out during the week**, but you can **break it up into smaller chunks of time during the day**. As long as you're doing your activity at a moderate or vigorous effort for **at least 10 minutes at a time**.



Tips to Keep You Going

1. Adopt a specific plan and write it down.
2. Keep setting realistic goals as you go along, and remind yourself of them often.
3. Keep a log to record your progress and make sure to keep it up-to-date.
4. Include weight and/or percent body fat measures in your log. Extra pounds can easily creep back.
5. Upgrade your fitness program as you progress.
6. Enlist the support and company of your family and friends.
7. Update others on your successes.
8. Avoid injuries by pacing yourself and including a warm-up and cool down period as part of every workout.
9. Reward yourself periodically for a job well done (not with foods!..How about a new pair of shoes??)

Other Resources:

Adding Physical Activity to Your Life

<http://www.cdc.gov/physicalactivity/everyone/getactive/index.html>

Be Active Your Way: A Guide for Adults

<http://www.health.gov/paguidelines/adultguide/default.aspx>



Exercise

So you keep telling yourself that you will start a workout program "soon". You'll start right after "this" or as soon as "that" is done. Well, we are here to tell you the time is **NOW**.

The Benefits of Exercise

Regular physical activity is one of the most important things you can do for your health. It can help:

- Control your weight
- Reduce your risk of cardiovascular disease
- Reduce your risk for type 2 diabetes and metabolic syndrome
- Reduce your risk of some cancers
- Strengthen your bones and muscles
- Improve your mental health and mood
- Improve your ability to do daily activities and prevent falls, if you're an older adult
- Increase your chances of living longer



Beyond the above benefits of exercise are others such as, providing an outlet for fun and creating a social environment for support. When added to a weight control program these benefits take on increased significance. We already have noted that proper exercise can help control weight by burning excess body fat.

It also has two other body-trimming advantages

- 1) exercise builds muscle tissue and muscle uses calories up at a faster rate than body fat; and
- 2) exercise helps reduce inches and a firm, lean body looks slimmer even if your weight remains the same.



Remember, fat does not "turn into" muscle, as is often believed. Fat and muscle are two entirely different substances and one cannot become the other. However, muscle does use calories at a faster rate than fat, which directly affects your body's metabolic rate or energy requirement. Your basal metabolic rate (BMR) is the amount of energy required to sustain the body's functions at rest and it depends on your age, sex, body size, genes and body composition. People with high levels of muscle tend to have higher BMRs and use more calories in the resting stage. Some studies have even shown that your metabolic rate stays elevated for some time after vigorous exercise, causing you to use even more calories throughout your day.

Additional benefits may be seen in how exercise affects appetite. A lean person in good shape may eat more following increased activity, but the regular exercise will burn up the extra calories consumed. On the other hand, vigorous exercise has been reported to suppress appetite. And, physical activity can be used as a positive substitute for between meal snacking.



Better Mental Health

The psychological benefits of exercise are equally important to the weight conscious person. Exercise decreases stress and relieves tensions that might otherwise lead to overeating. Exercise builds physical fitness, which in turn builds self-confidence, enhanced self-image, and a positive outlook. When you start to feel good about yourself, you are more likely to want to make other positive changes in your lifestyle that will help keep your weight under control.

In addition, exercise can be fun, provide recreation and offer opportunities for companionship. The exhilaration and emotional release of participating in sports or other activities are a boost to mental and physical health. Pent-up anxieties, stresses and frustrations seem to disappear when you're concentrating on returning a serve, sinking a putt or going that extra mile.

If you have a chronic health condition such as arthritis, diabetes, or heart disease, talk with your doctor to find out if your condition limits, in any way, your ability to be active. Then, work with your doctor and exercise specialist to come up with a physical activity plan that matches your abilities. If your condition stops you from meeting the minimum guidelines, try to do as much as you can. What's important is that you avoid being inactive.

The bottom line is - the health benefits of physical activity far outweigh the risks of getting hurt.

Getting Started

A helpful hint in getting started is to know what to do and how to start. The following are some common guidelines to follow when beginning an exercise program:

- Choose an activity you enjoy. Don't do something because you think it's a popular activity. You are more likely to stay with an activity if it's something you enjoy. If having people exercise with you is important then join a class, club or form your own group. When working out with a partner, be sure to choose someone with a similar fitness level. As a beginner, you may work too hard if you exercise with an experienced partner.

- When beginning, ease into a program and have fun. Remember, you should not try to make up for all the years you have not exercised in the first few workouts. Because your body is unaccustomed to exercise, realize that you may be stiff or sore after the first day. This soreness will pass as you continue to work the muscles. If you overdo it the first day, you may be so sore that it turns you off from exercising later.



- Choose to participate in more than one activity. Anything can become boring or monotonous day after day. If you like biking and swimming then alternate these activities.

- When possible, exercise at the same time each day. This helps to form a schedule. Once you have a routine it becomes a natural part of your week.

Types of Exercise

Cardiovascular exercise (also known as, “cardio”), refers to the health and function of a person's heart, lungs, and circulatory system as they relate to sustaining activity for a long period of time. It also refers to the capacity of the lungs to exchange oxygen and carbon dioxide with the blood, which helps in transporting nutrients to metabolically active tissues.

Cardiovascular exercises:

*All cardiovascular exercise programs should include a warm-up, the main cardiovascular session (at least 20 minutes), and a cool-down.

Outdoor

- walking
- jogging
- running
- bicycling
- swimming

Indoor

- treadmill
- upright bike
- recumbent
- elliptical
- stair climbers
- rowers

A cardiovascular warm-up is typically 10 minutes in



length and should focus on slowly increasing heart rate and body temperature for the main cardio session in the workout. Usually the warm-up exercise is the same activity utilized

during the main cardio session, but will be performed at a lower intensity.

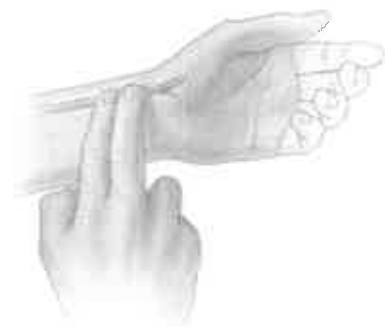
A cardiovascular cool-down is performed after the main cardio session in the workout. The goal of a cool-down is to lower heart rate and body temperature by slowly bringing it back down within about 20 beats per minute of the resting heart rate. This should also be performed at a lower intensity. Cool-downs are important for a client, to keep them from immediately stopping after exercise and to help reduce the risk of exercise-induced injuries.

To measure exercise heart rate:

Most accurate exercise heart rates can be determined by an exercise physiologist through a person's age, resting heart rate, and exercise intensity level. As an exerciser, you can measure your pulse during exercise to make sure you are within your target heart rate range. This range is usually 50% to 85% of your maximum heart rate.

Some exercisers cannot take their pulse or don't want to take their pulse during exercise. For those people, you can use the "talk test". This is a way of measuring intensity level during exercise. If you can talk and walk at the same time (hold a conversation with the person next to you), then you aren't working hard enough!

*Some blood pressure and heart medicines may alter resting and exercise heart rate. Make sure to check with your physician before starting an exercise program to see if any of your medicines may change heart rate.



There are estimated target heart rate ranges based on age alone:

| Age | Average Maximum Heart Rate* | Target Zone: 60% to 85% of Maximum* |
|------------|------------------------------------|--|
| 20 years | 200 bpm | 120 to 170 bpm |
| 25 | 195 | 117 to 166 |
| 30 | 190 | 114 to 162 |
| 35 | 185 | 111 to 157 |
| 40 | 180 | 108 to 153 |
| 45 | 175 | 105 to 149 |
| 50 | 170 | 102 to 145 |
| 55 | 165 | 99 to 140 |
| 60 | 160 | 96 to 136 |
| 65 | 155 | 93 to 132 |
| 70 | 150 | 90 to 128 |

***Remember to consult with an exercise physiologist or personal trainer to get a more accurate, individualized target heart rate range!**

BEGINNING A FITNESS WALKING PROGRAM

You know you want to begin a fitness program, but don't know where to start. It's easy! Walking is one of the easiest and most profitable forms of exercise. All you need is a good pair of shoes, comfortable clothing, and desire.

How to start: First of all, start out slow and easy. Just walk out the door. For most people this means head out the door, walk for 10 minutes, and walk back. That's it? Yes, that's it. Do this every day for a week. If this was easy for you, add five minutes to your walks next week (total walking time 25 minutes). Keep adding 5 minutes until you are walking as long as desired.



WATCH your posture. Walk tall. Think of elongating your body. Hold your head up and eyes forward. Your shoulders should be down, back and relaxed. Tighten your abdominal muscles and buttocks and fall into a natural stride.

Be sure to drink plenty of water before, during, and after walking. Incorporate a warm up, cool down and stretches into your routine. Start your walk at a slow warm up pace, stop and do a few warm up/ flexibility drills. Then walk for the desired length of time. End your walk with the slower cool down pace and stretch well after your walk. Stretching will make you feel great and assist in injury prevention.



The toughest thing about starting a fitness program is developing a habit. Walking daily will help (a minimum of 5 days a week is a good goal). You should walk fast enough to reach your target heart rate ($220 - \text{your age} = \text{target heart rate}$), but you should not be gasping for air.

After you have formed the habit you will want to evaluate your program and your goals.



Here are some general guidelines:

- If you are walking for the general health benefits try to walk 30 minutes a day, most days of the week, at a "talking" pace. (Talking pace means you have elevated breathing, but you can still carry a conversation.)
- To improve cardiovascular fitness you should walk 3 to 4 days a week, 20 to 30 minutes at a very fast pace. At this pace you are breathing hard but not gasping for air.
- If you are walking for weight loss you should walk a minimum of five days a week, 45 to 60 minutes at a brisk pace.
- Once you can comfortably walk for 30 to 60 minutes 5 to 6 days a week you may want to put more "umph" or speed into your routine.



Are You Up for the Challenge??

Zero to Sixty in Twelve Weeks - An easy to follow schedule to get you walking 60 minutes in 12 weeks.

Notice: If you're new to walking, start off with slow, short sessions and build your way up gradually. If you have any health concerns or medical conditions, be sure to check with your doctor for advice before you begin a routine.

12 WEEK BEGINNER SCHEDULE

Having a hard time getting started ... here is an easy to follow beginner schedule that starts with 15 minute walks and will have you walking 60 minutes in 12 weeks. Warm up and cool down time are included in the scheduled minutes. Be sure to stretch after your walks.

| WEEK | SUN | MON | TUE | WED | THU | FRI | SAT |
|------|--------|--------|--------|--------|--------|--------|--------|
| 1 | 15 min | 15 min | 20 min | 15 min | 20 min | 15 min | 20 min |
| 2 | 15 min | 20 min | 20 min | 15 min | 20 min | 15 min | 25 min |
| 3 | 15 min | 25 min | 20 min | 15 min | 25 min | 20 min | 25 min |
| 4 | 20 min | 30 min | 20 min | 20 min | 25 min | 20 min | 30 min |
| 5 | 20 min | 30 min | 30 min | 20 min | 30 min | 20 min | 35 min |
| 6 | 25 min | 30 min | 30 min | 25 min | 30 min | 25 min | 40 min |
| 7 | 25 min | 30 min | 40 min | 30 min | 30 min | 30 min | 40 min |
| 8 | 25 min | 30 min | 40 min | 30 min | 40 min | 30 min | 50 min |
| 9 | 30 min | 40 min | 40 min | 30 min | 40 min | 40 min | 50 min |
| 10 | 30 min | 40 min | 50 min | 30 min | 50 min | 40 min | 50 min |
| 11 | 40 min | 40 min | 50 min | 40 min | 50 min | 40 min | 50 min |
| 12 | 40 min | 40 min | 60 min | 40 min | 60 min | 40 min | 60 min |



Consistency is key in creating a new habit, so be sure that you get something in at least 5 days a week. The starting day for this schedule may be changed to suit your needs. Just try to keep your easy and harder days in the same order. If you are particularly tired one week, don't increase your time... just stick with the last week's schedule.

It's ok to take a day off once a week or choose a day to crosstrain. Choose one of the lighter days (Sunday or Wednesday) for this. A workable schedule for me is Sunday off, and crosstraining on Wednesday. As a beginner you may want to get the walking habit down before you add crosstraining to your routine.

It is natural to feel a little tired or have a few muscle aches when beginning a fitness program. Do not let this keep you from walking. On the other hand if you are in pain it may be prudent to take a day of rest. If the pain continues see a physician.

Notice: If you have any health concerns you should get your physician's approval prior to beginning a fitness program.





TIPS FOR WALKING FASTER

1. Use good posture. Walk tall, look forward, (not at the ground) gazing about 20 feet ahead. Your chin should be level and your head up.
2. Keep your chest raised, and shoulders relaxed (shoulders down, back and relaxed).
3. Bend your arms in slightly less than a 90 degree angle. Cup your hands gently. Swing arms front to back (not side to side - arms should not cross your body.) Do not swing elbows higher than your sternum (breast bone). Swing your arms faster and your feet will follow.
4. Tighten your abs and buttocks. Flatten your back and tilt your pelvis slightly forward.
5. Pretend you are walking along a straight line. Resist the urge to elongate your steps. To go faster -- take smaller, faster steps.
6. Push off with your toes. Concentrate on landing on your heel, rolling through the step and pushing off with your toes. Use the natural spring of your calf muscles to propel you forward.
7. Breathe naturally. As you walk, take deep, rhythmic breaths, to get the maximum amount of oxygen through your system. Walk fast enough that your breathing is increased yet you are not out of breath.

WALKING DON'TS

Common mistakes made by walkers...

1. Do not over stride
2. Do not use too vigorous arm movements
3. Do not look at the ground
4. Do not hunch your shoulders



What is the difference in power walking, fitness walking, and racewalking?

Fitness walking is called by many different names - power walking, fitness walking, health walking. Power walking is commonly used to represent an exaggerated walking style. This style of overstriding and exaggerated arm movements is often linked with injuries. Because of this I don't generally use the term power walking. A better term for a healthful energetic walking pace is "fitness walking".

Fitness walking is much more than a stroll or nature walk. When fitness walking you incorporate the muscles of the upper body making it a GREAT aerobic activity. It burns approximately the same calories as running, yet it is much easier on the body. Because more muscles are used it burns calories much quicker than less aggressive walking. It also tones muscles in the buttocks, thighs, hips, shoulders, upper back and abs. Most fitness walkers average about 12 to 15 minutes per mile.

Unlike racewalking; there is no official definition. There are no rules. If you walk at a purposeful fitness walking pace using good technique you are a fitness walker.

Resistance exercise (also known as “resistance training”) refers to any types of strength or weight training. Resistance training helps build and tone muscles. Each effort in resistance training is performed against a specific opposing force generated by resistance, which means any resistance to being pushed, squeezed, stretched, or bent). There are 3 main types of resistance training:

- **Isometric**: contraction of the muscle using the body’s own muscle (pushing palms together in front of body), structural items (wall push-ups), or free weights (holding the weight in a fixed position)

BEFORE ISOMETRICS, WENDELL HAD NO REASON TO LIVE... AFTER ISOMETRICS, IT WAS A DIFFERENT STORY!



search ID: J49564

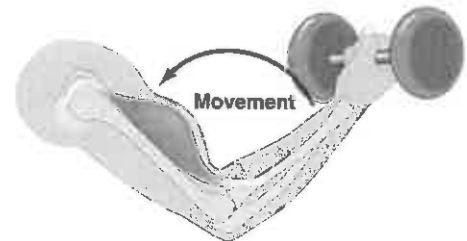
- **Concentric**: muscle contraction when weight is lifted (raising a weight during a bicep curl)
- **Eccentric**: muscle lengthening to lower a weight (lowering a weight during a bicep curl)

Isometric contraction
Muscle contracts but does not shorten



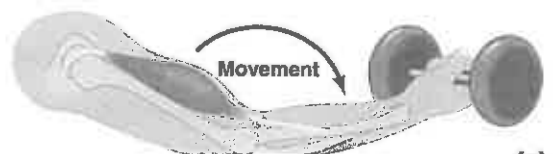
(a)

Concentric contraction



(b)

Eccentric contraction



(c)

Benefits:

Resistance training can be beneficial in:

- increasing bone mineral density
- decreasing body fat
- increasing range of activities
- increasing strength
- improving heart condition
- increasing mobility

Resistance exercises can be performed using a variety of different equipment. One can use:

- dumbbells
- weight machines (nautilus)
- one's own body weight (push ups, squats)
- elastic bands/tubing
- cans of soup or cinder blocks (at home weight training)
- any weighted object/band that would create resistance on the muscles

Resistance training highlights:

- Resistance training should be performed 2-3 days per week.
- Each exercise should have a certain number of sets and repetitions (“reps”). Reps are the number of times you perform an exercise, while sets is the number of cycles of reps that are completed.
- A program should consist of a variety of exercises from all of the major muscle groups in the body: chest, triceps, back (upper and lower), biceps, upper legs, lower legs, and abdomen.
- Trial and error is the best way to pick a weight if you are not working with a trainer. If you can lift a weight 25 times with ease, then it is too light. If you can only lift a weight 4 times, then it is too heavy. You want to choose a weight you can lift 12-15 times with slight to moderate difficulty.
- For beginners, weight machines are the best type of resistance exercise to start with because they are easy to learn and use!
- Free weights are generally used under supervision of a personal trainer or someone who is advanced in weight training. Free weights require more balance and coordination than machines and could result in injury if not used properly.

Flexibility is the range of motion within a joint along the various planes of motion. There is a specific range of motion within each joint and for each activity that is essential to reach peak performance. Having a full range of motion will help your body to move fluidly, avoid muscle tension, and reduce the risk of injury.

*The best way to increase range of motion and better your flexibility is through stretching.

Stretching is important because it will help:

- improve performance
- reduce the risk of injury
- increase blood supply and nutrients to joints
- improve nutrient exchange
- improve muscular balance and postural awareness
- decrease the risk of low-back pain
- reduce muscular tension

*Make sure you stretch after your muscles are warmed-up. You can stretch after your warm-up and/or after your exercise routine, but never stretch cold muscles. Ideally, stretching after you are completely finished with exercise is the best way to increase your range of motion.

Rules for stretching:

- Hold each stretch for 15-30 seconds
- All major muscle groups should be stretched
- No bouncing! Keep a comfortable position until you feel a slight pull on the muscle, then hold.

***Yoga and pilates are a good way to increase flexibility and to incorporate stretching into your exercise routine!**

