



How You Should Be Doing Cardio...

From the Successful Aging Academy

Cardio-vascular training sounds like it should be fairly straight forward. Start running on the road or on a treadmill and try to go a little further or a little faster each time out. The next thing you know you are fit and healthy. Simple enough.

Many people believe the only way to improve cardiovascular health is to run or hop in some other type of cardio machine. Personally I'm not a big fan of running. In fact, as a track coach at the local high school, I often joke with the other runners saying, "Running is bad for you."

Obviously it's not completely true, but running the way most people structure it does have significant drawbacks. Let me explain.

In order to improve your cardiovascular health, you need to train the body like we're supposed to work. Evolutionarily, we were meant to run for short distances and sit down; maybe you run away and not become dinner and sit down. Run and run and run and try to capture dinner so the family could eat, and sit down; short bursts of intermittent activity followed by periods of rest is the preferred manner to train the cardio-vascular system, particularly for fat burning. These days we call that interval training.

We want to have a brief period of exercise followed by a period of backing off or complete rest. Studies have shown this produce more significant drops in body fat as well.

Here is an excellent treadmill routine which will show rapid results. It is quite simple and quite effective.

Step I. After a brief warm-up, get on the treadmill and get in a comfortable walking speed for about 60 seconds. While some folks walk faster than others, a tolerable will be somewhere around 3 miles per hour.

Step II. At the end of 60 seconds begin a 60 second jog. This may be anywhere from 4-4.6 miles per hour.

Step III. After 60 seconds, move the speed of the treadmill up to go to a speed as fast as you can tolerate for one minute. For some people this speed will be no more than 5- 5.5 miles per hour. For others, top speed is going to be closer to 8 or 9 miles per hour. If you are a highly accomplished runner, you may go even faster.

The idea is that at the end of 60 seconds, you must be NEED to stop. You should not be able to continue on at that pace for another 30 seconds. If it was possible for you to continue past 60 seconds, you're going too slow!

Repeat this three minute cycle, walking, jogging and hard run anywhere from 8 to 12 times. When you first try this routine you may only be able to complete this circuit for three or four cycles. Eventually you want to work up to maybe doing it ten times to twelve times. Hence, the entire workout should last no more than 30 to 36 minutes.

That's a simple example of an interval based workout that's very, very effective for cardiovascular health as well as fat loss. Thanks to my colleague Nelson Ayotte, Strength & Conditioning Coach for the St. Louis Blues in the National Hockey League for the exact details.

For best results with most programs and definitely for this routine, it is the *intensity* that matters. It would be preferred the participant shorten the sprint phase above downward closer to the 45 second range rather than slow down.

NOTE: DO NOT ATTEMPT ANY CARDIO-VASCULAR WORKOUT UNLESS CLEARED BY YOUR PHYSICIAN TO DO SO. STOP IMMEDIATELY IF YOU FEEL FAINT, DIZZY OR LIGHTEADED.

I live roughly 20 miles north of Boston. There is a lake in this area, roughly 2 miles around. Walking the lake is a very common form of exercise for a large number of people

Although walking is a certainly better option than doing nothing at all, it is not effective in the long term on several levels. The human body is an amazing instrument. It will adapt quickly to a physical stressor.

Once your body gets used to a walking pace, there quickly comes a point of diminishing returns. That is, as you become more efficient at a particular movement, it takes less energy to complete this movement.

Hence, over time, as your cardio-vascular system improves, less energy is expended. If additional stress is not placed upon the system, improvement ceases. Additional stress could be in the form of traveling further in the same time frame, covering more absolute miles or even carrying an additional load while walking the same distance. There must be some form of progressive resistance involved.

It is important to bear in mind that walking and running are not muscle building activities. While they are solid tools for helping maintain a healthy cardio-vascular system, they will not help individuals in the 50+ crowd build the vital muscle mass needed as the years pass.

In fact, a strong case can be made that distance running is a muscle-wasting activity. A quick comparison of sprinter physiques vs. distance runner physiques emphasizes this point.

Have you ever heard anyone say, "Wow, look at her. She's ripped! She must walk all the time."

When doing cardio-vascular activity, in order to get the best "bang for your buck" you must vary the pace. Step up to a fast power walk and then back off. The ultimate goal is to elevate and then lower the heart rate repeatedly. Move it up and back off. Again, mimicking the way our heart evolved to work. It was designed to be challenged.

The common question I hear in response to my treadmill example is, “I have bad knee (back/ankles/hips) Do I really need to run?” Some people don’t want to run or can’t run, because of orthopedic issues. Running is far from the only form of effective cardio-vascular work. Swimming and biking are options, but many people do not like these forms of exercise or do not have access to the proper facilities to do so.

Interval Training (IT) is an ideal solution. This is the approach used in my “boot camp” style training session so popular at the time of this writing. This training approach is also referred to as Metabolic Training.

Below we present to you multiple examples of this type of training. These workouts provide a cardiovascular and fat burning benefit without running. People often tell me that they run 45 minutes on the treadmill at a steady pace, three days a week. That’s great. It is clearly more than most of the population does and much better than a sedentary existence. But as mentioned, after a while your body is going to adapt to that movement.

There is another caveat here however, once you step off that treadmill the caloric burn quickly ceases.

However, if you’re doing interval based workouts studies have shown the metabolism stays elevated for several hours after the conclusion of the exercise.

So while steady-state running does have a benefit to a degree, there are better uses for your time. In addition, there’s something called oxidative stress that becomes a factor in long distance running. We’ll talk more about that later.

Recommended Cardio Training Patterns

NOTE:

- Again, do not undertake ANY cardio-vascular training program without first consulting a physician and getting approval to do so.
- Immediately cease exercise if you feel faint or dizzy.
- Always be aware of outdoor temperature and avoid working out in excessive heat.
- Beginners should ALWAYS work out with a partner.
- Stay well hydrated at all times.

Level I

Option 1 – For individuals just starting out and able to walk outdoors

Street Version – walking only

- 1) Warm up for approximately 5 minutes of 'regular walking pace', which should be in the area of 2.8mph to 3.2mph or approx. 120 strides per minute.
- 2) Select a target landmark in the distance which will take a minimum of 30 seconds to reach.
- 3) Increase walking speed to a more rapid, but safe pace. Exact speed will be highly individual, but may be anywhere from 4 to 5.5mph or even 6mph. This equates to anywhere from 150-190 strides per minute.
NOTE: You should be able to maintain a conversation during this rapid walking phase. This time will slowly move up to 60 seconds to reach. It will take only a brief period of time to develop the ability to determine how far away a landmark is and how long it will take to get there.
- 4) Once you reach the landmark, decrease the walking speed back down to the original 2.8 to 3.2mph.
- 5) Repeat 4-6 times initially with a long range goal of 30 to 45 minutes

Option 2 - Walking outdoors on a track:

- 1) Warm up for approximately 5 minutes of 'regular walking pace', roughly 1 lap.
- 2) Select a starting point, perhaps using an existing track painted finish line.
- 3) Increase walking speed to a more rapid, but safe pace. Exact speed will be highly individual, but may be anywhere from 4 to 5.5mph or even 6mph. This equates to anywhere from 150-190 strides per minute.
- 4) Maintain the fast pace for $\frac{1}{2}$ of a lap or 200 meters.
- 5) Once you have completed the 200 meters, reduce to the original walking speed for another 200 meters.

- 6) Repeat 4-6 times initially, gradually working up to 30-45 minutes. The first workout may last 1 mile. If you cannot complete the mile, cut all the above distances in half until you can work up to that level.

Option 3 – Walking on a treadmill

Most treadmills and other cardio machines have an Interval setting built in. Many allow individuals to select a slower and faster speed to alternate between. Use the recommended speeds above to as part of this option.

It is also recommended individuals use a treadmill before going outside to walk in order to safely learn and determine personal limits. Experience on a treadmill will allow for a learning period to determine what faster speeds actually feel like and comfortable at specific target tempos for each of these workouts.

Level II

Option 1 – Moderate: For individuals with the ability to run without pain:

- 1) Walk 1 minute: Speed: 2.8-3.0 miles per hour / 120 strides per minute (20 minute mile)
- 2) Jog 1 minute: Speed: Approx. 4.3-4.6 miles per hour / 150 strides per minute (14 minute mile)
- 3) Run 1 minute (target over 6-6.5 mph or greater / 190-200 strides per minute (10 minute mile) Depending upon ability this running speed may be as high as 10 mph.
- 4) Repeat this 3 minute pattern 8-10 times.

NOTE: Less experienced runners: You may need to start with only 4-6 cycles and work up from there. The goal is to get this pattern to last over 30 minutes.

Option 2: Using an outdoor 400 meter track

- 1) Walk 100 meters at regular pace as above
- 2) Run/jog 200 meters at a moderate pace
- 3) Repeat 4-6 times at first and then move up to 30 to 45 minutes

Option 3:

Similar pattern to the above, but change speeds to match songs on an ipod. Some people find this more motivating due to personal music selection. These interval periods will be much longer due to the average song length, so only follow this recommendation if you have prior, recent running experience.

Option 4:

If your knees are bothering you, use an Arc Training or Bicycle and follow the same 3 minute pattern.

Level III: More advanced

Option 1:

Two minute pattern:

- 1) Jog for 1 minute at 4.3-4.6 mph. This equates to 150-160 strides per minute or a 13-14 minute mile.

- 2) Run for 30-45 seconds as quickly as you can handle. It is not necessary to track the speed or stride frequency, only that the effort (intensity) is as high as safely tolerable. More advanced runners may move this 'Run' time to as high as 1 minute.

This pattern is more challenging. Try to count the cycles completed and add 1-2 cycles per week.

All of these patterns should be easily adapted to other types of cardio equipment available to allow for sore joints or simple variety.

Option 2:

- 1) Walk 100 meters at regular pace as above
- 2) Jog 200 meters at a moderate pace
- 3) Run/Sprint 200-300 meters

- 4) Repeat 4-6 times at first and then move up to 30 to 45 minutes