

Walking programs

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Introduction

General beliefs concerning physical activity and exercise training still assume that strenuous or vigorous activity is needed to achieve health benefits. It is indeed documented that there is an intensity-effect correlation when it comes to physical fitness, but this should be completed with the message that moderate-intensity exercise can also yield beneficial results.

A lot of people are not capable of doing vigorous exercise due to orthopedic injury, or because they don't like the sensation that accompanies heavy exercise. For those people, moderate intense and easy to incorporate activities can be recommended. The most used activity when it comes to increasing physical activity levels in a sedentary and deconditioned population is walking.

Walking is something almost everybody can do. Barriers to walking are easy to overcome and people complaining of 'not being the sporty type' or 'having not enough time' can use walking to increase their daily activity. Walking is easily incorporated in the everyday life. Use it as a means of transport for local commissions, use the stairs more often or spend 10' of your brake at work to make a quick walk. People who use walking as a means of transport often reach the required amounts of physical activity/week automatically.

Even though it seems a very simple and non-challenging exercise, walking can increase your heart rate, respiration and metabolic processes enough to induce beneficial effects on the risk factors for cardiovascular diseases. Proven effects are a better lipid profile, decrease of obesity, lower blood pressure and in the long run a decrease in morbidity and mortality. Important to note is that in this context we speak of *Brisk Walking*, which is slightly different from normal walking. Brisk walking is characterized by a higher tempo and more expressive movement to increase activation of your body. Intensity should reach around 70% of the maximum heart rate (respiration increases, face turns red and sweating starts) and volume is recommended to be at least 150'/week. However, duration can be shorter when the intensity is higher and vice versa. Of course you can use walking in combination with PATHway sessions performed at your home. In that case, the total amount of PATWay usage and walking is taken into account to reach the 150'.

A final remark is that quite fit individuals possibly can't reach 70% of their max heart rate by walking alone. Once you surpassed this level of physical fitness, and because one can only walk so fast, you should progress to jogging or choose another activity to achieve recommended heart rates to improve health.

Following here some practical considerations when taking up walking are considered and some general and specific schedules are provided for your use.

Correct posture

- Look forward and not to the ground. Your shoulders should be relaxed
- Place your feet directly below your trunk. This improves your ability to push yourself forward, using your gluteus. In comparison, when you place your feet too much in front of yourself you will try to pull yourself forward and this has negative influences on your posture.
- Your heel always strikes the ground first. You then proceed to roll your foot and eventually push off your toes. When placing the heel on the ground this results in a shock given to your body. To minimize the effects of this shock on other joints in your leg, it is recommended to keep your knee slightly bent when putting your heel down.
- Determine your stride length by placing both feet together and let yourself fall forward. Break your fall by placing one leg forward at the last moment. The length of the step you then make is your stride length. Try to keep this stride length irrespective of the kind of walk you do. It is better to focus on smaller and faster steps.
- Swing your arms by your side
- You can also watch this video: <https://www.youtube.com/watch?v=-fD2TSL2s7I>

Getting started and building up

When trying to make walking a part of your daily life, start small. This makes it easier to commit yourself to walking and gives room to slowly and almost unnoticeably incorporate walking into your daily routine. Start walking short periods of time with a low intensity and slowly build up to 30'/day for 5 days/week at moderate intensity. A method you can use is as follows: walk for 10'/day in the first 3 weeks. Starting from week 4, add 5' to every walk per week until you reach the goal of 30'/day for 5 days/week. When you advance more and more, it may be easier for you to walk only 3-5x/week. When you start walking less frequent (e.g. 3x/week), increase duration. Or you can start walking a certain distance instead of a certain amount of time (e.g. 3 miles, 3x/week). When you enjoy walking, are trained and have confidence in yourself you can try to make (organized) long walks or daytrips. When doing so, always remember to bring something to drink and/or eat!

REMARK: Before heading out, take a moment to reflect about the environment you will be walking in. Walking up a hill increases the intensity of your walk and consequently your heart rate. If you live in a hilly area, your walks will probably be more intense and therefore can be shorter in duration. Also walking through the mud, or on a track where you have to jump over puddles etc. influences intensity!

Week	Warm-up	Brisk walking	Cool-down
1	5 minutes	5 minutes	5 minutes
2	5 minutes	7 minutes	5 minutes
3	5 minutes	9 minutes	5 minutes
4	5 minutes	11 minutes	5 minutes
5	5 minutes	13 minutes	5 minutes
6	5 minutes	15 minutes	5 minutes
7	5 minutes	18 minutes	5 minutes
8	5 minutes	20 minutes	5 minutes
9	5 minutes	23 minutes	5 minutes
10	5 minutes	26 minutes	5 minutes
11	5 minutes	28 minutes	5 minutes
12	5 minutes	30 minutes	5 minutes

U.S. Department of Health and Human Services, 2013

The look of a walking session

- Warming up: consists of a stimulus for your cardiorespiratory system to get your blood pumping. Typically this is done by walking at low pace the first couple of minutes of your training. Also included in the warm-up is a short session of dynamic stretches. Turn loose your ankles, knees and hips and swing your legs from front to back and from side to side.
- Technique: spend a short period of time in the beginning of your walk to pay attention to correct execution.
- The main part: consists of one of the *general training programs* or *specific training programs* as mentioned below.
- Cool down: Likewise as the warm-up, spend the last few minutes of your walk slowing down. When back home (or at the car or...), perform a couple of static stretches as you can find in the PATHway system.

General training programs

Extensive low volume

In this type of training, your heart rate fluctuates between 40% and 80% of your max heart rate. Your average heart rate should be around 65% of the maximum. You perform exercise at an intensity that still allows you to talk. Duration of exercise at this intensity should be between 30'-60'. Effects resulting from repeated *extensive low volume* training are: burning of fat, maintenance of aerobic exercise capacity.

Extensive endurance training

This type of training allows a heart rate between 50%-80% of your max heart rate. The average heart rate should be around 70% of the maximum. You work in bouts of 10'-20' with a short rest period in between. Depending of the duration and intensity of the bout, you perform between 3-5 repetitions. Effects of repeated *extensive endurance training* are: increase in stroke volume of the heart, increased capability of the muscles to use oxygen.

Fartlek/interval training

Fartlek training is a form of interval training with a very random character. Heart rate fluctuates between 60%-100% of the maximum and the average heart rate achieved is completely up to you. We recommend to at least try to achieve an average of 70% of the maximum. You work in bouts with a duration of 5'-45'. Practically this means that you can use different bouts of shorter duration with a higher intensity or long bouts with a low intensity, totaling a duration of at least 30 minutes. Fartlek training was and still is very popular in the Scandinavian countries. They were one of the first to use this method to train their championship-winning long distance runners. The playful character of this training method makes it fun. You can just walk around your neighborhood and decide to walk faster until the next intersection. Then you walk slower for a couple of minutes and choose a new mark point to walk to with increased speed.

Specific training programs

endurance

	Content	Heart rate	Remarks	Goal
Warm-up	3'walking, 2'dynamic stretching	50-70% of HRmax		Get the system going
Technique	Upright, correct foot placement, bend knees, arm swing	70-80% of HRmax	Performed during main part of the session	Injury prevention
Main part	10'-20' brisk walking	75-85% of HRmax	Duration dependent on fitness level	Conditioning
Cool-down	3' walking, 2' static stretching	50-70% of HRmax		Relax Injury prevention

	Content	Heart rate	Remarks	Goal
Warm-up	3'walking, 2'dynamic stretching	50-70% of HRmax		Get the system going
Technique	Upright, correct foot placement, bend knees, arm swing		Performed during main part of the session	Injury prevention
Main part	20'-30' brisk walking	70-80% of HRmax	Duration dependent on fitness level	Conditioning
Cool-down	3' walking, 2' static stretching	50-70% of HRmax		Relax Injury prevention

	Content	Heart rate	Remarks	Goal
Warm-up	3'walking, 2'dynamic stretching	50-70% of HRmax		Get the system going
Technique	Upright, correct foot placement, bend knees, arm swing		Performed during main part of the session	Injury prevention
Main part	30'-40' brisk walking	65-70% of HRmax	Duration dependent on fitness level	Conditioning
Cool-down	3' walking, 2' static stretching	50-70% of HRmax		Relax Injury prevention

Interval

	Content	Heart rate	Remarks	Goal
Warm-up	7'walking, 3'dynamic stretching	50-70% of HRmax		Get the system going
Technique	Upright, correct foot placement, bend knees, arm swing		Performed during main part of the session	Injury prevention
Main part	4 blocks of 4' of high intensity interspersed with 3' of low intensity.	4'= 85-90% of HRmax 3'= 50-70% of HRmax	Saintex-CAD protocol (see references)	Conditioning
Cool-down	3' walking straight after last block of 4' high intensity, 2' static stretching	50-70% of HRmax		Relax Injury prevention

	Content	Heart rate	Remarks	Goal
Warm-up	3'walking, 2'dynamic stretching	50-70% of HRmax		Get the system going
Technique	Upright, correct foot placement, bend knees, arm swing		Performed during main part of the session	Injury prevention
Main part	Find yourself a (steep) hill that takes approximately 3' to get to the top by walking. Walk back down as rest. Repeat X-times.	85-90% HRmax uphill 50-70% HRmax downhill	This can also lead to a burning sensation in the legs, this is normal Number of repetitions depends on fitness level	Conditioning
Cool-down	3' walking, 2' static stretching	50-70% of HRmax		Relax Injury prevention

	Content	Heart rate	Remarks	Goal
Warm-up	3'walking, 2'dynamic	50-70% of HRmax		Get the system going

	stretching			
Technique	Upright, correct foot placement, bend knees, arm swing		Performed during main part of the session	Injury prevention
Main part	Walk at normal pace for 3' Walk at moderate pace for 2' Walk at fast pace for 1' Walk at moderate pace for 2' Walk at normal pace for 3' Repeat X-times		Normal pace= 50-70% of HRmax Moderate pace= 70-80% of HRmax Fast pace= 80-90% of HRmax Number of repetitions depends on fitness level	Conditioning
Cool-down	3' walking, 2' static stretching	50-70% of HRmax		Relax Injury prevention

Tests

If you want to check if you make progress, there are a couple of tests you can do. Best is to do one test when you just start and a follow-up test at 6 and 12 weeks for example.

- 12' or 6' walking test. Try to walk as far as you can in 12 or 6 minutes. You can do this on a track with a known length (e.g. at a track and field club) or make your own route on a website. When repeating the test, make sure you walk the same route.

- Find yourself a route of 2.5-3 km. Walk this route with an intensity that still allows you to talk. Monitor your heart rate and the time it takes to complete the route. When repeating the test, walk the same route with the same average heart rate as the first time. If you made progress, you will complete the walk faster, although your heart rate was the same.

Tips

- There are plenty of websites you can use to find attractive walking routes near your home
- Mix it up! Walk forward, backward and sideways
- Set yourself a goal
- Place your walking shoes in a spot where you frequently see them

References

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