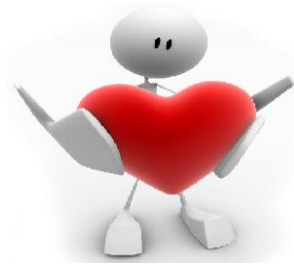


Sheffield Coronary Society



Introduction

Exercise is a very important part of your rehabilitation and your future health.

You should try to increase your Activities of Daily Life (ADLs) walking, washing the car etc.

You will need to exercise at least three times per week, minimum, (ideally 5 - 7 times per week) for you to get any real benefit from the exercise. You should try to build up the amount of exercise you do steadily but gradually.

Some of the benefits of exercise for cardiac patients include:

- ♥ Improved working ability of the heart, both at rest and on exercise
- ♥ Heart becomes more efficient as a pump
- ♥ You may be able to do more work before you experience any exercise symptoms, such as angina
- ♥ Exercise may help to reduce blood pressure both in the short term (during an exercise session it may not increase as much), and in the long term (resting blood pressure may be reduced)
- ♥ Exercise helps to widen the vessels our blood travels around the body in. If wider, the flow of blood is made easier and so blood pressure is reduced
- ♥ Exercise may also help to prevent any further development of the fatty plaques which block the blood vessels
- ♥ Exercise can help to improve the circulation of blood in the heart itself so that the heart muscle gets the oxygen it needs to work efficiently.



Types of exercise

To gain the benefits mentioned already, and many others that exercise can bring about, cardiac patients should carry out cardiovascular resistance and flexibility exercises. These include walking, cycling, jogging, swimming and dancing....

You need to build the above exercises into your everyday life in addition to things such as doing the housework, gardening, DIY and other activities such as golf.

Exercise such as housework, DIY and golf, etc do not maintain your heart rate for a constant period of time and, although they will help with flexibility and stamina, are not as beneficial for your heart.

Cardiovascular/aerobic activities and exercise allow your heart rate to increase steadily and stay elevated for a continuous period of time.

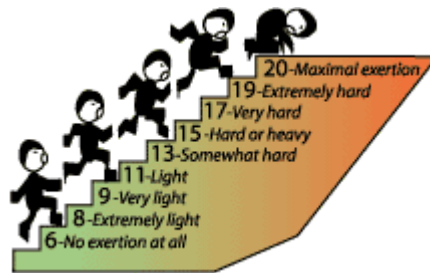
Monitoring Exercise Intensity (RPE-Rate of Perceived Exertion)

Ideally you will be given a "Target Heart Rate-THR" from your cardiac nurse. This is calculated based on your age and medication. We can use heart rate monitors or take our own pulse for 10 seconds and x6 to check on this.

A more simple way of quantifying how hard we are working is called RPE-Rate of perceived exertion.

It is important for you to know if you are exercising at the right level for you. The way in which we ensure you are exercising safely and assess the intensity of exercise is called

The Borg Scale



This is a scale used so that you can estimate how much physical effort you use to perform the exercise. As well as considering how hard or easily you are working, you also need to consider the sensations your body is feeling while exercising, i.e., breathing a bit faster, actually feeling your muscles working, feeling warmer and perhaps starting to sweat a bit. Any, or all, of these indicate that you are using increasing physical effort.

If you have any other physical problems, e.g., a bad knee or hip, you will be using more effort in your exercise because of the problem you have. Your need to include this effort when estimating where you are on the scale

You should never work at and above 15 on the Borg scale i.e. feel that the exercise is physically hard.

The Borg Scale

6 No exertion at all (sitting down)

7 Extremely light / easy Very little / no effort involved
(Can keep going 'all day')

8

9 Very light / easy Little effort involved
(Can keep going for a very long time)

10

11 Fairly light / easy Starting to put some effort into it
(Can keep going for quite a long time)

12

13 Somewhat hard Need to put effort into maintaining the speed
(Can still keep going for a good period of time)

14

15 Hard work Really pushing yourself to keep going
(Can only keep going for a short time)

16

17 Very hard work Pushing yourself very hard to keep going
(Can only keep going for a very short time)

18

19 Extremely hard work Pushing yourself extremely hard

20 Maximal exertion

Preparation for exercise

• Warm Up

Warming up before any exercise is **essential** and should be for a minimum of **15 minutes**.

This allows time for the heart and circulation to adjust so that when your muscles need more oxygen to exercise, it is there.

During the warm up your muscles, tendons and ligaments become warmer and your heart rate (pulse) will start to rise.

Warm up should start with gentle movement, particularly of the legs which is where we all have the big muscles needing the most oxygen. This movement should become a little more vigorous as the warm up progresses.

• Warm Up Exercises



15 minutes (aim for Borg scale 9-10) Pulse Raising and Mobilising Exercises

Always start slowly – increasing intensity.

The following are used by the Coronary Society and do not need a huge amount of space. Walking progressing in intensity to Marching – 1 Minute intervals

In between the walking

- 1, Heel Digs- 20-30 each side
- 2, Side Taps- 20-30 each side
- 3, Backward toe taps- 20-30 each side
- 4, Shoulder rolls -20-30 forward/backward
- 5, Heel/Toe taps- 20-30 each side
- 6, Heel Dig/Bicep Curl- 20-30
- 7, Side Tap/Lateral Raise- 20-30
- 8, Backward toe tap/Front arm raise- 20-30

Please ensure you always warm up properly- failure to do so can lead to injury.

.Aerobic or Cardiovascular Exercise



Aerobic or Cardiovascular exercise uses oxygen to help supply the energy that working muscles need. This type of exercise helps to make the heart stronger and you to feel fitter. Ideally you should exercise aerobically **at least** three times per week for 20 to 30 minutes.

Start with 5 to 10 minutes gradually increasing to 30 minutes. Types of aerobic activity are walking, dancing and cycling or circuit training exercises.

All of these use repetition of large muscle group activity. You should also maintain a Borg level of 11 –13, i.e., you are putting some effort into the exercise but it is not becoming 'hard work'.

With any exercise period, whether you are out for a walk or doing another form of exercise, it is essential that you keep moving to make sure your heart rate remains raised. If indoors, **do not sit down between exercises or stop moving your feet/toes.**

.Resistance Training



Guided, moderate weight training has been proven to deliver considerable benefits.

Resistance training not only enhances the benefits of aerobic fitness, but it provides the added benefit of increased functional capacity and independence. It helps people better perform tasks of daily living – like lifting bags of shopping.

Resistance training should be performed:

- in a rhythmical manner at a moderate-to-slow controlled speed;
- through a full range of motion, avoiding breath-holding and straining by exhaling during the contraction or exertion phase of the lift and inhaling during the relaxation phase; and
- alternating between upper and lower body work, to allow for adequate rest between exercises

Thus, a comprehensive program of eight to 10 exercises can be accomplished in 15–20 minutes and should be done after the aerobic component, which will ensure an adequate warm-up

Resistance training does not have to be with weights or expensive equipment in a gym. EG Own Body weight, Resistance Bands, tins of beans can all be used in a range of movements to exercise our muscles.

Avoid – Over head lifting, breath holding, laying down exercises, gripping too tightly

Please ask me for more information on resistance training

The Final Stage

Cool Down



Cooling down exercise allows blood pressure to return to normal slowly and will prevent dizziness occurring. Heat and waste products are removed from the exercising muscle groups, which reduces the risk of stiffness and aching later on.

The cool down should last for at least **10 minutes**.

It can include:-

- . Gentle exercises, i.e., slow walking – this can be the last 10 minutes of your walk
- . A selection of the pulse raising warm-up exercises done at very slow speed
- . Developmental Stretches (Static) – holding for 20 – 30 seconds

At the end of the cool down you should have recovered from the exercise. Your heart rate and breathing rate should have returned to what it was before you started to exercise.

What You May Experience While Exercising

NORMAL WHILST EXERCISING - KEEP GOING	STOP EXERCISING IF ANY OF THE FOLLOWING ARE PRESENT
Breathing – faster and deeper	Inappropriate levels of breathlessness
Feel your muscles working	Chest pain or your usual angina pain
Heart beating faster	Pulse irregular (unless this is normal for you)
Skin will become warm	Excessive sweating
Slightly sweaty	Dizziness
	Feelings of unusual and excessive tiredness
	Unusual pain, not associated with muscle soreness

Please note:

Do not exercise if you are feeling unwell.

If you are unable to take exercise for several days due to illness, reduce the length of time for your exercise when you start again, and then build it up slowly to your previous level.

If your medication is changed it may affect your heart rate and how you feel when exercising – if you notice a difference then contact your cardiac nurse or GP.

Exercise Reminders

1. Warm up

- a. 15 minutes
- b. Begin slowly, gradually increase intensity
- c. Aerobic forms of exercise e.g. walking, heel digs, lunge backs, side steps, .
- d. If it is cold outside and you plan to go out for your exercise walk, warm up inside before you go out.

2. Aerobic Exercise

- a. 20 – 30 minutes (start with 5-10 minutes and build up)
- b. Walking is a good form of exercise. Wrap up warmly in cold/rainy weather! You should be walking briskly.
- c. Cycling, swimming and dancing are also good forms of exercise- try these later on once fully recovered
- d. Use exercises used in the warm up e.g. heel digs, stepping, side steps combined with walking.
- e. Stationary bikes are good also if you have your own at home.

3. Resistance Training

- a. 10-20 minutes
- b. 8 to 10 exercises including all major muscles
- c. 1-2 sets
- d. 12-15 reps – low intensity, low resistance all reps should be done with perfect form
- e. own body weight-squats, lunges
- f. Resistance bands- decathlon / Sportsworld sell them
- g. Machines/Cables
- h. Begin with exercises for major muscle groups: work large muscles, such as chest and back, before smaller muscles e.g. biceps / triceps

4. Cool Down

- a. 10 minutes
- b. Slow walking or other gentle exercises to bring your heart rate down
- c. Hold stretches for at least 15 seconds

5. Monitoring

- a. You must monitor your heart rate
- b. During the aerobic exercise it must be within your target heart rate range. It can be measured manually or with a heart rate monitor

c. The Borg scale must also be measured, please refer to previous pages and ask instructor if unsure

6. Practical Points

- a. Wear loose clothing
- b. Do not exercise until 2 hours after a large meal. This can be reduced if the meal is small or a snack.
- c. Drink plenty of water when you are exercising and afterwards
- d. If you are diabetic make sure you have a snack available
- e. Stop exercising immediately if you get chest pain, feel dizzy, uncontrollable sweating
- f. Do not exercise if you are feeling unwell (e.g. cold, flu)

Exercise and Activity should be fun
Please ensure you exercise responsibly and sensibly

Remember if you feel unwell at any time then stop exercising immediately

If you need any help or advice then please contact me any time

Nick lowe
Personal Trainer
07795 378056

References

Cardiac Rehab Advice (NHS May2009)

Lifetime Exercise and Fitness Knowledge Level 3

ACSMs Exercise Management for persons with Chronic Diseases and Disabilities

Health wise Cardiac Rehab copyright 1995-2008

Nick lowe Functional Fitness Group Warm Up Copyright 2009