**Exercise**

**Benefits of exercise**

This section covers the following topics –

* What happens when you exercise
* How exercise can help
* How you can monitor the amount of exercise you do
* Choosing an exercise routine
* Ideas for long term exercise plans and maintenance

Your heart is a muscular pump made up of four chambers, these are called the right and left atria and the right and left ventricles. The right side of the heart has the job of pumping blood to the lungs where it picks up oxygen. Blood goes back to the left side of your heart, which then pumps the oxygen rich blood around your body. This is how all the organs in your body including your heart get their blood and oxygen. Valves between the chambers of the heart keep blood flowing in the right direction.

Most of the heart is made up of muscle and this needs its own blood supply to give it energy to pump the blood around your body. The coronary arteries lie on the surface of your heart and supply the heart muscle with blood and oxygen.

**So what happens when you exercise?**

Exercising heart muscle needs more oxygen, much like a car needs more petrol when it is going faster. If your arm and leg muscles are working harder; so is your heart muscle and all of these will need more oxygen.

This extra oxygen comes from breathing faster so that the blood going through your lungs picks up more oxygen. Your heart then beats faster to pump this oxygen rich blood around your body to the other muscles to replace the oxygen they are using up.

When you exercise, you are using up the oxygen as a fuel for your muscles, which produces heat as a by-product of the exercise, again much like a car engine heating up as it uses more fuel. The heat makes you feel warmer when you exercise and then you may sweat to cool down the core temperature inside your body.

**So, Breathing Faster and Feeling warmer are the normal results of exercise and can be used to help guide you as you progress.**

**With regular exercise:-**

**YOUR HEART BECOMES STRONGER:** Like any other muscle, the more you use your heart, the stronger it will become. It can pump more efficiently and squeeze more blood through each time it beats. In time, this means that your heart will not have to work as hard when you are exercising.

It may be that part of your heart muscle has been damaged, we know that repair can take place. We have more heart muscle than we need and it is very important that the undamaged heart muscle is as fit and strong as we can make it. This is why cardiac patients are encouraged to exercise.

**YOUR MUSCLES BECOME MORE EFFICIENT:** The other muscles in your body, e.g. your arms and legs, also get stronger and work more efficiently. They will need less oxygen to work hard and are able to extract oxygen more efficiently and the result of this is that your heart does not have to work as hard to pump more blood to these muscles.

**YOUR CARDIAC RHYTHM IS MORE LIKELY TO REMAIN REGULAR**:It has been shown that regular exercise can help prevent irregularities in your heart rhythm such as atrial fibrillation.

SO HOW CAN EXERCISE HELP?

1. **Regular exercise will help prevent more problems with your heart in the future**. Your heart will become stronger as you get fitter so all kinds of activities will feel easier and more enjoyable. You may then be able to get back to such things as swimming, dancing, golf, bowling etc so your quality of life improves. You may even decide to take up a whole new activity and you will find your confidence increases.
2. **It can help reduce weight, as it will help burn calories**. If you feel that being overweight has played a part in your heart condition in the first place, then exercise can help. If you are a stone overweight, imagine how much more tired you would feel if you had to carry 7 bags of sugar around with you. Losing weight will help your heart. We know that losing weight can be tough but bear in mind that it is better to be overweight and fit than underweight and unfit.
3. **Exercise can make you feel happier, sleep better and reduce stress**. This is because when we exercise chemicals in our brain called endorphins are released. These are known as feel good chemicals and can give you a bit of a high. You may feel good while you are exercising but you will feel even better afterwards!!
4. **It can help reduce blood pressure**, which is also important in preventing further trouble with your heart.
5. **It can help reduce cholesterol**. In simple terms, regular exercise converts bad cholesterol into good and this can only benefit us.
6. **Exercise helps to keep all joints and muscles in good condition**. This can help prevent other aches and pains and if you already have some problems, exercise can help reduce these. We know that weight-bearing exercise can help reduce osteoporosis.
7. **Exercise helps the body’s defences against infection**, making us more resistant to coughs and colds.
8. **Exercise can help reduce angina** by improving the oxygen supply to the heart muscle and helping it work more efficiently. Angina is caused by a temporary lack of oxygen to the heart muscle, so if the muscle is more efficient it will not produce so much pain. Once your heart is stronger, you may find that you can do more before you reach your threshold.
9. **Regular exercise can help reduce the risk of your blood clotting**. This again is due to the release of chemicals that supplement the effects of aspirin and Warfarin.
10. **Exercise is generally protective** against many conditions e.g. diabetes, increased blood pressure etc.

**SO, HOW DO WE MONITOR EXERCISE AND HOW HARD DO WE PUSH?**

Earlier we talked about how breathing faster and feeling warmer are normal things that happen when we exercise, and you can use these things as your guide when you are exercising. These responses to exercise will help you decide whether you are ready to progress or to keep the level the same.

Some people find it difficult to feel confident about how much exercise is safe to do and sometimes it is not the patient themselves but their partners or families who think they may be overdoing it. But the choice really does lie with you. Think about two things in deciding about exercise – how hard it feels and how enjoyable it is.

Exercise should feel somewhere between “moderate” and “somewhat hard”. It should feel “enjoyable”. You should feel warmer and be breathing faster but still be able to speak comfortably when you have finished the exercise. Try to keep this in mind while you are exercising and when you are planning your next session.

**FINALLY CHOOSING YOUR EXERCISE ROUTINE**

We hope that you will now agree that taking up a regular exercise habit is important for you, but what does regular mean?

To become fit and stay fit you need to exercise for **30 minutes**, to a level where you feel warmer and are breathing faster on every day or most days of the week. So walking around the shops where you are stopping and starting is not the same as a continuous walk around the park. However, if you can only mange three sessions of 10 minutes per day then this is better than nothing although you might want to try and increase towards 60 minutes in total if you are breaking the sessions up.

Remember that although this is the ideal amount of exercise, you may not be able to do this at the beginning. Many people tell us when they come for assessment that they want to get fitter. It is important that you think about what you want to be fitter for and try to set yourself goals to achieve this. Your cardiac rehabilitation specialist can help you to plan and progress your exercise. You should always bear in mind the over activity rest cycles and the principles behind preventing yourself straying into over activity, particularly if you are starting a new exercise or activity.

**Remember**

The exercise that you choose should be **fun**. If you don’t enjoy it you will find it hard to stick to it.

Exercise should be **regular** otherwise it would not give you so much benefit. If you are not good at sticking to things, then consider something organised as part of a class or group. Alternatively, you may find that making a commitment to do something with a friend on a regular basis can also help.

Choose a few things to do as exercise so that you can have a **variety**. There are lots of options available at your local leisure centre, community centre or church. Information on local activities can be found on the internet or at your local library.

Try to build exercise and activity into your daily **routine**. Use the stairs more often, do not always take the car from door to door, and get off the bus couple of stops early.

Listen to your body. Even if you feel tired try and complete your baseline. Remember once you feel better you should not try to catch up and on the days where you feel good do not overdo it **Do what you plan not what you feel**. If you are unwell take a few days off but remember to reduce your level when you start.

**REMEMBER WE ARE LOOKING FOR A LIFE LONG COMMITMENT NOT A QUICK FIX**

Nowadays there are many activities happening in your community such as walking groups, over 50’s sessions, bowling groups and so on. There are also many classes held in your local leisure centres, community centres and church halls, some of which may be appropriate for you. There are also some support groups operating in the Lothian’s and these can be a great way of meeting other people and combining this with exercise too.

Your cardiac rehabilitation staff will be happy to offer advice on any of these topics

