Physiotherapy following cardiac surgery

Information for patients
Cardiac Surgery
Physiotherapy is an essential part of your recovery from your operation.

The physiotherapist will see you before you have your operation, to explain the reasons why physiotherapy is so important.

This booklet is to reinforce that information and to allow you to take in the information in your own time.

Please ask your physiotherapist any questions or queries you may have.

There are 3 main areas of physiotherapy involvement:

1. Chest care
2. General mobility
3. Rehabilitation
1. Chest care

Chest problems do occur after cardiac surgery even if you have no history of chest problems or smoking.

Reasons for chest problems after your operation include:

- **The anaesthetic gases**
  - increase the amount of phlegm produced
  - make the phlegm sticky and difficult to cough up
  - make you sleepy after your operation
  - make you take small rather than big breaths
  - make your cough less effective

- **Previous chest problems or history of smoking**
  - can lead to increased amounts of phlegm being produced after your operation.

- **The operation**
  - during the operation your lungs are not inflated fully and you need to re-expand them after your operation.

- **The incision**
  - the discomfort from the wound may mean you are reluctant to take deep breaths or cough effectively.

- **Posture**
  - if sitting or lying in a slumped position in your bed or chair, you will be unable to take a full deep breath.

- **Decreased activity**
  - in the early stages after your operation you spend more time in bed than usual, and do not take such deep breaths as you would when walking, so phlegm can accumulate.
Always sit in an upright position, not slumped

Therefore to speed your recovery and prevent chest infections, it is **vital that you practice** the breathing exercises and coughing that your physiotherapist teaches you.

If you practise these before your operation you will find them easier to do after your operation.
Breathing exercises

- Sit upright
- Place a hand high on your abdomen, at the lower end of your breast bone, take a normal breath in and feel your hand move outwards, then breathe out normally and feel your hand move in.
- Practise this relaxed, breathing for about one minute.
- Follow this by taking a **deep** breath in, keeping your shoulders relaxed
- Hold the breath for a count of 3
- Breathe out
- Repeat this 4 times and then return to your relaxed breathing
- **Complete 3 sets of 4 deep breaths every 30 minutes**
- Cough and clear your chest as necessary

Coughing

Effective coughing is **extremely important** to clear any phlegm present on your chest.

- When coughing, ensure that you are sitting upright and that you support your wound with the cough pillow provided
- Take a deep breath in
- Cough strongly from your tummy **not** your throat
- Afterwards do some relaxed breathing as described above

If you have difficulty with this, the physiotherapist will be able to teach you other ways to effectively clear any secretions present.

**Always ask for more pain killers if pain or discomfort are stopping you from deep breathing or coughing effectively**

. . . . . . don’t suffer in silence
2. General mobility

It is important to become active as soon as possible.

The physiotherapist will, if possible, help you sit out in a chair on the first day after your operation and start you walking on the second day, despite any drips or drains you may have.

When moving in bed or rising from a chair it is important not to push down through your arms. This would put too much of a strain through your wound.

Walking is an excellent way to take deep breaths and assist in clearing your chest. It will also help increase your strength after your operation.

Your exercise tolerance (amount of walking) will be increased gradually over the following days and the physiotherapist will check you can manage a flight of stairs with you, if appropriate, before you go home.

When you are able to walk on your own, try to have a walk every hour
3. Rehabilitation after discharge from hospital

Following your cardiac surgery, it is extremely important to maintain and increase your exercise tolerance.

**Regular exercise** both helps you feel better and improves your heart function.

Exercise should become part of your daily routine starting the day of discharge. However you must realise that you will be starting from a lower level of fitness initially and it is important to build up gradually.

**Exercise at your pace and avoid sudden bursts of activity**

The following regime of exercise should be carried out in hospital and until your clinic appointment. It is also useful to continue to use these exercises as a ‘warm up’ prior to walking and other activities.

Aches and pains around the chest and neck are very common after heart surgery. These exercises are designed to prevent your neck, rib cage and back from becoming stiff and painful. They also help to make you more aware of your overall posture.

**Breathing exercises**

During the first two weeks after you are discharged home, it is important to continue with the breathing exercises you have been practicing during your hospital stay. This will prevent you developing chest infections and improve your lung function.

These exercises should be continued as long as you feel they are helping.
**Shoulder exercises**

These exercises are to help ease off some of the stiffness / aching you may develop following your heart operation. They should be done slowly.

Aim to do them twice a day, starting with 5 of each and gradually building up until you can do 10 of each.

A. Shrug your shoulders towards your ears and then push them down

B. Place your finger tips on your shoulders and draw circles with your elbows

C. With alternate arms reach high towards the ceiling
Trunk exercises

A. Alternate side bending in standing

(i) Bend sideways to the left without leaning forwards or backwards. Slide your fingers towards your knee.

(ii) Count to five and slowly return to standing.

(iii) Repeat to the right side.

B. Thoracic rotation

(i) Sitting with your hands across your chest, slowly turn to the right.

(ii) Hold for a count of five.

(iii) Repeat to the left.
**Leg exercises**

The following exercises will help improve your circulation and ease any stiffness or swelling that may be present due to leg wounds.

These should be done at the same time and the same amount as the shoulder exercises.

You should continue these exercises for 6 weeks.

A. Alternate knee bends

(i) Sitting with your legs straight out in front of you bend one knee towards your chest

(ii) Straighten and repeat with opposite leg

B. Half squats holding onto sturdy furniture for support

(i) Stand with feet slightly apart and back straight

(ii) Bend your knees to 45° slowly and straighten

(iii) Keep heels on the floor throughout

C. Step ups

(i) Lift your right foot onto the first step of your staircase

(ii) Bring your left foot up to join it

(iii) Step down

(iv) Repeat leading with your left foot
Walking

As well as these exercises, it is most important that you continue to take regular walks (twice a day initially).

Prior to discharge you will have taken regular brisk walks with your physiotherapist. It is essential that you continue to walk outdoors when you go home and gradually increase the length of time walking as you feel able. Initially you should aim for a 10 minute walk and this could be increased gradually, depending on how you feel.

It is natural to become slightly short of breath on exercise. If however this shortness of breath is excessive and doesn't recover within a minute or so, you are working too hard. You should always be able to continue talking when exercising. Try to aim for a 30 minute walk by the time of your first clinic appointment.

After valve surgery, progress of walking may be slower. Also, if you have been used to regular exercise you may progress a little faster.

It is essential that you continue with some form of regular exercise indefinitely. Choose an aerobic type of exercise which you enjoy ie. brisk walking, swimming or cycling.

Remember:

Regular exercise makes your heart grow stronger
Return to activities after sternotomy

These activities should be avoided until your breast bone has completely healed.

- **Driving** - usually around 6-8 weeks, though please follow your consultant's advice or ask at clinic

- **Swimming** - 2-3 months. All wounds need to be completely healed.

- **Bowling** - 2 months

- **Dancing** - 2 months

- **Golf** - 3 months

- **Jogging** - 3 months or after your Cardiac Rehabilitation class

- **Cycling outdoors** - 3 months

- **Static exercise bike at home** - discuss with your physiotherapist

- **Work** - depends on your occupation so you need to seek the consultant's advice:
  - light occupation - 2 months
  - manual work - approximately 4 months

- **More active sporting activities** - follow doctor's advice or see physiotherapist at post-surgical discussion or exercise groups
Return to activities after minimally invasive surgery

For 4-6 weeks, care should be taken with any activity or posture which involves over stretching your right groin, where your surgeon accessed your artery.

- **Driving** - consultant advice at clinic
- **Non-strenuous activities** - 2-4 weeks
- **Heavy lifting** - 6-8 weeks

Cardiac Rehabilitation exercise class

Your physiotherapist will refer you to your local exercise class in your area.

You will be referred to:

If you have any queries regarding this, please contact the above hospital directly.
General advice

- Following cardiac surgery, it is natural to experience new aches, pains and stiffness in your chest, back and neck areas as bruising appears and your bone heals. This does not resemble angina pain. It may take 2 to 3 months before it completely resolves.

- Do not lift, carry, push or pull anything heavy for at least six weeks, until your breast bone heals.

- Avoid sudden exertion or exercise which will put an unexpected load on your heart. A gradual increase in your exercise tolerance is therefore important. Never continue to exercise if you experience palpitations, undue shortness of breath, extreme fatigue or dizziness.

- Do not exercise on a full stomach.

- In extreme weather conditions you tend to work much harder whilst walking. Use your common sense. If you cannot go outdoors you need to do more exercise indoors.

- Do not walk with a dog on a lead for the first 6 weeks.
Who should I contact if I have any questions or concerns?

If you have any queries regarding your rehabilitation, you can contact the Physiotherapy Department as follows:

- 0114 226 6173

Your named physiotherapist is:
Remember:

Regular exercise makes your heart grow stronger