NHS
Blackpool Teaching Hospitals
NHS Foundation Trust

# Advice for patients having Open-Heart surgery

## Cardiac Directorate
## Patient Information Leaflet

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## 1. Introduction - Advice for patients having open heart surgery

This booklet has been compiled to offer information, advice and reassurance to you and your family both before and after your heart surgery. The nursing staff are always available to answer any queries or help with any worries.

You have been advised to have open-heart surgery, either to replace one or more of the heart valves or to have coronary artery bypass grafts (CABG), or both. This is to improve your quality of life and relieve some of your symptoms.

Your Consultant will already have explained the risks associated with your operation when he saw you in clinic, or on the ward. If you or your family require any further information please ask to speak to your Nursing staff or one of the Doctors caring for you.

If you have a problem and are unsure what to do or you wish to speak to someone concerning your recovery, you can contact the Ward or Cardiac Coordinator.

Telephone 01253 952501 (office) or through the main hospital switchboard on 01253 300000 and ask for bleep 1825.

## 2. Surgery for coronary artery disease

Coronary arteries are the blood vessels which carry blood to supply the muscle of the heart with oxygen, its source of energy. There are 3 main arteries:

- Right Coronary Artery.
- Left Anterior Descending Artery.
- Circumflex Artery.

Coronary arteries can become narrowed or blocked, by the build up of a fatty substance in their walls. When the blockage is severe it causes chest pain, as the blood supply to the heart muscle is restricted.

Coronary bypass surgery is commonly known as "open heart surgery" (the chest is opened, but not the heart itself) and is obviously a very serious operation. Thankfully, modern techniques have made it a relatively common procedure that we do well and with safety. You will have a cut down the middle of your chest and the breast bone (sternum) will be divided. In many people we will use one or both arteries, which lie next to the sternum (the internal mammary arteries) for one or more of the bypass grafts. While one surgeon is working on the chest, another surgeon or theatre practitioner works on taking a length of vein (for the bypass) through a long cut on the inside of the leg or some may have several very small incisions if your surgeon is using the Endoscopic Vein Harvesting technique (EVH). Alternatively, the radial artery from the forearm may be used for a bypass. The radial artery appears to be at least as good as a piece of vein from the leg, and may even be better. However, it is not suitable or appropriate to use the radial artery in everyone.

The coronary arteries on the surface of the heart are between 1mm and 3mm in diameter. The surgeon will sew (by hand) the vein from your leg and the mammary arteries to the narrowed arteries on your heart. With the heart beating many times a minute, this is not an easy job! We will therefore stop your heart for a short time to allow us to do this part of the operation, but we will continue to pump blood around your body (even though the heart has been stopped) by using a bypass machine (heart-lung machine). The heart is usually stopped for between ten and ninety minutes depending on what needs to be done. After we have completed the bypass grafts we will start the heart beating again and remove you from the bypass machine so that your heart is pumping all the blood around your body once more. If your heart muscle is weak, we may need to give powerful drugs to strengthen the heart or use a machine called a Balloon Pump to help us with this part of the operation. People who have normal strength heart muscle seldom have any problem at this point of the operation.

Once this part of the operation is finished we will close the sternum with stainless steel wires that will stay in place forever. The sternum, like any broken bone, heals in about six to eight weeks. The wires support the bone while it heals.

The skin incisions will be closed with a dissolving stitch placed under the skin edges, and this stitch will just dissolve away once the wound has healed.

There will be 2 or 3 small cuts at the lower end of the chest for us to position chest tubes, which will take away any blood and air from inside the chest after the operation. They will be removed the day after your operation. Some patients may have a small blue lead exiting through the skin in this area too. This is a temporary pacemaker wire, which is needed in some cases, and it will simply be pulled out (painlessly!) on the ward a few days before you go home.

In some patients the surgeon will be able to do the operation with the heart still beating and without the need for the bypass machine. This is done using a special stabiliser to keep small areas of the heart

still while we operate on it, while allowing the rest of the heart to beat normally. This may reduce some of the risks associated with the conventional operation. It is not suitable for use in everybody. This type of surgery is called Off-Pump Coronary Artery Bypass (OPCAB) and your surgeon will discuss this type of operation with you.

## 3. Surgery for heart valve disease

The heart pumps blood around the body. Within the heart there are four valves, which ensure the blood flow is unrestricted and goes one way. Heart valves can become damaged or diseased and this may cause them to leak or block up. This abnormality causes strain on the heart, which the patient may recognise as breathlessness on exertion and tiredness. The names of the most commonly affected valves are the mitral and aortic.

In certain situations a faulty heart valve may be suitable for valve repair rather than replacement. If you do need your valve replacing there are generally two options for artificial heart valves; the mechanical valve which is extremely long lasting but requires Warfarin to prevent clotting, or alternatively there are tissue valves which do not require long term Warfarin but will wear out after a number of years. A worn out tissue valve can be replaced but would require a more complicated operation. Warfarin is generally well tolerated but can result in easy bruising and often worsen any bleeding. The choice is sometimes dictated by any other medical conditions but will be discussed between you and your consultant.

Port Access valve surgery is a new way of performing heart valve operations, which allows the surgeon to operate through small holes or ports in the chest wall between the ribs. This type of surgery involves similar steps as the traditional open chest heart surgery but does not involve a large incision in the breastbone. The surgeon gains access to the heart through one of three smaller incisions that are made between the ribs or a smaller breastbone incision and a small incision in the groin. The diseased valve can be repaired or replaced through one or more of the ports between the ribs, with the surgeon looking at the heart directly or through a small tube shaped camera. Because it requires a smaller incision it may shorten your stay in hospital and reduce the recovery time. In some patients the surgeon may start a Port Access valve operation but due to clinical circumstances the surgeon may have to change to a traditional open chest procedure.

Following this type of surgery all patients are encouraged to resume normal activities at their own pace and many patients report a return to normal activities within a few weeks.

## 4. Surgery for aortic disease

The aorta is the major blood vessel taking blood from the heart to the rest of the body and can be affected by different diseases. In aortic disease different parts of the aorta can be affected. Typically the diseased part of the aorta which is frequently ballooned up (an aneurysm) is replaced with an artificial tube, which may be combined with a valve replacement in an aortic root replacement.

## 5. Heart surgery - the risks

Your consultant will have explained the risks from having the operation when you met in the outpatient clinic. They will go over them again when you meet before your operation. Complications after operations are always a possibility. The risks of heart surgery are not zero, nor will they ever be. This section of these

notes is merely to explain some of the potential complications that can occur so that you and your family are fully informed. However, we do not mean to scare you or unduly worry you or your family – but simply to truthfully inform you of the potential consequences of having a heart operation. Please remember that the majority of patients (more than 90%) go through their operation without any major complications at all, but unfortunately there is sometimes an inevitable consequence of doing such major and complex operations.

## Major risks

***1. Death***

Sadly, with any heart operation there is the possibility that the operation may lead to your death. This occurs in about 1-2% of non-urgent straightforward cases. In other words, if we do 100 operations, tragically 1 or 2 patients may die as a result. But, looking at the figures the other way round, 98 people out of a hundred will sail through with no problem. If the heart has been weakened by previous heart attacks, or if other procedures such as valve replacement need to be done, then the risks increase. They may be as high as 10-25% in the worst cases or even higher in certain situations. We have a risk prediction calculator (called the Euroscore) that gives us a rough idea of the risk from your operation. This is approximately the figure you will be quoted for the risk of your individual operation when you meet your surgeon in the clinic.

***2. Stroke***

The operation may lead to a stroke, which may leave you with a weakness down one side and/or speech problems. Many people recover fully (with time) after a stroke, while unfortunately others are left with some residual weakness. Strokes are a result of many things but are usually caused by microscopic fragments of the hardened arteries (atherosclerosis) becoming dislodged during the operation and travelling to the brain where they cause the stroke. We always do everything we can to minimise the chance of this happening. Elderly patients, those who have had a previous stroke and those with carotid (neck) artery disease are at most risk of a stroke. In otherwise normal, fit patients the risk of stroke is about 1-2%. The risk may reach 10% or greater for patients in a high risk group.

***3. Bleeding***

This complication affects about 5% (1 in 20) of our patients. Obviously, the operation involves a lot of stitching around a lot of blood vessels and it is possible for a 'leak' to develop after the operation has ended. Also, in order to stop your own blood clotting in the plastic tubing of the bypass machine we have to thin out your blood. This, together with some of the side effects of the bypass machine, means that in some people their blood does not form clots and they will have excessive bleeding after the operation. This is one of the things we will watch for after the operation. If there is excessive bleeding from the chest tubes after the procedure, we may try giving medications to help the blood clot in the hope that the bleeding will stop. This often works but it may take a few hours to become effective. If the bleeding continues, we may need to take you back to the operating theatre for another operation to look at the heart again and see if we can find an explanation for the bleeding. This is seldom life-threatening and usually takes about one or two hours to do, but it will be our last resort. Fortunately, you will be asleep under the original anaesthetic while all this is going on, but it is important that your relatives are aware that it is a possibility. We will contact them if this becomes a problem and let them know if we need to take you back to the theatre. Remember that 19 out of 20 patients are fine.

***4. Infection***

As with all operations there is a risk of infection in the wound, no matter whether you are having a hernia fixed, varicose veins stripped or major heart surgery. Since the advent of surgery, infections have complicated surgical procedures and continue to do so today. However every possible precaution is taken to prevent this problem during and after your operation. It is also possible to get other infections; chest infections (pneumonia) can occur and it is important that you breathe deeply, cough (supporting your chest) and have physiotherapy to ensure that this does not happen; urinary tract ('water works') infections also occur from time to time, but these are easily treated with a course of antibiotics.

***5. Abnormal Heart Rhythm***

About 1 patient in 4 may develop an abnormal heart rhythm after their surgery. This is called atrial fibrillation or 'AF'. The heart beats quite quickly and irregularly, and sometimes patients feel unwell when it happens – others don't realise anything is wrong. Don't worry if this happens to you. We are

very familiar with it and will treat it appropriately. It is not a risk to your life. It is easily treated in 90% of cases with tablets that you will need to take for around six weeks. We can stop them if your heart is in a normal rhythm when we see you in the outpatient clinic for your follow up visit after the operation.

A few people remain in AF despite our best efforts at treatment. If this happens there is a small chance of blood clots forming inside the heart so we will start you on the blood thinning medicine called Warfarin. This takes a couple of days to work, but once we have established you on a regular dose we can send you home. If you have reverted to a normal rhythm, then you will be able to stop taking the Warfarin tablets when we see you in the out patient clinic.

Some people have a very slow heart rhythm after the operation and may need a pacemaker temporarily. If the heart rate does not pick up (it usually does after a few days), we may ask your cardiologist to see you to consider putting in a permanent pacemaker while you are with us recovering from your operation. This is a quick and straightforward procedure performed under local anaesthetic. This is very rare after bypass grafting but more common after valve replacements (2-5%).

***6. Renal Failure***
Your kidneys are very sensitive organs and may not work properly after your surgery. This is particularly the case if you have had previous kidney problems or are known to have weak kidneys that are not functioning perfectly before the operation. Often the problem will resolve after a few days but occasionally dialysis treatment maybe needed for a short time. The vast majority of patients do not have this problem and we will warn you if we think the risk of kidney failure and dialysis is greater in your particular case, especially if you are known to have kidneys that do not work as well as they should.

## 6. Prior to your operation

For both CABG and Valve surgery the Surgeon will explain the operation to you and the associated risks, and you will then be asked to sign a Consent Form. You must be satisfied with the details given to you and understand the operation and its implications before signing.

Please feel free to discuss any concerns or worries you may have with any nurse or medical staff involved in your care.

Please tell the Doctor or Nurse if you have any allergies, for example to any drugs or to elastoplast tape. They will also want to know about your past medical history, any operations and the medications you are presently taking. (Please bring the medications with you). You will be asked about your social circumstances. If you think that you will require any assistance following discharge, please inform a nurse so that this can be discussed.

The Nursing Staff will shave your chest, arms and legs and ask that you take two showers using antiseptic soap scrub. Towels are provided.

You will be asked not to eat prior to surgery and admitted to the ward on the morning of your surgery. You will be able to drink plain tap water until your operation. The nursing staff will inform you of these times. A Nurse and a porter will escort you on a trolley or chair up to the Operating Theatre.

## 7. The anaesthetist

An anaesthetist is a doctor who is specially trained in anaesthesia, the treatment of pain, and the care of very ill patients (intensive care). An anaesthetist will visit you prior to your surgery and carry out a careful evaluation of your past medical history and general health. You will be asked questions about the following areas:

**General health:** How well have you been in the last 6 months?

**Heart problems:** How long have you been suffering them, what makes them better or worse. You will be asked about your blood pressure control, previous heart attacks, and strokes.

**Medical History:** Do you have additional medical problems such as diabetes, epilepsy, gastric reflux, asthma or previous surgery?

**Previous Anaesthetics:** Any problems or reactions that you or your family have had in relation to anaesthesia.

**Medications:** These will include G.P. prescribed, over the counter, or complementary therapies.

**Allergies:** Any reactions to medicines, foods, substances such as latex.

**Dental Work:** It is necessary for your anaesthetist to know if you have any loose teeth, caps or crowns, so that damage may be avoided with breathing tubes.

In addition you will be examined. Particular attention will be paid to your heart and lungs, and assessment of your ability to open your mouth. You should also inform the anaesthetist of any neck stiffness or pain when moving your neck.

**Pain Control:** The anaesthetist will discuss pain control with you. After the operation your anaesthetist will ensure you receive strong pain killing drugs to keep you comfortable. They are given in the following ways:

***Infusions:*** You may be given morphine, which is a powerful pain killer, by a patient-controlled analgesia system (PCA), whereby once awake, you can press a button to deliver a dose of painkiller when you feel the need for it. Safety features are built into this system to prevent overdose. The side effects of morphine, nausea, vomiting and itching, we can usually treat with medication. Drowsiness and hallucinations may also occur. The nurse will be monitoring you closely for these side effects to make sure you are receiving the pain killer in a safe manner.

***Fentanyl Patches:*** You may be given a fentanyl patch which contains a powerful pain killer called fentanyl which is slowly released into your circulation for 72 hours from the time of application. The Patch is applied to the skin at the start of surgery and removed on the 3rd day following surgery.

***Intrathecal (spinal) morphine:*** Morphine may also be given to you by an injection into the lower back for pain relief. This is called a spinal or intrathecal injection whereby morphine is injected into the fluid surrounding the spinal cord. By its effect on the spinal cord and or brain, morphine provides pain relief. The effects of this injection last for around 24 hours with an advantage of using only a small dose of morphine to provide effective pain relief with potentially less side effects. However there is a small risk of a headache which occurs in less than 1 in 100 patients. Nerve damage is a rare complication of spinal injection and occurs in 1 in 5000 to 10,000 patients. The features include numbness, tingling and weakness of the affected area usually in the legs. The damage is temporary and usually recovers in 18 to 24 months. Very rarely it can cause permanent damage. The injection is usually performed while you are awake prior to giving general anaesthetic. You may be unsuitable for this technique if you have been taking the blood thinning medications, clopidogrel or ticagrelol within 7 days, or if you have a clotting abnormality. Also please inform the anaesthetist if you are taking any herbal remedies. Your anaesthetist will check this to confirm whether you are suitable to receive this method of pain relief.

***Epidural:*** Occasionally used for patients having heart surgery. This provides predictable, controllable, high quality analgesia, which can be continued for several days if necessary .It can be useful following cardiac surgery if you have lung disease. This procedure involves an injection in the region of the upper back to enable a very narrow plastic tube to be placed in the epidural space across which the nerves carry pain impulses. The plastic tube allows delivery of local anaesthetic via a pump directly into the epidural space where it continually bathes the nerves and stops transmission of pain impulses to the central nervous system. It is performed under local anaesthetic while you are awake and should be a relatively painless procedure. Sometimes some discomfort is experienced as the plastic tube is advanced. At all times you will be monitored for complications and side effects by the medical and nursing staff looking after you. The most serious complication is permanent neurological damage which is rare (1:10,000) or very rare (1:100,000) in young fit adults and on no medication. It must also be born in mind that occasionally an epidural will be technically difficult or even impossible to perform in which case the anaesthetist will discuss with you another form of pain relief.

***Local Anaesthetic Infusion:*** a plastic tube with perforations can be placed in the wound at the time of surgery and connected to a device which will deliver a continuous infusion of local anaesthetic into the wound over a period of 2-3 days. There are very few side effects associated with this technique but it will require another form of pain relief in addition.

***Oral medications:*** Simple pain killers like paracetamol and co-codamol, and stronger pain killers like morphine and tramadol can also be given orally once you are eating and drinking normally.

Remember it is important that if you feel at any time your pain relief is inadequate you inform a member of the nursing or medical staff.

## 8. In the operating theatre

The Ward Nurse will hand over your care to the Theatre Nurse after checking your details. You will then be taken into an anaesthetic room where the Anaesthetist will administer you anaesthetic and from this point you will be aware of nothing until the operation is over. At this time, you will be placed back in your bed and transferred to the Cardiac Intensive Care Unit (Known as CITU).

## 9. After the operation

You will be looked after carefully in the Cardiac Intensive Care Unit for about 24 hours. The Doctors and Nurses require a lot of machinery, lines and drains to monitor and care for you in the immediate post operative period. Please do not be alarmed at all of the equipment that you see and the alarms you hear on the unit. The majority of these lines and drains will be removed the following morning. You will be assessed and treated by the physiotherapist on the first morning following your operation.

## 10. The cardiac intensive care unit (CITU)

The Cardiac Intensive Care Unit is a 20 bedded intensive care unit, which has been purpose-built for the care of patients who have undergone heart surgery. It is situated on the second floor of the Lancashire Cardiac Centre at Blackpool Victoria Hospital.

The staff members include the consultant surgeons and anaesthetists, surgical registrars, sister and/ or charge nurses, staff nurses, nursing assistants, physiotherapists, technicians and other support staff.

Our aim is a trouble-free recovery following your heart operation. Please feel free to ask any member of staff about anything that you are worried or unsure about.

## 10.1. Visiting in the cardiac intensive care unit

Visiting hours on the unit are between 2.30pm – 8pm but it is recommended a maximum of an hour and a half at a time. Children under the age of 12 are not permitted. Visiting out of these hours may be considered after discussion with the nurse in charge. Some people feel that seeing their relatives after the operation puts their minds at rest, whereas others do not wish to visit until the following day when the patient may be back on the ward. Perhaps discussing the matter with the nurses before the operation may help.

Your relative may telephone at any time by dialling direct on 01253 957770, visiting can be discussed with the nurse caring for the patient, and we will do our best to accommodate relatives' wishes. We allow 2 visitors per patient (close family only please) anytime. There is no overnight accommodation available on the cardiac unit.

Most patients get tired after about half an hour with their visitors but do not be alarmed if the patient dozes off after 10 minutes, this is perfectly normal. Feel free to ask any questions that you have, we are here to help.

Obviously, everybody is different and some operations take longer than others, so it is impossible to give relatives a precise time that the operation will finish. Relatives are welcome to ring at any time and we would appreciate it if you could restrict the number of people telephoning to the immediate family and if possible elect a spokes-person that can communicate with the nurse caring for you, and return information to the rest of the family.

Patients in hospital are exposed to bacteria that would not normally cause any problems for them. However following surgery these bacteria can enter the body through other routes and make you feel quite unwell.

Patients often touch parts of their body that harbor bacteria which is harmless in those areas but can become harmful if transferred into a surgical wound. For example bacteria can enter your blood stream through your surgical wound or through a drain site or other puncture sites that may have been caused by an intravenous tube.

It is really important that you wash your hands regularly whilst you are a patient to prevent any transfer of bacteria from the hands into a wound or other site. We always advise washing your hands with soap and water / hand gel or a hand wipe before meals and after using the toilet or commode.

During mealtimes you will be offered a hand wipe to clean your hands before a meal as transfer of bacteria from hands to mouth at mealtimes has been shown to increase the transfer of infection. Please can you help us to reduce the spread of infection by using the hand wipes that are provided.

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## 10.2. Length of stay

Every patient is an individual and your recovery time following surgery varies immensely. Most patients will stay in the unit for a period of 12-18 hours. Once your Consultant or Registrar has seen you and they are happy for you to be discharged out of the unit, all patients are then transferred to Ward 38, 39 or the Lancashire suite.

## 10.3. Patient's property

Personal property is not allowed on CITU, so all belongings will be packed away by the ward staff into a locked cupboard once the patient has gone to theatre and unpacked once the patient returns to the ward. Gifts of flowers and fruit should not be sent until the patient is back on the ward. Any valuable items should be taken home.

# 11. Back on the ward after the operation

You may be attached to a cardiac monitor for 24 hours, this is just routine. You will also have your blood pressure, temperature, pulse and respiration rate recorded every 2-4 hours. You may still have chest drains in place but sometimes these will have been removed whilst you are in the CITU. You may also have pacing wires which, if not in use, will be coiled and covered with a dressing. These are usually

removed about the fourth day after the operation. (These wires are a precautionary measure in case your heart rate is slow following surgery). The Physiotherapist will continue to see you on the ward.

Visiting on ward 38/39 and the Lancashire suite is between 2.30pm to 3.30pm and 7pm until 8pm daily.

## 12. Bathing and showering

The nurses on the ward will advise you of when to take a shower or bath. Before this can happen your wound needs to be healing well with no oozing of fluid from the wound. All drips and drains need to have been removed before you can shower or bathe and some patients will have had pacing wires inserted in theatre. These need to be removed also. This usually occurs around the 4th day after your operation.

Some general points to note are outlined below.

- Showering is preferable to bathing.
- All dressings need to be removed before having a bath or shower.
- Don't use any soap, shower gel, body lotion, talcum powder or other bathing products directly over the healing wound.
- It's all right to allow the shower water to gently splash onto the healing wound. However don't rub the area, as this will cause pain and might delay the healing process.
- Only have a bath if the healing wound can be kept out of the water. Don't soak the area as this might soften the scar tissue and re-open the wound.
- Dry the healing area carefully by patting it gently with a clean towel.

## 13. Caring for a surgical wound

Surgical site infections compose of up to 20% of all infections that patients acquire while they are in hospital. At least 5% of patients who undergo surgery develop an infection in the surgical wound. The majority of these infections are preventable and measures are taken by hospital staff before, during and after the operation to reduce the risk of infection. One of these measures is to give intravenous antibiotics before, during and after the operation. The use of these precautionary (prophylactic), antibiotics has been shown to reduce the risk of infection following surgery.

There are a number of things that you can do to look after your wound, lower the chance of infection and encourage healing.

### 13.1. Dressings

Not all surgical wounds need dressings. The purpose of a dressing is to:

- Absorb any leakage from the wound.
- Provide ideal conditions for healing.

- Protect the area until the wound is healed.
- Prevent stitches or clips catching on clothing.

The sternal wound and leg wound dressing are removed after 3 days providing that the wound is dry and not soaked with blood or any other liquid. Once the dressing is removed it is important that you do not touch the healing wound with your fingers. The healing wound can then usually be left without a dressing.

Some people like to continue wearing a dressing over the area for protection, especially if clothing is going to rub against it.

If this is the case, apply the dressing carefully and don't touch the inside of the dressing. There is no need to use antiseptic cream under the dressing.

## 13.2. Problems with wound healing

Most surgical wounds heal without causing any problems. However, wound infections are one of the most common complications after surgery. This means that germs have started to grow in the wound and this can delay normal healing. Wound infections are usually treated with a course of antibiotics, but occasionally further surgery is needed.

A surgical wound is the cut made in the skin by your doctor during an operation. At the end of the operation, most cuts are stitched to allow the skin edges to come together and heal.

The skin edges usually form a seal within a day or two of the operation. This time varies from person to person and from operation to operation. Certain people are more likely to develop wound infections and your Doctor will discuss this with you.

Those at higher risk include people who:

- Smoke.
- Have diabetes.
- Have a condition or treatment that affects their immune system, such as leukaemia or chemotherapy.
- Have a major operation.

Your Doctors and Nurses will do everything that they can to prevent your wound from becoming infected while you are in hospital, but it is important that you know how to tell if you are developing an infection after you go home.

If a wound becomes infected, it may:

- Become more painful.
- Look red, inflamed or swollen.
- Leak or weep liquid, pus or blood.
- Smell unpleasant.

If you are concerned about your wound or if you develop a high temperature, or notice any of the signs listed above, you should contact the helpline number or your GP. Wound infections can be treated successfully if they are diagnosed early.

## 13.3 Stitches, clips and staples

The medical term for stitches is sutures. Other methods used to close a surgical wound include metal clips or staples, and adhesive dressings or tapes.

Some stitches are dissolvable and don't need to be removed. Other types of stitches, and clips or staples have to be removed by a nurse or doctor. If this is necessary the hospital will arrange for the district nurse team to remove them when you are discharged home.

Stitches, clips and staples are usually removed between 5 and 21 days after treatment, depending on the type of operation you have had.

## 13.4. Taking care of stitches

Dissolvable stitches will usually disappear on their own in 7 to 10 days. Non-dissolvable stitches may not be removed for up to two weeks.

You may see small pieces of the stitch material poking out of the healing wound, which has dissolvable stitches. Don't be tempted to pull on these. Wait until they fall out on their own. If the stitches cause you pain or discomfort, contact the helpline or, your GP for advice.

## 14. Going home

Before you came into hospital you will have been asked about who will care for you when you go home. On discharge it is better for you to have a family member or friend or relative to stay with you or you to stay with them for a couple of weeks after your surgery to assist you with cooking, cleaning and shopping. If you live alone and have no one to help you, you can contact your local Social Service department to see if any help is available to you.

Your consultant will assess your condition and when he is satisfied with your recovery, he will give you a proposed date for discharge. This is normally anytime after the 4th or 5th day following your operation (if you are well enough). It takes up to three months to fully recover from heart surgery. During your recovery in the hospital, together with your Nurse and your family, you will be able to plan for your discharge. We ask that someone come to collect you, or if you require transport or any assistance on discharge, please let your Nurse know as early as possible.

Most patients are mildly anaemic on discharge and can therefore expect to be easily tired and short of breath on exercise. The anaemia will improve spontaneously as long as you are on a balanced diet. Some GPs will want to prescribe iron supplements if the anaemia is troublesome.

If you have had Port Access surgery there are no restrictions to your after care. Please get back to living a normal life as soon as possible. You may be able to return to work after 1 month.

If after discharge following valve surgery your symptoms change and you develop a continual temperature, feeling of lethargy and being generally unwell - please contact your GP or Cardiac Liaison Nurse to arrange blood tests as infections can occur following your operation.
It is not unusual to be faced with fear and uncertainty when you first arrive home. Indeed, some

people feel very unsafe away from the hospital environment. Apprehension about the future can cause mood changes with periods of irritability and frustration mixed with feelings of elation and optimism. Sometimes there is a tendency to feel weepy, often for no apparent reason. Concentration may be reduced and sleep disturbed.

These feelings are considered 'normal' reactions to the physical and emotional trauma you have experienced and will not last. However if the symptoms persist they may interfere with your recovery and you should talk to your doctor.

Family members tend to be overprotective when you first go home. Remember- they have had a worrying time too and need time to realise that you can undertake certain activities. Talk to your partner/family about how you feel, be open and honest about your feelings.

It is normal to have good and bad days. Remember the good days are to remind you that you can feel normal. If you do too much on a good day, it may be followed by one or two 'bad days', so learn to pace yourself. Don't worry if you have a bad day just take it easy and start again the following day.

Occasionally, a few days after open-heart surgery, you may feel very depressed and down. This is quite normal after major surgery, it will gradually improve. The Ward Staff are always available if you want someone to talk to about this. You may find you run on quite a short fuse immediately after you go home. Once again this is normal. If you can, talk about it.

Although you have to suffer the physical pain and all that major surgery entails, it is important not to forget how those at home have also suffered, but in a different way. It is equally as frustrating, tiring and lonely and it is important for your partner or carer to have a break during the day, instead of pushing themselves too far.

Some people report seeing dots or flashing lights in front of their eyes, again this is due to the operation and in most cases this will resolve over time. If you do visit your optician or have your eyes tested, explain that you have had heart surgery. Initially you may find your glasses not as effective as before your operation, again this should improve over time.

Increased sweating can occur for a few weeks following open heart surgery (this should not increase your normal body temperature), which is quite normal and part of the post operative effects after by-pass surgery and will settle over time.

You may notice rapid heartbeats at times after your operation. This is usually due to your heart being sensitive and irritable after your surgery. The spells of rapid heartbeats should settle down in the first 4 weeks after your operation. If a spell of very rapid heartbeats goes on for 2 or more hours, or if you feel dizzy, breathless and unwell, contact your family doctor.

## 15. Recovery

The breastbone (Sternum) which was divided during the operation takes 8-12 weeks to fully heal, and is now held together with stainless steel wires. These will remain in your chest. We advise that you support your sternum whilst coughing with a cushion or rolled up towel.

Following your heart surgery, it is very important to adhere to the post-operation precautions, i.e., not pushing or pulling up through your arms.

This may initially impact your ability to complete activities in and around your home such as:

- Washing and dressing.
- Getting up from the chair, toilet and bed.
- Domestic tasks such as cooking, shopping, laundry, housework and gardening.
- Leisure activities.

Patients often experience muscular pain, discomfort and numbness -particularly in the chest, neck, back

and arms. This is a part of the healing process and should gradually improve. If the symptoms persist or get worse following discharge, then you should consult your GP.
Discomfort may also be experienced in the leg from which the vein has been removed for the coronary artery surgery. You may experience feeling of numbness or pins and needles around the leg wound. This is quite normal. A degree of swelling of the leg may also be experienced often persisting for some months. This can be alleviated by wearing support stockings and by elevating the legs whilst sitting in a chair.

Generally your stockings should be worn for about 4 weeks from your operation, night and day, until the swelling subsides. Then for the following 2 weeks the stockings should be taken off at night time, but should be put back on first thing in the morning. When resting try to keep your legs up (the higher they are the quicker the swelling will go down).

You will be assisted with your hygiene needs and your mobilisation within the first few days after the operation. You may seem a little unsteady and weak at first but this will improve.

Early mobilisation is important as it prevents complications. In the first few days after surgery you will be sat in a reclining chair. As your condition improves you will gradually be assisted back to full mobility and independence by the time you are ready for discharge. You should feel well enough to wear your own clothes, i.e. tracksuit or loose fitting shirt and shorts or skirt. Ladies may feel more comfortable wearing a soft bra or crop top.

The best form of exercise you can do is walking. This will have played an important part of your recovery in hospital. Walking will help you to gain the maximum benefit from your heart surgery and will improve your quality of life. It is important to continue mobilising, progressively building up your exercise tolerance. Do not do too much too soon.

The first walk at home should be that of a similar distance to the walk you have already done in hospital. An adequate distance is that which a steady pace makes you feel slightly breathless. REMEMBER you always have to return. You may walk in cold weather, but wrap up well. Have a daily walk and increase the distance gradually -approximately 30-50 metres.

You may initially be breathless after walking upstairs or getting dressed, but this should settle within 5 - 10 minutes and you should not be gasping. If it is lasting longer than this, contact:

- **Your own GP.**
- **Ward 38 (01253 957738).**
- **Ward 39 (01253 957756).**
- **Lancashire Suite (01253 957862).**
- **The Cardiothoracic Liaison service on 01253 957720.**

By gradually increasing the distance you are walking, you could be walking 2-3 miles by your clinic appointment, remember everyone is an individual, some people may be doing more, others less.

## 16. Returning home

- Remember that these are guidelines only, and each person must reach their own level of recovery and fitness at their own pace.
- While some people will recover very quickly, others will take much longer. Use common sense and allow yourself the best chance of a smooth recovery.
- In the early stages of recovery, you may find that you are more tired than usual but this should pass as you regain fitness and confidence.

## 16.1. First week at home:

- Stay around your home and garden for the first few days then start venturing out on the street increasing your daily walks by an extra lamp post a day or to the next house.
- Take things easy around the house – light washing up or making a snack is fine.
- Eat light meals.
- You may play with your children or grandchildren but no lifting or carrying them.
- Resume gentle hobbies such as sewing, painting and puzzles, playing board games with your children or grandchildren but remember no lifting them!
- Avoid heavy housework, such as cleaning or vacuuming or cooking a large meal.
- Rest on the bed after lunch and have early nights.
- Take the stairs gently in the first few days, stopping to rest if you become short of breath or experience any pain/discomfort.
- No moving or lifting of heavy objects.
- Have visitors but not too many and not for too long.

## 16.2. Second week at home:

- Become more active around the house.
- Begin short periods of light housework such as dusting and washing up.
- Gradually increase the amount of food you eat at mealtimes.
- Take shorter afternoon rests in the chair.
- Continue to have visitors as long as you are able to cope with them.
- No moving or lifting of heavy objects.
- Walk to the local shops, if nearby, for light shopping, but avoid supermarkets.
- Avoid public transport but you may be taken out in the car for a drive.
- Continue going for daily, gentle walks outside and gradually build these up.

## 16.3. Third week at home:

- Increase household tasks to include mopping floors, light hand and machine washing. Do not carry the wet washing out of the machine, get help to do this, but you can hang the washing out.
- Begin light social activities such as going out for a meal, or to the pub, but do not stay out too long or go out too often.
- Rest when necessary.
- Visit friends or relatives.
- You can go to the supermarket but do not push the trolley particularly when full, and you can make

short visits into town, but do not carry heavy shopping.

- Make beds, but no stripping or changing sheets.

## 16.4. Fourth week at home

- Trips to the cinema and other social events.
- Rest when necessary.
- Access public transport.

## 16.5. Weeks five / six

By this stage you should be doing most of your normal day-to-day activities and be walking up to 3 miles a day

- Washing and polishing the car in stages, with regular breaks. Do not lift the bucket when it is full of water.
- You may start ironing again.

## 16.6. After six weeks

You may vacuum again.

## 16.7. After eight weeks

You may push the trolley at the supermarket – even when full!
You should be back to your pre-op level of activity and beyond.

## 17. Do's and don'ts:

Whilst waiting for your sternum to heal, (approximately 8-12 weeks after your operation):

- NO digging the garden.
- NO mowing the lawn.
- NO heavy lifting e.g. the grandchildren.
- NO shifting snow.
- NO cleaning windows or baths.
- NO pushing supermarket trolleys.
- You can do light household duties e.g. dusting or washing-up.
- Ten weeks after your operation you can usually cycle or start swimming. Start off easy and build it up, just like with your walking.
- Three months after your operation - you can play golf again, but start at the driving range before playing eighteen holes.

Build up all the activities gradually but keep active, and establish a regular exercise routine. Discuss specific activities with your Physiotherapist.

## 18. Return to work

This depends on the type of work you do, but is usually approximately 6 weeks to three months after the date of operation. Most people should be able to return to their previous occupation, although you should avoid excessive overtime. The time needed to prepare for return to heavy work will obviously be rather longer than for a desk job. If you have had Port access surgery your return to work will be sooner. If you require a medical certificate, ask the Nursing Staff.

You should discuss your individual circumstances with your Consultant, GP and your employer. If a change of employment is suggested, then the Employment Advisor at the Job Centre may be able to help you.

## 19. Holidays

Most people are able to enjoy a holiday abroad approximately 10-12 weeks after surgery. Under normal circumstances, you should then be able to fly. Confirmation of safeness to fly is usually given at the post-operative visit. Do check your holiday insurance before you travel.

## 20. Driving

DVLA guidelines state that you are able to drive at 4 weeks post heart surgery, providing there are no other disqualifying conditions. This is for group 1 licence holders only i.e. motorcycles and cars. For further information visit the website www.dvla.gov.uk write or telephone the DVLA.

But the following Consultants would recommend that you do not drive until you have had your follow up appointment.

**Mr Bittar and Mr Rose** - will review you in clinic approx 10 weeks post op and advise on driving.

**Mr Zacharias and Mr Walker and Mr Raimondo** – allow their patients to drive at 4 weeks post op, but you must have had your GP check that your sternum is stable prior to driving.

**Mr Bose and Mr Laskawksi** – adhere to the DVLA recommendations and will allow you to drive at 4 weeks post op, but there should be no other disqualifying condition.

We recommend that you inform your Insurance Company of your heart surgery, just to ensure there is no possibility of you invalidating your insurance.

Holders of LGV and PCV licenses must inform DVLA. The phone number for the DVLA Medical Section is 0300 790 6806 or https://www.gov.uk/contact-the-dvla/y/driving-and-medical-issues.

## 21. Sex

You may resume when you feel fit enough . Ensure you are the passive partner to begin with. As a rough guide, if you are able to climb two flights of stairs with out any problems you should be able to resume sexual activity. Occasionally Beta-Blockers can cause impotence. If this problem is experienced speak to your GP as this can be treated.

## 22. Anticoagulants

If you are on anticoagulants post- operatively, you will be given an appointment for the Anticoagulant Clinic (at your local hospital or GPs surgery) on discharge. If you require transport, please inform the Nursing Staff.

Always carry your anticoagulant booklet with you whether you are going to the Clinic or not.

## 23. Outpatient appointment

You will be sent an appointment through the post, approximately 8-10 weeks after discharge, for a post-operative check.

It would be useful if you could either bring your tablets with you or a list of the tablets you are taking and at what intervals.

## 24. Cardiac Rehabilitation

You will be referred to your local Cardiac Rehabilitation team on discharge and they will contact you at home.

Cardiac Rehabilitation is offered to people who have had a heart attack, cardiac surgery and angioplasty and stent.

The aims of Cardiac Rehabilitation are: -

- To help improve your quality of life by increasing your confidence to exercise regularly in order to strengthen your heart.
- To help you understand what coronary heart disease is and the process of heart disease.
- To help you become aware of the risk factors that might have contributed to your heart problems and make relevant changes to your lifestyle to reduce them.

## 24.1 How do you join the programme?

Whilst in hospital your details will be collected and referred onto your local rehabilitation team.

Your local Cardiac Rehabilitation team will then contact you at home to check your progress and explain what will happen on commencement of their Cardiac Rehabilitation programme.

## 25. Cardiac Rehabilitation Occupational Therapist (OT) role

The OT can provide assessment for physical/functional problems around the home. This may include difficulty with daily living activities e.g. personal care, bathing, getting on/off furniture or managing in the kitchen.

An OT can complete assessments of your physical / functional / cognitive abilities prior to discharge home and make appropriate recommendations.

One to One emotional support is also offered to help come to terms with your cardiac event, such as feelings of anxiety, worry, and low mood.

If you require assessment/support please contact Cardiac Rehab OT on Tel 01253 955326.

## 26. Dental advice

Patients with their own teeth should visit the dentist every 6 months if they have a new heart valve (either tissue or mechanical). Go to the dentist immediately if you have any problems with your teeth i.e. toothache, etc.

Advise the dentist that you

(a) Have a new heart valve or
(b) Are on anticoagulants for either three months or for life.

Expect to have to take Amoxicillin (3gms) one hour prior to any dental treatment.

## 27. Patients who were on treatment for high blood pressure before surgery

If treatment is not prescribed on discharge it is because it is not required at this stage.

Please ask your GP or Practice nurse to check your blood pressure once a week or fortnightly. If your blood pressure rises, they may recommence treatment.

## 28. Patients who were on water tablets before surgery

If treatment is not prescribed on discharge, it is because it is not required at this stage. You may need to go back on water tablets if your GP recommends it.

If you start to feel more breathless and both of your ankles begin to swell, please consult your GP. It is normal for the leg that has been operated on to swell, but the other leg should not be unduly swollen.

Do not hesitate to ring your GP about any immediate or urgent problems.

If you have any worries after discharge, you can leave a message on the Heart-line answer phone and a member of staff will call you back.

Tel: 01253 957720 and speak to the Cardiac Liaison nurses.

Or contact the Cardiac Coordinator on 01253 952501, or Ward 38/39 or the Lancashire Suite.

## 29. Sleep and rest

It is common for anyone who has recently been in hospital to feel extremely tired. This is normal and should be the limiting factor to your progress. Rest as required, particularly after lunch, as you did on the ward.

## 30. Pain

Don't hesitate to take painkillers, usually Paracetamol or similar. Aim to take them regularly at first. Try to avoid getting pain, rather than waiting for it and then treating it. Stronger painkillers can be obtained from your GP. It is quite common for the pain to get worse when you go home. The pain can be anywhere between your waist and your neck. Don't be a martyr, the pain will eventually get less. If the

pain persists and is unrelieved, contact your GP or Helpline.

You may experience some numbness near or around the scars from where the vein has been taken. This can also occur around the sternal scar if a graft has been taken from the internal mammary artery and is quite normal.
Very occasionally you may still experience some angina after your operation and this should be reported to your doctor.

If your sternum " clicks" and the pain increases, inform Ward 38/39 or your GP. Usually if it is an occasional click it is nothing to worry about.

## 31. Constipation

The painkillers that you will have been taking may make you constipated. If this happens on the ward please let the ward staff know.

The painkillers containing Codeine (e.g. Co-codamol) are usually the main cause. Should you become constipated, don't leave it for more than a couple of days, consult your GP or chemist for advice about taking Laxatives. Take a high fibre diet, plenty of fruit and vegetables, walk around the house every hour or so and drink plenty of fluid. All of these will help.

## 32. Medications

The Nurse discharging you will give you a short supply of medication, which has been prescribed for you by the Doctor. The Nurse will explain the medication, dosage, frequency and continued administration. Any medication that you have been previously taking prior to your operation should be discontinued and only the medications given to you on discharge should be continued. You will also be given a letter for delivery to your GP. This letter tells the GP about your operation, medication, and that you have returned home and will now be under his/her care again. Advice about convalescence and any appointments that you need to attend will be given to you.

You will then need to contact your GP surgery for a repeat prescription before the week is over. Never run out of your tablets.

There are different groups of drugs used in the treatment of heart disease.

The doctor decides which combination of drugs is best for you.

- You should always know what tablets you are taking and when to take them.
- What the tablet is called?
- What it is for?
- Are there any side effects I should be aware of?

You should keep an up-to-date list of all your tablets and dosages with you at all time.

Never stop taking them without contacting your GP.

If you are unhappy about any of your tablets, you must discuss this with your GP, who will advise you.

The following section contains a list of the drugs that are commonly used to treat heart disease.

## 32.1 Antiplatelets

These make the blood cells less 'sticky' which helps to reduce the chance of a blood clot forming inside

your arteries. This helps to lower the risk of further heart attack.

- ASPIRIN should always be taken with food.
- CLOPIDOGREL Usually given after angioplasty and stent insertion into a coronary artery. It may also be given in place of aspirin.

## 32.2 Ace inhibitors

These reduce the amount of work the heart has to do by widening the blood vessels. They can help to lessen the effect of the damage caused by a heart attack. They can also be used to treat high blood pressure and heart failure.

- RAMIPRIL (Tritace).
- PERINDOPRIL (Coversyl).
- CAPTOPRIL (Capoten).
- LISINOPRIL (Zestril).
- ENALAPRIL (Innovace).

## 32.3 Angiotensin II Antagonists

These act in a similar way to ACE inhibitors. They also lower blood pressure. Can be used as an alternative to ACE inhibitors.

- LOSARTAN (Cozaar).
- VALSARTAN (Diovan).
- IRBESARTAN (Aprovel).

## 32.4 Beta Blockers

These act by slowing the heart rate and lowering the blood pressure, reducing the amount of work the heart has to do

- BISOPROLOL.
- ATENOLOL.

## 32.5 Lipid-lowering drugs

These reduce the amount of cholesterol in your blood, which can help to reduce the further build-up of 'fatty' deposits in the coronary arteries. They should be used in conjunction with a low fat diet. You must avoid citrus fruit whilst on this medication, particularly grapefruit/ grapefruit juice. You can discuss this with your GP.

- SIMVASTATIN (Zocor).
- PRAVASTATIN (Lipostat).
- ATORVASTATIN (Lipitor).

## 32.6. Diuretics

These are sometimes called 'water tablets'. They increase the amount of urine produced by the kidneys, which removes excess fluid from the body. This helps to reduce the strain on the heart. Some diuretics are used to lower high blood pressure.

- FRUSEMIDE (Lasix).
- CO-AMILOFRUSE (Lasoride).
- BENDROFLUAZIDE.

- BUMETANIDE (Burinex).
- SPIRONOLACTONE.

## 32.7. Anticoagulants

WARFARIN Used to thin the blood when there is a possibility of blood clot formation or evidence that a blood clot may be present. The dose may vary according to the thickness or thinness of the blood, and this will be determined by regular blood tests at the anticoagulant clinic at the hospital, or your GP surgery.

## 32.8. Anti-arrhythmics

These help to control fast or irregular heartbeats.
- DIGOXIN .
- AMIODARONE (Cordarone).
- SOTALOL (Betacardone).

# 33. Healthy eating

- Healthy eating is an important part of looking after the heart.
- It is a good idea to look carefully at what you eat, as often what we eat can affect our health.
- This is one area where the whole family can benefit from changes that may be made.
- The easiest way to make sure that your diet is healthy is to eat as wide a variety of foods as possible.

The most important points to remember are:

## 33.1. Fat

- One of the most important things we can do to reduce the risk of heart disease is to reduce our fat intake.
- We should consider the total amount of fat in our diet, especially if being overweight is an issue. It is important to look at the type of fat that we eat.

### 33.1.1 Saturated fat

- This comes from animal fat and should be avoided.
- This is the type of fat that will build up in arteries and includes cheese, butter, cream, lard, full fat milk, visible fat on meat, pies and pastries.
- Where fat is needed a suitable vegetable alternative should be used. These are "healthier" types of fat and these can be divided into two types.

### 33.1.2 Monounsaturated fat

- This will not increase blood cholesterol levels or "clog up" arteries and may also have a slightly protective effect.
- It is found in olive oil and margarine's made from olive oil. It is also found in rapeseed oil.

- There may be a protective effect from including a little in the daily diet.

## 33.1. 3 Polyunsaturated fat

- Again, this will not increase blood cholesterol or "clog up" arteries.

- It is found in sunflower oil, corn oil, soya oil and safflower oil and the margarines made from them.

**Do not use a huge amount of these fats or they will increase your body weight.**

*NB Benecol and ProActive are new margarine products, which are a little different. They both contain naturally occurring chemicals found in plants. These chemicals are called sterols or stenols and research suggests that they may be able to help reduce blood cholesterol. They are available to buy at supermarkets and can be used as directed on packaging. They have to be used in conjunction with a healthy heart diet to be effective.

- Avoid excess fats when choosing foods.

- Use healthier cooking methods. Some suggestions to try are to: grill, dry roast, casserole, boil, poach, steam or use a microwave, pressure cooker or slow cooker.

- Include a variety of chicken, turkey, fish and meat.

- It is useful to include some red meat, as it is a good source of iron, but buy smaller amounts of lean meat and trim off visible fat. Do not eat red meat more than two or three times per week. Tinned and processed meat is not a healthy choice.

- Use poultry and fish as an alternative.

- Oily fish contains a type of oil called 'Omega-3', which is thought to be protective against heart disease. It is found in fish such as mackerel, herrings, pilchards, kippers, sardines, salmon and trout. Eating one of these fish twice a week is helpful.

- Look for the lowest fat alternatives – especially for foods such as milk, cheese, yoghurt, fromage frais etc.

- When looking at food labels try to ensure that food is less than 5 grams total fat per 100 grams.

## 33.2. Carbohydrate

- Carbohydrate is found in starchy and sugary foods.

- On the whole sugary foods do not provide any goodness, so we should be careful about eating too many of them.

- The largest part of your food should come from the starchy foods. These include bread, rice, pasta, potatoes, breakfast cereals and fruit.

- These foods provide a lot of nutrients, which are important to us.

- Everyone will need different amounts depending on appetite, activity and body weight, but the largest part of the food that we eat should be the starchy part.

## 33.3. Fibre

- Increase or maintain a high fibre intake. Fibre may help to reduce the risks of heart disease by lowering cholesterol levels.

- Fibre is found in fruit and vegetables and also in wholemeal bread and other foods made from wholemeal flour, other foods made from wholemeal flour, brown rice and wholegrain pasta.

- Try some of the many high fibre breakfast cereals. Beans – including baked beans, peas and lentils are also good sources of fibre.

- Soluble fibre is found in oats, fruits and vegetables, beans, pulses and lentils.

- It is thought to be more effective at helping to control blood cholesterol levels than other types of fibre.
- Fruit and vegetables are particularly important because they provide antioxidant vitamins and minerals which will help to protect against heart disease.

- An ideal intake of fruit and vegetables is to include five portions a day. One portion might be one piece of fruit such as an apple, orange or banana, one glass of fruit juice, a small dish or side plate of salad or 2 tablespoons of cooked vegetables. Include a variety of different colours to increase the variety of vitamins!

## 33.4. Sugar

- Sugar is high in calories and may increase your weight. It is recommended that we do not have more than 30g/1oz of added sugar, honey,glucose or syrup daily. This is equivalent to 7 cubes of sugar. It also includes the (fruit) sugar in unsweetened fruit juices, sweets, chocolates, toffees, cakes, biscuits, desserts and puddings. Sweetened fizzy drinks and cordials contain a great deal of sugar and need to be reduced or avoided.

## 33.5. Alcohol

Excess should be avoided, particularly if taking painkillers. If you are on anti-coagulants - don't binge. It is safer to drink the same amount daily i.e. a pint per day or one measure of spirits, than to save it all for the weekend.

- Drinking some alcohol in moderation is not thought to be harmful in heart disease.

- Alcohol contains a lot of calories and can cause weight gain.

- Spread the alcohol over the week do not drink the whole "allowance" in one go!

- Have 2 alcohol free days each week.

- Keep within the recommended guidelines – which are no more than 14 units of alcohol per week for women and no more than 21 units per week for men.

**One unit of alcohol is equal to**

- 1 small glass of wine.

- ½pt of regular beer or lager (not the strong varieties).

- 1 pub measure of spirits.

- 1 pub measure of sherry or port.

## 33.6. Body weight

- Aim to keep your weight within reasonable limits. Following a healthy eating plan will help keep your weight under control, especially avoiding too many high fat foods.
- If you are overweight or obese, a healthy goal is to reduce your weight by 10%.

## 33.7. Salt

- Common table salt is made from sodium chloride and the sodium part of salt may be a factor in high blood pressure.
- We tend to eat far more than we actually need. Many foods have a natural salt content so we should be very careful about adding any salt in cooking or at the table.
- Those people with a raised blood pressure should be taking steps to actively avoid excess salt.
- Many processed, tinned and packeted food contain salt or sodium in other forms especially foods such as bacon, processed meats, cheese, soups, cured or smoked foods

You will benefit from a healthy diet, which is low in fat and sugery foods. E.g. fish, chicken, turkey ,beans, lentils, pulses ,nuts, eggs, a little red meat, vegetables, fruit, salads and high fibre breakfast cereals, bread, pasta, rice and oats.

## 33.8. Cholesterol

The normal levels are between 3.5-6.9. If you have had bypass surgery, it is essential that you try and keep your cholesterol level less than 4. If you don't know what your level is, ask your GP to check it about three months after heart surgery and again at a later date.

If your cholesterol level is raised, it can be reduced initially by a low fat diet and if necessary tablets. All patients who have had Coronary artery bypass surgery should be on a cholesterol-lowering tablet. Your present cholesterol level is …….

## 34. Smoking

When the Consultant saw you in the clinic and advised an operation, he would also have advised you to stop smoking from that time. This is very important as your recovery could be prolonged if you continue to smoke. Use this opportunity to give up smoking completely.

## Why?

Smoking increases the tendency of the blood to clot in the blood vessels, especially in arteries that are already furred up.

Carbon monoxide in cigarette smoke increases the oxygen needs of the heart.

Nicotine increases the heart rate and blood pressure.

However, once you have stopped smoking you halve the chance of a further heart attack.

## Help is available

Whilst you are in hospital, if you are finding it difficult because you are unable to smoke, talk to the

nursing staff.

You can also contact your GP who will refer you to your local Stop Smoking Service.

You need to think about a day when you are going to stop smoking. Most people use the day of their heart attack.

The sooner you stop the better. It is never too late.

Identify any smoking patterns you may have, and this will help you to deal with different smoking situations.

We do understand that stopping smoking is hard. We are here to support and encourage you, but it has to be your decision to stop.

If you do not feel ready to stop, you need to talk to a smoking cessation adviser in order to gain the support you will need to help you quit.

## 35. Stress

Stress is difficult to define or measure, as what is stressful to one person may not be stressful to another. Also each individual's causes of stress can alter.

Stress is a necessary part of everyday life. Indeed a certain amount of stress is considered to be a good thing as it can motivate and help you perform at the peak of your ability.

Too much stress, however, affects your health and well-being and can cause emotional, psychological and physical problems.

Although it is difficult to prove, stress does seem to contribute towards high blood pressure, angina and coronary heart disease.

It is useful to recognise the causes of your stress and realise that almost any event can cause stress.

Some causes are obvious, for example redundancy, bereavement, divorce or illness in the family, whilst other causes will require careful thought to bring them out into the open.

Stress can also be caused by events that are thought of as pleasant, like getting married, moving house, going on holiday.

You may also need to take into account the fact that events tend to be particularly stressful when they are: -

- Unpredictable.
- Unfamiliar.
- Major.
- Intense.
- Unavoidable.
- Inevitable.

People deal with stress in different ways, they find their own ways of tackling stress and learn ways of coping in different situations.

There are many ways of coping with stress – some of these deal with the stress and others simply make you feel better.

Here are a few suggestions, which may help you to deal with stress and hopefully improve your quality of life: -

- Take regular exercise.
- Learn a relaxation technique.
- Pursue hobbies and leisure activities.
- Enjoy time with family and friends.
- Try to keep things in perspective.
- Take on less responsibility – delegate tasks, learn to say 'No'.
- Make time for yourself.
- Take short breaks throughout the day.
- Make small, regular changes to your lifestyle.
- Don't be worried to seek medical help if you are worried about your health.

## 36. Exercise

There are a few general exercises you can start a few days after your operation to prevent stiff shoulders, neck and back. They should be done gently and not too often. Do the exercises twice a day, repeat each exercise 3 times. This should only take a few minutes.

Start by slumping in your chair so your whole spine is bent forwards, then sit up making your spine straight and take your shoulders back. Now you are in the correct position to start the exercises.

1. Turn your head slowly to look over your right shoulder, hold at the end of the movement for a few seconds, then turn to look over your left shoulder and hold for a few seconds.

2. Looking straight ahead, take your chin down to your chest, then lift your head to look up at the ceiling.

3. Looking straight ahead, take your right ear down to your right shoulder, then take your left ear down to your left shoulder.

4. Lift your right hand up above your head, keeping your elbow straight and your arm close to your head, then bend your elbow and stretch as far down your neck/back as able. Return to the resting position. Repeat with the left arm.

5. Place your right hand on your right shoulder, take your elbow out to the side, away from your body; until approximately level with your shoulder, and do a circle forward 3 times, then change direction. Repeat with the left arm.

## 36.1. Exercise after 6-8 weeks – cardiovascular

By this stage you should be commencing the Cardiac Rehabilitation Exercise programme.

## 36.2. Type of exercise

- The type of exercise which benefits your heart is CARDIOVASCULAR / AEROBIC exercise.

- This means that you should feel pleasantly breathless and sweaty.
- Your pulse rate should rise significantly and should be sustained for approximately 30 – 60 minutes.

- Exercise must be increased slowly and gradually, both in intensity and duration, particularly for those who have previously undertaken very little exercise.

EXAMPLES OF THIS ARE: -

- Walking.
- Swimming. Suitable cardiovascular exercise.
- Cycling.
- Dancing.

- Golf and bowls are not classed as aerobic exercise as they are stop / start in nature.
- Sports that are highly competitive impose a sudden severe load on the heart and should be avoided.

EXAMPLES OF THIS ARE: -

Squash.
Water skiing. Exercises to be avoided.
Weight lifting.

## Take Note:

- Activity is **not** the same as exercise.

- Such activities as housework, gardening, and D.I.Y do not cause a significant rise in heart rate over a prolonged period of time as they are **stop / start in nature and do not benefit the heart in the same way as prolonged exercise.**

You should not exercise: -

- During an asthma attack.

You should stop exercising if you: -

- Are suffering from chest pain / Discomfort until it has settled.

- During an angina attack until it has settled.

- Are having a cold sweat.

- If you have a high temperature.

- Are sweating profusely.

- If you are feeling tired or ill.

- Are extremely short of breath  i.e. unable to talk.
- If your Doctor has advised you not to.
- Are nauseated/vomiting.
- If you have uncontrolled diabetes.
- Are feeling faint/dizzy.
- After you have eaten a heavy meal.

## 36.3. Benefits of regular exercise

- Increases the efficiency of the heart.
- Gives a feeling of well being.
- Decreases anxiety/stress levels.
- Helps you to lose weight.
- Helps to lower cholesterol levels.
- Helps to reduce angina/breathlessness.
- Helps to normalise blood pressure.

Below are the local Cardiac Rehabilitation Centres and their contact numbers.

**Local Contact Numbers:**

| | |
|---|---|
| **Barrow** | **(01229) 402645** |
| **Blackburn** | **(01254) 732448** |
| **Blackpool** | **(01253) 955326** |
| **Burnley** | **(01282) 804068** |
| **Chorley** | **(01257) 245635** |
| **Kendal** | **(01539) 715415** |
| **Lancaster** | **(01524) 516343** |
| **Preston** | **(01772) 522311** |

Other .....

## 37. Patient Telephone Helplines and Websites

**British Heart Foundation**

**Website: www.bhf.org.uk**
**Telephone number: 0300 330 3322 ask for Medical Information Department.**

- **Angioplasty • stents • bypass • pacemakers**
- **Heart conditions**
- **Lifestyle advice**
- **Help and support (including online chat)**
- **Information including recipes**
- **Links**
- **Medicines**

## H.E.A.R.T. UK

**Website: www.heartuk.org.uk**
**Telephone number: 01628 777046**

- **Healthy heart information**
- **Membership available • publications**
- **Information about heart disease**
- **Cholesterol Helpline: 0345 450 5988**

## Alcohol Support Groups

**www.AlcoholConcern.org.uk**
**www.AlcoholLearningCentre.org.uk**
**www.DrinkAware.co.uk**

**Telephone: Drink Line: 0800 917 8282**

## Diabetes UK

**Telephone: 020 7424 1000**
**Website: www.diabetes.org.uk**

## NHS Website

**Telephone Number: 111**
**Website: www.111.nhs.uk**

We hope that this booklet will help to alleviate any fears you may have about your operation and recovery; but if you or your family have any questions or worries about anything, please do not hesitate to ask.

If you have any suggestions for amendments or further inclusions you feel would benefit future patients, please send them to:

**MATRON**
**CARDIAC DIRECTORATE OFFICE**
**BLACKPOOL VICTORIA HOSPITAL**
**WHINNEY HEYS ROAD**
**BLACKPOOL**
**FY3 8NR**

# Other sources of information:

Cardiac Centre, Patient Care Advisor:
Telephone: 01253 952501 (office)

**Hospital switchboard**
Telephone: 01253 300000 and ask for bleep 1825

## Patient Relations Department

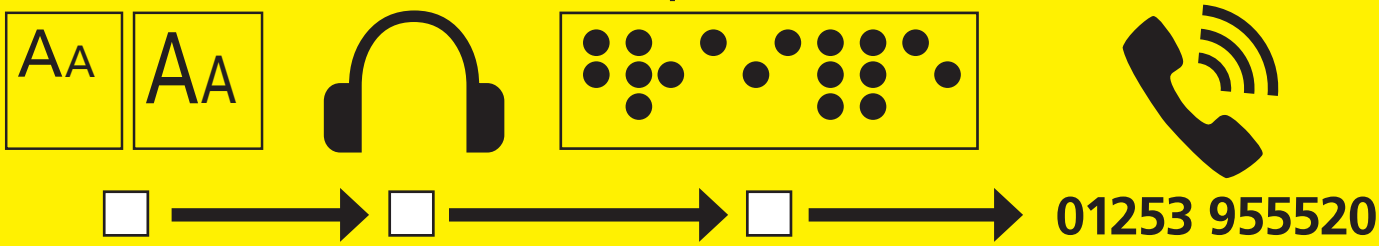
The Patient Relations Department offer impartial advice and deal with any concerns or complaints the Trust receives.

You can contact them via tel: 01253 955589
or by email: bfwh.patientrelations@nhs.net

You can also write to us at: Patient Relations Department, Blackpool Teaching Hospitals NHS Foundation Trust, Blackpool Victoria Hospital, Whinney Heys Road, Blackpool FY3 8NR


Further information is available on our website: www.bfwh.nhs.uk

If you'd like a large print, audio, Braille or a translated version of this booklet then please call: **01253 955520**

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Approved by: Cardiology
Date of Publication: 11/03/2022
Reference No: PL/603 v5
Review Date: 01/03/2024