ANTERIOR LUMBAR FUSION OR DISC REPLACEMENT SURGERY: L18p AND L20p
Information for Patients at The Spine Surgery London

Introduction
This information sheet has been prepared primarily for patients undergoing the operations of lumbar fusion or total disc replacement via an anterior opening, (on the tummy), for back pain and or leg pains. Other information sheets concerning different aspects of spinal disorders are available and may be of relevance. (You may obtain a Title List of other information sheets from my office)

This information is intended to supplement the interview and examination sessions at which advice specific to your individual case will have been given. If you are considering this operation this document should be viewed as only part of the information you will have received.

The information provided below is intended to be clear. Inevitably when dealing with complex and important issues difficulties may arise. If you are anxious about any element you should seek further information. If you feel the information could be improved please let us know.

Certainly no patient should undergo any operation without feeling that they have all the information that they wish concerning the aims, risks, benefits, nature of the surgery and the usual post-operative recovery, in addition to having been appraised of the alternative lines of management and what happens if nothing is done (the natural history of the condition). If you feel that any of these aspects have not been covered to your satisfaction you should ask for more detail and certainly not consent to any operation until you are entirely satisfied. It is your right to have this information and indeed your responsibility to ensure that you have understood it. There is also a general document entitled “Informed Consent for Treatments: Operations and Injections”

Anatomy
The spine is made up of bones (vertebrae) which are separated by discs. The spine has 24 separate bones – 7 in the neck (cervical vertebrae), 12 in the chest (thoracic vertebrae) and 5 in the back (lumbar vertebrae). The discs are soft(ish) cushions which act as both shock absorbers and hinges. An arch of bone (the laminar) comes off the back of each vertebrae to form a tunnel (spinal canal). You need to know about the laminar as they are involved in decompressions. Within this canal in the neck and thoracic spine is found the spinal cord. Coming off the spinal cord on each side and at each vertebra are the nerve roots. The spinal cord ends at the top of the lumbar spine which lies approximately level with the naval. In the lumbar spinal canal contains no spinal cord but lots of nerve roots which supply the functions of the legs (power and feeling), the bowel and the bladder. The spinal cord may be thought of as “the brains motorway to the body”. It is very soft, about the size of an index finger and contains all of the nerves controlling feeling and movement of every part of the body i.e., the arms and legs along with all of the conscious and unconscious actions of the internal organs, chest and abdomen. Though made up of billions of nerves the spinal cord is entirely numb. This contrasts with the contents of the lumbar canal for anyone who has had sciatica will tell you that when a disc touches a nerve root it can hurt like fury. Finally, there are the spinous processes. These are flat spine that project backwards off the back of the bony arches (laminar) which form the back of the spinal canal.
They are like a series of fins such as some dinosaurs had. The spinous processes can be felt with the finger as the knobbly bits under the skin in the middle of your back.

Each vertebral bone is joined to the one above and below by the intervening discs. They are also joined by a pair of small joints at the back. Called the “facet joints” there is one on either side and about the size of a finger nail they are formed from projections off the top and bottom of the lamina on either side of the spinous process. These projections are called the “pars interarticularis” (parts between the joints to you and me).

The lumbar spine is most commonly approached from the the back via an incision which runs up and down and is made in the middle. However and in this case, it can also be approached from the front, (anteriorly), in which instance a horizontal, (transverse), incision on the lower abdomen between the pelvis and the abdomen is used. This will usually lie below a “high bikini line”. Occasionally, if wider access is needed, then a vertical incision up and down is required.

**Lumbar Spine Degeneration**

The lumbar discs are flat circular objects. They consist of a central firm jelly (nucleus pulposus or pulp) contained within a hard fibrous ring (annulus fibrosus or capsule). It is rather like a thick walled tyre (capsule) filled with stiff jelly (pulp).

In the classical form an acute disc prolapse occurs when the capsule tears and the pulp herniates through the capsule. This produces back pain. If it prolapses backwards onto the nerve roots supplying the legs pain is perceived in the legs and it is this leg pain which is referred to as “sciatica”. In practice however this prolapsing usually only arises when the disc is already worn by the effects of age/wear and tear.

This ageing of the disc occurs early and can often be seen in the late teens or early twenties. As a process it has many different names: wear and tear, arthritis, osteoarthritis of the spine, spondylosis and degenerative lumbar disease. The term spondylosis has to be differentiated from spondylolithesis – the first means arthritis of the spine and the second a slip of the spine and “spondylitis” which means inflammation of the spine.. Prolapsing of a lumbar disc also has many names: ruptured disc, herniated disc, prolapsed disc and slipped disc.

As the degenerative processes proceed the other structures of the spine are also affected. Swellings on the bone adjacent to the disc may develop and give rise to narrowing of the canal or foramen and this in turn to pressure on the nerve roots and thus the generation of sciatica. These bony swellings are called “osteophytes”. They may arise not only adjacent to the disc but also on the small hinge joints at the back of the spine – the “facet joints”. In addition the disc loses height as it wears and the gap between the bones is therefore reduced. As a result of these processes the canal through which the nerve root normally exits from the spine, the foramen, becomes narrow. This situation may itself give rise to sciatica and certainly will reduce the size of the disc prolapse that may be tolerated before sciatic symptoms develop. The same degenerative process may narrow the main central spinal canal and give rise to “spinal canal stenosis” (leg pain on walking or standing).

The degenerative processes in the discs, the bones adjacent to the discs, the facet joints and the loss of height in the disc, can all contribute to back pain.
The removal of the disc prolapse (not the whole disc but the “pea”) is what is referred to as “discectomy”. The removal of the osteophytes and the widening of the nerve’s exit hole (foramen) is what is meant by “nerve root decompression”. If the central part of the canal has also been narrowed and all the nerves are compressed (ie not just the nerve root exiting the spine at that level) this central canal is opened up. This widening is called a “central canal decompression”. You may need one of the last two as part of your fusion,

You all have a discectomy as part of a fusion procedure or disc replacement,

In fusion the movement of the facet joints is stopped and so it is appropriate for patients with pain coming from the facet joints as well as the disc whereas disc replacement is more appropriate if it is thought that your pain is primarily coming from the disc. Other factors in choosing between disc replacement and fusion are considered later.

The majority of you having fusion or replacement have a painful disc. The reasons why discs give rise to severe pain in some patients and in others either no symptoms or only a mild ache is unclear. In the vast majority back pain can be well managed by conservative measures. However in a few it cannot and in those circumstances fusion or replacement is an option.

**Symptoms and Surgery**

Lumbar fusion and disc replacement surgery is performed primarily for those with serious, lasting back pain thought to come from the disc or discs, (“discogenic back pain”). There may also be leg pain or symptoms of numbness and weakness in the legs. These symptoms come from pressure on the nerves as they pass to the legs through the spinal canal. In these circumstances surgery to decompress the spine is required and is done as part of the procedure. In cases where facet joint pain is an issue then fusion is used instead of disc replacement as with the latter the facet joints move as much or more than they do prior to replacement.

It is worth spending some time considering these symptoms and their origin.

Sciatica is commonly caused by a prolapsed lumbar disc pressing on the nerve root just prior to it emerging from the lumbar spine and is usually treated with key hole surgery However another common cause is narrowing of the lumbar spinal canal (the main nerve channel down the centre of the spine) or the exit foramen (hole at the side of the spine) that the nerve exits the main canal via. These narrowings are often referred to as “spinal stenosis” or “lumbar canal stenosis”. It is entirely possible to have both a prolapse and a narrowing which then act together. Each lumbar nerve root is about the size of a biro refill and the disc prolapses are often not much bigger than a pea.

Consequent pressure on the nerve root gives rise to a sensation of pain in the leg and may induce loss of function in the nerve root and thence numbness or weakness affecting the leg. The commonest functions to be affected are ankle movements and sensation around the foot, calf and ankle. In lumbar canal stenosis the symptoms are classically felt when walking or standing upright and are relieved by sitting or bending forwards in which position the spine is relatively open – patients may be able to ride a bicycle for miles but walk only for a few tens of yards.

The primary aim of the decompression part of an operation is usually to relieve leg pain though it may additionally be targeted at improving strength in the weakened muscles or the relieving of numbness.
The surgery achieves this by opening the spinal canal and thereby relieving pressure on the nerves within it.

However, the primary aim of a fusion is to relieve back pain. If the pain comes from the discs this can be achieved by removing the disc completely and replacing it with an artificial disc or by fusing the adjacent bones together. If it comes from the facet joints the only option is to fuse the bones and stop the movement. Sometimes there is an element of both disc and facet joint origin and then decisions are made in the context of other factors.

The bottom disc, L5/S1, does relatively little movement and is often very narrow. Fusion is used more often here though disc replacement remains an option. The second to the bottom disc by contrast is large and situated higher up outside of the pelvic ring. It is therefore missed more an the transfer of its movement to the adjacent levels is more of a concern. Thus it is more often the subject of disc replacement.

The concern about disc replacement is that all artificial joints wear out and so we wonder how often people will need these operations revising i.e., how long will it last?

The concern about the fusion operations is the adjacent segments are then required to do more work so when will they wear out?

The clinical trials do not show a clear winner though the factors I outline above are issues we feel are the relevant ones to influence the current choice.

Both operations have the same approach, (incision), and surgical risk. The recovery is the same. Some patients need two levels treating and on occasions the choice of fusion and replacement differs from one level to the other.

In either instance this is major surgery and you should not be considering either unless your problem is serious, lasting and unresponsive to sustained non-operative treatments.

**The day of surgery**

The day will begin with you in the ward. Some of you will have come in the night before though increasingly patients come in on the morning of surgery which may mean a very early start as you are often needed at the hospital by 7am. My office or our Spinal Nurse will be able to tell you when.

Make sure you have your scans – no scan no operation.

The night before or that morning you will sign your consent form and meet the anaesthetist. This is a good time to give me the telephone number of any relative you would like rung when the operation is over – we are always happy to do this.

You will have had **nothing to eat or drink** for a substantial period before the anaesthetic. The precise length of this period, (usually 6 hours), is prescribed by the anaesthetist and you need to be clear about this the day before the surgery. My secretarial team or our Spinal Nurse will clarify this also.
One of the hospital porters will come and collect you from the ward and will take you to theatre, with one of the ward staff. They deliver you, on a trolley, to the anaesthetic ante-room adjacent to the operating theatre. There you will meet the anaesthetist again. They will usually put a small drip into a vein on the back of the hand. After asking you to breathe some oxygen they will send you off to sleep with an injection into the drip.

The next thing you are aware of is waking up in the recovery area or back on the ward.

**The post operative period**

There will usually be an intravenous drip in one of the veins in your arm. This gives you fluids so you do not need to eat or drink if you feel sick. The anaesthetist may wish for you not to eat or drink for a while after the operation and will advise you of this. Most of you are soon having a cup of tea.

In addition there will often be a separate small drip providing you with pain relief. Usually there will be a button for you to press in order for the pain relief to be delivered i.e., you will control the amount of pain relief you get. This is a very safe and effective way of making sure you get analgesia when you need it. You cannot overdose yourself by pressing it too much – the device will simply fire blanks when the maximum safe dose has been reached. You will get more pain when you move and it takes a little time for the pain relief to work. So a good tip is to press the button a few minutes before you want to move. Some patients find that too much causes a headache or nausea. If this is a significant problem we will need to use a different system but for most people it is the most effective way to deliver pain relief.

There may be a drain coming from the wound. This is like a drip and will be connected to some sort of collection device (small plastic bottle) next to you. This is usually removed the next day.

**Wound care** is important. You will have some form of surgical dressing on the wound – usually a light non-waterproof dressing. The wound should not be allowed to get wet until the day after the sutures/skin clips are removed (see below). In general we like to disturb the dressing as little as possible. If it is becomes stained but is intact it is often better to put one over the top rather than to take it off.

If you need to go to the toilet you may normally get up and use the facilities in your bathroom. If you are on bed rest (see paragraph below) or are in too much pain to do that then ask for a bottle or bed pan.

Nearly always you can get up immediately if you wish. Of course you should have a nurse or physiotherapist with you on the first occasions. Many of you will need a **brace when upright**. We will have discussed this before hand though if one is required you must get used to putting it on and off and wear it whenever you get up. It will be custom made usually the day before the surgery and be ready the day afterwards. You need to wait for it before you get up.

**CSF Leaks**

With this kind of surgery there can rarely be a leakage of fluid from the sack containing the nerves and this needs to heal **before you get up**. The fluid, cerebrospinal fluid, or CSF, is clear and watery. I can see the leak at the operation and will tell you of the event. Whilst this does not adversely affect the outcome of the operation it does mean you have to lie flat for five days.
You may not get up at all for any reason. This is a great bore though as mentioned does not alter the outcome of the operation. During this time you can roll over or lie on your front if you wish but you must not end up with your head higher than your bottom. The column of fluid in the spine extends up to the head and thus if the head is high compared to the base of the spine fluid will tend to escape into the wound.

**How the Operation is Performed**

Once you are anesthetised you are taken through into the operating theatre. You are placed face up on the operating table.

**The incision.** (cut in the skin), is made on the abdomen, (tummy). Its length is determined by the number of levels involved. By using X-ray guidance we can keep this as small as possible though these are not “keyhole” operations. The incision usually goes from side to side an is between the naval and the pelvic bone just above or at the pubic hair – a high bikini line. Occasionally an up and down incision is needed. If you have had previous surgery we may be able to use those. The muscle is then parted to reveal the abdominal contents. These are contained in a sack called the peritoneum. This is thin and can be seen through. It is kept intact and the intestines are moved over to the right to approach the front of the spine from the left and finally head on from the front. The dissection takes you over the muscles on the back of the abdomen the arteries and veins supplying the legs, the tube between the bladder and the left kidney and various nerves (more of these later). The bladder would get in the way and be at risk if full so a catheter is put in after the anaesthetic.

We often inject local anaesthetic to numb the area of skin where the incision is to be made and the tissues below. This reduces the amount of painkiller the anaesthetist has to use with the general anaesthetic and makes it safer. The local anaesthetic has adrenaline added so as to constrict the local blood vessels. This decreases bleeding which makes the operation safer and lengthens the effect of the local which makes the immediate post operative pain. This is called “a local block”.

This “access” to the front of the spine is often taxing particularly if there have been previous abdominal or pelvic problems or surgery and several crucial structures are potentially at risk. Thus, often a second surgeon is required to safely access the spine and keep the risks to a minimum. It is my custom to have an “access surgeon” very frequently. This will be a vascular surgeon whose day job routinely takes them to this part of the body and is clearly an expert in the principle hazards which are vascular – arteries and veins. Most often this is Mr O. Agu who heads the vascular surgery unit at University College Hospital London. It may be another surgeon particularly if your previous problems have involved specific surgeries requiring a different skill set. Whoever it may be you will meet them prior to your surgery on the day.

Now comes the business end of the operation. Several things are done.

The disc is cleared. This is the “discectomy”. The bone of the adjacent vertebrae is cleaned meticulously of all disc fragments so that the bone surface will grow into the grafts – see below.

A **decompression** is completed by removing the thickened bones and ligaments from the back of the disc and this is advanced with the aid of the operating microscope. If the central canal is narrow the bone and ligaments are cleared from it so as to perform a “central canal decompression”. The foramina (hole) which the individual nerve roots exits from the spine is now widened as necessary.
Again this is done by shaving bone and ligament from the walls as this will have thickened to cause its narrowing. This called a “nerve root decompression”

There then follows the fusion or the disc replacement:-

Fusion
A fusion has two elements to it; the instrumentation and the bone graft.

The instrumentation involves inserting a cage into the empty disc space between the vertebral bones to be fused. This cage is secured by a plate and four screws which are placed into the vertebral bones.

The bone graft is used to fill the cage and further bone graft is placed around the side of the spine between the bony fins on the lateral aspect of the spine.

Disc Replacement
In this option the artificial disc is fitted into the space left by the disc. There are many discs and I will talk to you about the one you will have. All of them have a metal end plate inbetween which there is either a ball and socket type arrangement or a composite structure designed to mimick normal disc physiology. They tend to be secured to the ends of the vertebral bones on either side of the disc space in the short term by fins cut into channels in the bone. Longer term the bone itself grows into micro-pores on the surface of the disc’s metal plates

Once this has been completed there comes the “closure”. Again meticulous care is taken to stop any bleeding and the wound is then stitched in layers using internal absorbable stitches. A drain is sometimes placed at the base of the wound. This is rather like a drip and is removed at 24 hours. The skin may be closed in a number of ways though most commonly an absorbable stich under the skin is used or a series of separated stitches or metal skin clips rather like little staples. A top up to the local block is given. A dressing is applied.

You are then woken up and I write some notes on how things went and what we found. I call any relatives who may be waiting for news – please, when I come to do your consent form before the surgery give me the name and number of anyone you would like us to call.

Removal of the suture/clips if it is required occurs at approximately 10 days. This can be done either at the hospital or at your GP’s surgery or at home by district nurse. If we have used clips we will give you a clip remover before you go home.

Two Stage Operations
On occasions it is not possible to all we need in a fusion from the anterior part of the spine and in those circumstances a second posterior/lateral procedure is needed to add further instrumentation and fusion at a second operation.
The second procedure is performed through the back I will usually suggest we do this about a week or two latter. It can be done by rolling you over and carrying on at the same sitting but to recover from a simultaneous front and back is tough indeed. Usually I will have an idea that this is going to be a possibility and will specifically warn you. It is not required in disc replacement.

**Aims**

The operations are primarily designed to relieve back pain. Very rarely will they be recommended in the absence of significant back pain. They are also used to improve leg pain, muscle weakness or numbness though this is usually only in the context of back pain as the driving indication. Often you need to do physiotherapy exercise to assist with all this and to relieve stiffness - this is something tackled in the weeks that follow the surgery.

**Risks**

No procedure is without risk though this is routine surgery which *rarely causes harm and usually works very well*. The risks are as follows.

Complications of any operation and indeed any long period spent in bed include *chest infection and blood clots* forming in the deep veins of the legs (deep venous thrombosis or DVT). Parts of the blood clots may break off and fly up to the lung where they block the blood flow,(Pulmonary embolus or PE). Very rarely people die from these blockages. You may have heard of these complicating long plane journeys. We can reduce the incidence of these by giving you injections to thin the blood, supportive stockings (which I request you wear at all times whilst in hospital) and compression pumps on the legs worn while in bed. We use the stockings and pumps in theatre but do not start the injections until 24 hours after the surgery so as not to provoke bleeding into the fresh wound.

There is a **risk to life and limb**. Any anaesthetic and any operation may kill you. Any spinal surgery may paralyse you which in the instance of a lumbar operation will mean loss of all leg, bowel, bladder and sexual function. At its worst this may be complete and permanent. Such disasters are extremely rare and are in the order of the risk of your being run over by a bus. People do get run over by buses but it is exceptionally rare. Of course if you do not have the operation the disc may fully prolapse. Again I see this though very rarely - these “buses” associated with the natural history of the condition are indeed extraordinarily rare and you can usually see them coming and so take evasive action.

*The “cauda equina syndrome” is the term used to describe paralysis of this part of your nervous system. The patients usually have a phase of excruciating pain followed by numbness, paralysis and an inability to pass urine which classically is painless. i.e., you know you have an overfull bladder but it does not hurt – “painless retention”. An early warning may be numbness around the private parts/perineum. If you notice anything like this you need to see a doctor, any doctor – don’t wait for me - immediately. This syndrome is a surgical emergency. You need to have the nerves decompressed immediately i.e., that day / night.*

**Nerve root injury** affecting just the nerve that passes out from the spine at this level - it is not quite so rare but is far from common.
Obviously the nerve root is handled during the procedure and even though microsurgical techniques reduce this to a minimum the risk of an individual nerve being permanently lost remains. It is low – less than 1%. This might mean that the ability to stand on tip toe is lost or to lift up the foot (a foot drop) results. Again, if you do not have the operation, pressure from the pathology itself may do this anyway.

The spinal nerves are contained in a sack and this is filled with fluid secreted by and in communication with the brain. As the disc fragment presses directly on this sack it may leak cerebrospinal fluid during the course of the operation. This should not adversely affect the outcome of the operation though does mean you will need to lie flat for five days as described above. (See CSF Leak section above) Nearly always the leak can be seen during the surgery and therefore I will give instructions for you not to be mobilised for the five days. If you are told you may get up then I have not encountered a leak. This occurs about 1 in 20 times though is more frequent when patients have had surgery before.

**Failure** of an operation to achieve its intended goal is always possible. In this instance it will mean the persistence of back and leg symptoms as they were before. In those of you having this surgery for “discogenic” back pain there is a failure rate of up to 50%. That is to say half of these procedure fail. In addition even in the successful cases persistence of some non-disabling levels of back pain is common. It is not uncommon for a degree of pre-existing weakness and numbness to persist particularly if it was severe before hand. The longer they have been present the more likely this is.

**Recurrence** of symptoms may occur. That is to say you may get better only for things to get worse again later. This is obviously a variety of “failure” as above. There are a number of reasons why and again this may be in the form of back or leg pain. Back pain may occur in acute bouts and can be minimised by your being diligent with the post-operative physiotherapy. Leg pain may arise from narrowing of the spinal canal developing at an adjacent level or indeed at the original level, scarring occurring around the nerve roots at the original level and damage caused by the original compression leaving the nerve root hypersensitive as it attempts to recover in the post-operative months. Finally the instrumentation may irritate the nerves and muscles of the spine. Usually it is an element of each of these pathologies which operate together to cause recurrent leg or back pain. A degree of pain is almost universal. Precisely how severe and how often is still a matter for some debate. To find out a true recurrence rate thousands of patients need to be followed for tens of years and for none drop out during that time. There is no perfect study but it is my impression from those studies that have been done and from my experience, that perhaps 1 in 5 of the discogenic group eventually have substantial persistent or recurrent trouble.

**Deterioration** is a possibility. Operations can make you worse, can do you harm or may leave you with new problems to cope with. This is rare and I suspect deterioration directly as a result of the surgery probably affects around 1% to 2% of patients – certainly less than 5% or 1 in 20. Quite a few patients may have a transient increase in numbness or weakness though persistent significant problems are rare indeed.

**Wound infection** can occur with any operation. In the spine it is rare as there is so much muscle covering it. Muscle fights infection well. However, if an infection ever sets in the effects can be very serious. The risk is around 1%. Diabetic patients are at a higher risk of this. Superficial wound infection may be successfully treated with antibiotics alone. However, if the infection gets deep into the wound and affects the metal work then this often eventually has to come out. This may take months to treat.
Should you have a fusion or disc replacement?
No one should consider this procedure unless they have serious symptoms which have persisted for a long time and for which all other possible treatments have been tried. What you have just read explains that the surgery is major and the failure rate high. If you have discogenic pain you need to feel desperate and that you have exhausted the alternatives. The results of each are similar but as we have discussed above certain factors will steer us to one or the other.

What happens if you don't have it done?
The “natural history” is what happens when nothing is done and this must be compared with the scale of risks associated with the procedure.

Discogenic pain will often eventually settle. If you are having surgery before a year there needs to be a good reason – progressive motor or sensory loss, worsening rather than consistent or declining pain, or an associated narrowing of the spinal canal of such severity that it threatens paralysis. You should know what the reason is for such a rapid progression to fusion surgery. However, if after this time there is no clear pattern of improvement in symptoms many of you are stuck at least for a long time. Many of you will have had a very gradual onset of symptoms perhaps years ago. Again in these circumstances it is likely that you are stuck.

From this you can appreciate that there are virtually no circumstances where you should feel rushed into these operations. They are elective operations which should be done after very careful consideration.

What alternative procedures are there?
Much of this is covered in other information sheets and will have been the subject of our previous discussions. Essentially an operation is always the last resort. Instead you could try injections or further conservative treatment (physiotherapy, osteopathy, chiropractic, acupuncture, tablets and time.) Obviously I will usually have formed the view that these are unlikely to bring you to comfort any time soon. Occasionally I will have warned you that bad paralysis of nerves may occur if things are left and in these circumstances there is little choice but to proceed. The majority of you in this urgent situation will have very severe narrowing of the spinal canal and progressive weakness and numbness. However, this is an unusual situation. For the majority it is pain that drives the surgery. In these circumstances you have to feel that the degree of pain warrants the risk and effort involved in having the operation.

Discharge
Most people go home at about a week. However, there is no rush and you should stay until you can manage the journey home, life at home and have not needed the pain relief drip for 24 hours. If you live a long way off, live on your own or have a dependant family you will need to stay for longer. Occasionally the less able who live alone might sensibly use a convalescent facility. Equally, some go home on day four or five though if you are an early leaver you should rest at home much as if you were still in hospital. Don’t rush it. Remember to take your X-rays and scans with you.
How to get home

The front passenger seat in a standard car is fine. If the journey is long get out of the car every hour and do some simple stretches. Then get back in the car and carry on. It is often sensible to take some tablets before you leave the ward. Go to bed when you get home regardless of how well you feel.

Done once even a long journey is OK. This is not a licence to drive every day – see below.

Post-operative back care

Before you go home after your operation, we will have discussed some details of how to care for your back in the weeks that follow. In addition other team members will have discussed issues with you. Below is a general summary.

If you feel you are developing unexpected troublesome or worrying symptoms, do not hesitate to call my office or the ward staff, who will be able to guide you or if necessary contact me. If troubles arise out of hours call the hospital and ask for the sister in charge. (See final section for emergency details)

Physiotherapy

You may well have been given specific instructions by the hospital’s physiotherapist. Indeed you are likely to be given a sheet with diagrams of various exercises. The precise details of these exercises and how often they should be done will vary from one individual to another. However, these details are of less importance than your response to them. That is to say, if you develop pain on doing these exercises, you should stop them. In the first few weeks all that can occur is the simple healing process. Physiotherapy maintains your mobility during this time but should not be allowed to interfere with the healing process. Therefore, if it hurts, you should stop and you should not be anxious if, as a result, you are quite stiff by the end of this early period. Physiotherapy begins in earnest around the fourth to sixth week when the wound and back will be stable enough to allow real progress to be made.

Exercise

The aim here is to do small amounts but often. For most of the first week you will either be in hospital or should be pottering about inside your home. For the second week the amount of activity undertaken should essentially be unchanged. You should simply be moving about as if you were in fact still in hospital. It would be perfectly reasonable to fix your own meals and to look after yourself though you should not be doing housework or looking after others. You may go out for short walks. From the second week onwards, light exercise may be taken. You may go on very short car journeys (10-15 minutes) and go out for longer walks. Prolonged outings, lengthy or frequent trips to the office will be bad for you. Problems most often arise when patients do a little too much a little too often, i.e., one trip to the office may be alright but three cause troubles.

Sitting

You are better to be standing or lying following back surgery. If you wish to sit, a high, upright dining room style chair is the most appropriate. It is certainly reasonable to start sitting for your meals when you have gone home but it is sensible to stand up and stretch between courses. This should be back to normal around about the four to six week mark. However, it will always be advisable to avoid prolonged periods sitting and very soft or low armchairs.
**Baths and showers**
You should in the early days avoid baths as lying curved in them is likely to cause back pain. In addition any waterproof dressing is unlikely to keep out all water if submerged. (see Removal of Stitches below) Showers or and assisted standing baths are better. Please don’t fall over.

**Sex**
If it hurts, don’t. If you think it will hurt, don’t - until of course you think it won’t and it doesn’t.

**Wound care**
You should not get the wound wet until the day after the sutures have been removed. It is perfectly reasonable to have a shower, providing the wound is covered with a waterproof dressing. The ward will provide you with this before you leave. In general, we like to change the dressings on wounds as infrequently as possible. The wound should be kept dry and a non-waterproof dressing used so that the wound may breathe. That is to say, whilst you should cover the wound in a waterproof dressing for showers this should usually be replaced by a dressing which breathes. Cunningly, there are now dressings which let moisture out but not in. These are ideal. Ask the nursing staff/my spinal nurse which it is you have on.

**Removal of Stitches**
The stitches, of which ever type, should be removed at or shortly after the tenth day. Most often a nurse linked to your G.P. or the district nursing service do this. If you are near one of my hospitals you may be able to have these removed there. You need to have agreed an arrangement for this to be done before you leave hospital - our ward nurses who will liaise with your GP, district nurse or one of the local hospitals as is appropriate. I often use a single stitch which runs under the skin and which can be pulled from one end. (Get an adult to help you.) I also usually put steristrips (small sticky tapes) across the wound and two in parallel with the wound to hold the stitch ends. The ones holding the stitch ends need to be pulled off and then the suture can be removed. For some I use skin clips. These are like small staples and are removed with a special clip remover. You will be given a clip remover by the ward for you to give to the nurse who will be doing the removal.

**Bending, lifting, carrying**
In the first few weeks you should not be doing this. The physiotherapy, which will begin about the fourth to sixth week, will teach you how to bend correctly and how best to lift. It should certainly be something that you keep to a minimum in the first months.

**Driving**
In the first few weeks you should be driven i.e., you should not drive the car yourself. In the weeks that follow, you should limit journeys to short periods. As physiotherapy commences and progress is made, you may gradually start to extend this. In general it is best to have the car seat set as high and as upright as possible. If you are becoming uncomfortable you should stop, get out and do some light stretches before continuing.

**Sports**
You should not do this until we have reviewed your progress. It should be deferred until you have completed the fitness programme that only begins with the physiotherapy at the fourth to sixth week and is likely to take a further four to six weeks at least.
Corset
This needs to be on at all times when upright if you had a fusion but is not needed in disc replacement surgery. If you have had both I will advise. Corsets are worn for the first 4 to 12 weeks – 6 on average.

General philosophy
The aim is for you to avoid things which aggravate your pain. Once recurrence of back and leg pain has occurred, it is much more difficult to get it to go away. It is much simpler to avoid it in the first place. If in doubt, err on the side of caution. You can do most things after the first week or so. However, you will not be able to do much of them. “Can I drive?”, “pick up the baby?”, “go into the Office?”, “fly?”, are all frequently asked questions. The answer is usually yes BUT not very often. It is not so much what you do but how often you do it. For example it is O.K. to be driven home a few days after the surgery but that does not mean it is alright to drive each day into the office.

Follow-up
My usual routine is to see patients three or four weeks after discharge and it is at that point that we can start the physiotherapy. This will need to be near to home though later may need to move nearer to work. I usually then see you after another six weeks and then a further three months. A review at a year with a final X-ray is often sensible.

Return to work
This may reasonably be anytime between four and twelve weeks post surgery. This might seem like a ridiculously wide window and certainly I will advise you more precisely. In fact some patients are back at work inside two weeks and others still off at four months. A brick layer commuting 50 miles by car each way will take longer than a librarian working next door to home. (Actually the former might sensibly try becoming the latter.)

Whatever the work a gradual return is best. A suitable regime for an average office worker with a reasonable commute might be: – perhaps two half days the first week (Tuesday and Thursday), three the second (Monday Wednesday and Friday) and four the fourth (Monday, Tuesday and Thursday, Friday). Work five half days the next and then start to increase the length of the days. It is important to keep up the physiotherapy during this phase.

Done in a gradually way the return to work is a very positive part of your rehabilitation. It needs to be in your control and with the encouragement of your employer. If they will put up with you being part-time and unreliable they will see you sooner.

If by contrast your job is one whereby you have to be there fulltime and reliably or not at all, it will take longer. Then the job is not a part of the rehabilitation but the hurdle rehabilitation has to prepare you for. You will get back later as you need to fully recovered before starting. If you have a long commute your return will be further delayed.

The average commute time for my patients is in the region of one hour each way. From the spinal perspective that is a two hour physical job in addition to your real work. Days spent working from home help.
Discuss this advice with your employer and make a plan. Obviously the best laid plans may change due to circumstances and I will advise on how likely your plan is to come off at the first out-patient session post surgery i.e., at about the four week mark.

**What do you do in the event of problems?**
If, once you have got home, problems arise, help is available from a number of sources.

First, you may ring my office number. If it is during working hours this is certainly what you should do. My secretarial staff will be able to contact me, my clinical assistants or our Spinal Nurse and obtain advice for you. If it is out of hours you may also ring this number and the machine will tell you what to do in the event of an urgent enquiry. You may leave a message though these are not heard until the next normal working day.

Secondly, you may ring the hospital and ask to speak to my Spinal Nurse. In her absence you should ask to speak to the hospital’s Duty Manager or to the ward staff. Telephone numbers are given at the end of this information sheet.

You may of course contact your general practitioner or any emergency service should you so wish or if the other avenues fail.

**I do not provide a 24 hour emergency service but can respond on most occasions.**

**Costs, Codes and Authorisation**
A separate information sheet is available which covers all aspects of this. Please obtain this and read it before you confirm your surgery. The costs of private surgery are considerable and if you are hoping to use insurance you will need to obtain authorisation from your insurer and register this with us prior to admission. Some insurers/policies may not pay all my fees. All costs remain your responsibility even if your insurer has agreed to help/pay direct. There are usually three bills you need to know about; the hospital, the anaesthetist and the surgeon (me). You are responsible for ensuring all are paid. If you are wishing to use a direct payment system with your insurer you will need to provide us with a daytime telephone number so we may call to collect credit/debit card payment for any unpaid element of my invoice. This will occur when a payment comes through with a shortfall or at one month if the invoice remains unpaid. In the latter circumstance you will then be able to claim back from your insurer.

**Other sources of information**
I produce a number of other information sheets relating to various aspects of medical and administrative issues. You may obtain a title list from my office.

The Princess Grace Hospital produces information on a number of surgeries including spinal procedures. I was also involved in their production so they are not entirely independent. However, the physiotherapy and nursing issues are given an airing. You can obtain these from my Spinal Nurse / Office – see contact details below.
Your General Practitioner will have seen other patients going through this kind of procedure and they can offer valuable insights into the practicalities behind the surgery. Of course they may also be familiar with any other health concerns you have and be able to offer advice on how these might impact on recovery.

There are free information packs provided by the Brain and Spine Foundation which cover issues related to this kind of surgery. You may obtain a copy by telephoning their help-line number on 0808 808 1000, by writing to them at The Brain and Spine Foundation, 7 Winchester House, Kennington Park, Cranmer Road, London SW9 6EJ, or by downloading it from their web site which you will find by searching their name and specifically at www.brainandspine.org.uk Their telephone help line will also offer useful information specific to this surgery and many patients have found it invaluable. The Brain and Spine Foundation is a charitable organisation and they would receive any contribution you can make with gratitude. They fund valuable research and education programs into the neurological disorders. The advice you receive will have been paid for by others so please be generous.

Contact Telephone numbers

The office 020 7935 3721- between 9.00am and 5.00pm. A recorded message out of hours gives instructions as to what to do in the event of an emergency.

Spinal Nurse Call the Princess Grace Hospital Switchboard on 020 7486 1234- and request Spinal Nurse Specialist on Pager 150
Or, call directly on her mobile - 07917 374 372
Or, on her direct line 0207 908 3682

Hospital Duty Manager Call the Princess Grace Hospital switchboard and request the Nurse in Charge on pager 009

The ward of the Princess Grace Hospital – 0207 486 1234
The Chaucer Hospital – 01227 455466 = switchboard

Remember in the event of an emergency or if urgent help is needed the usual health service provisions are available via your GP or your local hospital’s accident and emergency department.

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