Here to help

Our **Health Information Centre (HIC)** provides advice and information on a wide range of health-related topics.

We also offer:

- Services for people with disabilities.
- Information in large print, Braille and Easy Read formats.
- Information on audio tape and CD-ROM.
- A service to provide information in a language other than English.

Contact the **HIC** on: **01392 402071**

For RD&E services log on to: www.rdehospital.nhs.uk

Smoking is not allowed by anyone on any of the RD&E sites.

For information on how to stop smoking, see your GP before coming into hospital or phone the **Devon Stop Smoking Service** on **01884 836024**. This is a local service run by NHS Devon.

Patients and visitors involved in, or witness to, an accident on Trust property are encouraged to report it immediately to a staff member so that the matter can be properly reported and dealt with.

Reference Number: TO 05 001 003

October 2013 (review date: October 2016)

Designed by the Graphics Department, RD&E

Royal Devon and Exeter NHS
NHS Foundation Trust

Patient Information

Total Disc Replacement in the Lumbar Spine

Respond **D**eliver **&** **E**nable

Introduction

You have been scheduled for an operation on your low back known as a total disc replacement (TDR). This is an operation designed to improve your low back pain. Total disc replacement has been performed in continental Europe for about 20 years although in the UK there are very few centres that perform this operation. You will probably have been offered a choice of operation between TDR and spinal fusion and this leaflet outlines what you can expect from the TDR procedure.

Indication for surgery

The main reason for patients to have a total disc replacement is for significant and incapacitating low back pain which has been present for a long period (minimum 6 months), and which has failed to respond to non-surgical treatments. Low back pain is a disabling condition but, whilst very troublesome, is not life threatening, holds no risks of paralysis, and many people learn to tolerate episodes of back pain throughout their life without need for surgical treatment.

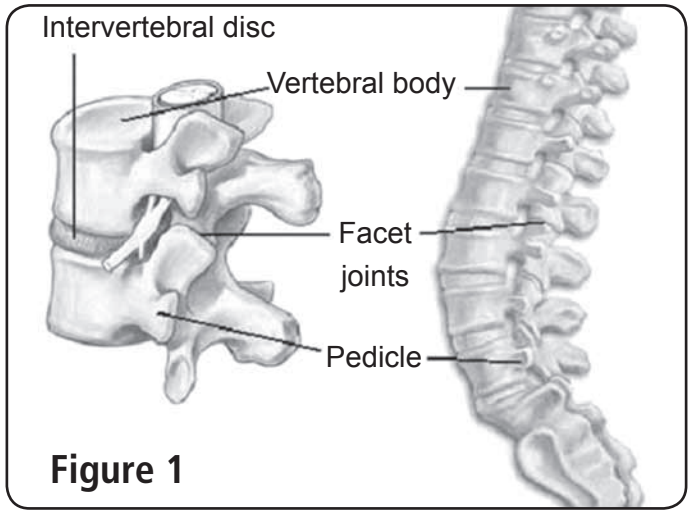

Figure 1

the physiotherapist to do specific exercises. You will be reviewed in the outpatient clinic at approximately six weeks after surgery. At that time, you may be referred for a more formal course of physiotherapy.

Time taken to return to work varies upon the type of work that you do. If you work from home doing office type work, you can expect to be working within two weeks. Light manual workers would usually return to work at approximately six weeks after surgery, and people doing more physical jobs may take some three months to return to work.

You will be allowed to return to swimming activities at approximately 6 weeks and activities such as tennis between 6-12 weeks. We would not recommend a return to contact sports such as football or more stressful sports such as squash for perhaps six months from the time of surgery. You can drive 6 weeks after surgery. You can have sex 6 weeks after surgery.

Summary

Total disc replacement is a major undertaking for any patient. It is reserved for patients who have severe and incapacitating low back pain. No operation is guaranteed to relieve low back pain.

You should not enter into this procedure unless your pain is very significant and markedly interfering with your quality of life. You should have pursued and exhausted other forms of conservative treatment including manipulation, strengthening exercises, cardiovascular fitness programs and so forth. The decision whether or not to undergo total disc replacement is complex and involves many factors. This decision must be made carefully and should be discussed thoroughly with your surgeon.

Retrograde ejaculation

In men, there is a small chance of a complication known as retrograde ejaculation. This can render men temporarily sterile. Small nerves lie over the lowest lumbar (L5/S1) disc and these control a valve that causes semen to be expelled outwards during sexual intercourse. By dissecting over the L5/S1 disc, the nerves can be injured and thus the semen passes backwards into the bladder. This can make conception very difficult. Fortunately this complication happens in less than 1% of cases and usually recovers after one year.

Nerve injury

This is generally not a problem with lumbar disc replacement surgery. However, there is a very small chance of injury to the nerves. The severity of this can vary - from a small degree of numbness to complete loss of strength in the muscles supplied by the nerve involved. Thankfully, severe nerve injury is extremely rare but if this occurs, it can cause permanent weakness and numbness in the legs and could cause loss of control of the bladder and bowels.

Operations such as TDR offer some specific risks and while these should not be overstated, they can be quite serious if they occur.

Recovery

You will be in hospital for a few days. You will be walking within 48 hours of your operation and when you go home will be independently walking around, able to get in and out of a shower, up and down stairs and in and out of bed. You will be encouraged by

You have chosen surgery as you feel that your symptoms are sufficiently severe to justify the magnitude of surgery that is being offered. You will have undergone various investigations to try and conclude where your back pain comes from, and in your case, it is thought your back pain relates to one of the discs between the bones of the spine (see figure 1).

What Happens during Surgery

The spine is approached through the abdomen. The disc between the two spinal bones is removed, and an artificial disc inserted (see figure 2).

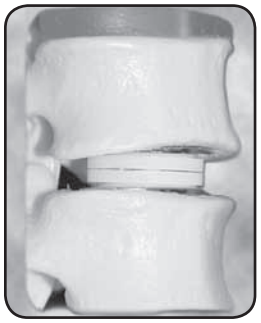

Figure 2
Artifical disc between the 2 vertebrae

Rewards of surgery

No operation is guaranteed to improve your symptoms. This operation is being offered to you with the aim of significantly improving your pain but no guarantees of success can be given. We think it is reasonable to expect that at least two thirds of patients who undergo this sort of procedure are satisfied with the results although not necessarily pain free. If you are left with backache, this may be something that you have to accept.

Risks of surgery

All operations carry with them a degree of risk. These include the risks of:

A general anaesthetic

General anaesthetics have some risks, which may be increased if you have chronic medical conditions, but in general they are as follows:

- **Common temporary side-effects** (risk of 1 in 10 to 1 in 100) include bruising or pain in the area of injections, blurred vision and sickness. These can usually be treated and pass off quickly.
- **Infrequent complications** (risk of 1 in 100 to 1 in 10,000) include temporary breathing difficulties, muscle pains, headaches, damage to teeth, lip or tongue, sore throat and temporary problems with speaking.
- **Extremely rare and serious complications** (risk of less than 1 in 10,000). These include severe allergic reactions and death, brain damage, kidney and liver failure, lung damage, permanent nerve or blood vessel damage, eye injury, and damage to the voice-box. These are very rare and may depend on whether you have other serious medical conditions.

Blood clots

Deep vein thrombosis is a possible problem, but is uncommon. If you are at particular risk then special precautions will be taken to reduce the risk. Moving your legs and feet as soon as you can after the operation and walking about early, all help to stop thrombosis occurring. Blood clots in the legs which can pass to the chest and in extremely rare cases can be life threatening.

Wound Infection

Superficial wound infection can usually be treated successfully with anti-biotics. Deep wound infection is extremely rare. Unfortunately, if you develop a deep infection that cannot be eradicated by anti-biotics, the implant may have to be removed and this can be exceedingly difficult. Further surgery to clear out the infected material and fuse the joint affected may also be required.

Implant failure

TDR has been performed in Europe for approximately 20 years and at this time, there are minimal numbers of reports in the literature of failure of the implants due to wear. It is anticipated however that in the longer term that there could be problems with wear of the components. At some time in the future it is possible that you would require further surgery although as yet, this is an unknown quantity.

Failure of symptoms to get better/worsening of symptoms

There are a group of patients who despite technically successful surgery continue to complain of low back symptoms and some may report the symptoms are even worse after surgery. Provided the surgery has technically gone well and there are no problems, there is little further we can do about this.

Surgical approach to the spine

TDR requires an incision through the abdomen, and there are reports of persistent abdominal pain post surgery, of injury to the major blood vessels that lie in the front of the spine, and of injury to the nerves at the side of the spine that help control the temperature in the legs.