



York and Scarborough
Teaching Hospitals

NHS Foundation Trust

Intrathecal Drug Delivery System (I.T.D.D.S.)

Information for patients, relatives and carers

① For more information, please contact:

The Pain Management Clinic

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The York Hospital, Wigginton Road, York, YO31 8HE

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What is an Intrathecal?

Intrathecal drug delivery systems are used in the management of severe pain. It allows us to deliver pain relieving medication close to your spinal column, thereby greatly reducing the total amount of medications that you require.

The intended benefits are:

- An improvement in pain relief.
- A reduction of side effects you are getting from your current strong pain killers. Such as sedation, constipation and an improvement in your speed of thought.

How does it work?

We all have pain relieving receptors in our spinal column that are much more sensitive to strong pain relieving drugs (opiates), if we can deliver them directly to it. We also combine these opiates with local anaesthetic drugs. It is therefore possible to give significantly smaller doses of the opiates which not only have the same benefits but cause less side effects.

Drugs are delivered continuously by means of a tube (catheter) that lies close to your spinal column and is connected to a small lightweight portable pump. This will give you pain relief, but you will also be able to give yourself extra top up doses if required.

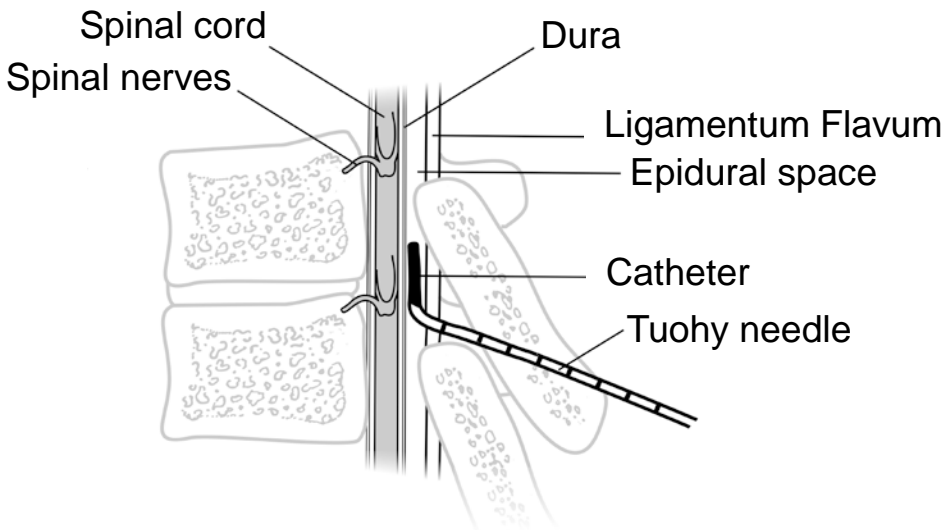
What does the procedure involve?

You will have the opportunity to discuss the procedure with the consultant anaesthetist undertaking it before you give your consent. They will explain the detail of what it involves and you will have the chance to ask any questions. The procedure can be done just with local anaesthetic to numb the skin and tissues of your back or with you asleep under a general anaesthetic.

The consultant will discuss this with you beforehand and detail the risks and benefits of choosing between each approach.

The procedure takes approximately two hours. You will need to lie on your front or your side. If you know that you will find this impossible, you may decide together to have it done under general anaesthetic.

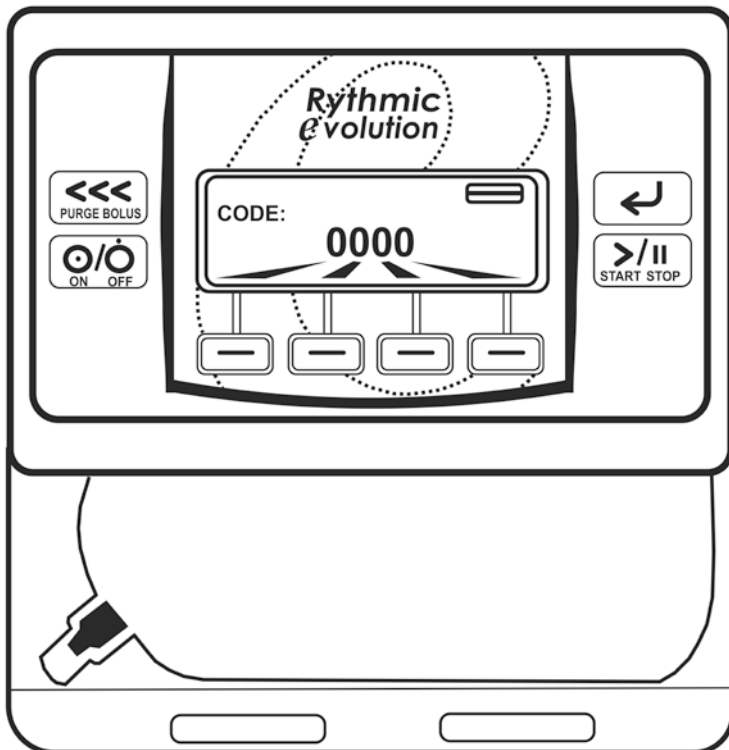
A fine Intrathecal or spinal catheter is inserted into the space next to your spinal column under sterile conditions. It is carried out in an operating theatre to reduce the risk of infection. The catheter usually enters your spinal column around your lower back, but is then tunnelled under the skin away from your spine all the way up to your shoulder area where it is connected to a thicker piece of tubing under your skin. This then exits the skin and is used to connect the catheter to the pump. It will be held in place by a surgical suture under the skin and a dressing. You will have two wounds approximately two to three centimetres long. One is in the middle of your lower back and one is near your shoulder. Image of spine below:



The pump used for the procedure:

- Being small and lightweight, it is easily portable.
- It is reliable and accurate.
- It has low power consumption, using nine volt (9v) batteries.
- It is easy to operate and medication bag changes are straightforward.

Image of pump:



What happens afterwards?

Following the procedure you will need to stay in hospital for at least one night. We will review your condition regularly to make sure that you are getting enough pain relief, but also not too much.

The pump will be set according to how you feel, settings may be increased or decreased. You and your relatives will be instructed on how to give a boost or bolus of pain killer if required.

The symptoms of getting too much medication are feeling drowsy, light headed or sick; having pins and needles in your fingers and toes; or feeling that your legs are heavy. These effects can be corrected rapidly by turning the pump off.

Staff will monitor you and observe your pain, level of sedation, blood pressure and the pump settings. The wound sites will be observed for any signs of infection or leakage. You will need this close monitoring normally for around three days. The day after your procedure it is sometimes possible for you to be monitored at your hospice, so that you do not have to spend too much time in the hospital. When everyone is happy that you are stable with your pain relief you will be able to go home or to the Hospice.

Your responsibilities when you get home:

To the pump and catheter:

1. You must make sure that you do not get the pump wet.
2. You may be given a satchel in which to carry the pump. You must look after the pump so that it does not fall and put a strain on the catheter. Strain on the catheter could cause it to break or to pull out of your body.
3. You should not soak the dressing around the catheter exit site from your body, as this will give bacteria the chance to infect the catheter system. Infection of the system is serious and the catheter will have to be removed.

To let your nurse and doctor know promptly if:

1. There is a problem with the pump and it starts alarming.
2. You are aware of the symptoms of getting too much of the drugs (overdosing).

It is important that your medical team have the opportunity of reviewing both the system and its effect on you on a regular basis. Keep your infusion chart with contact details for your team close to hand in case of need.

Our responsibilities to you

1. We will make sure that you understand how to turn the pump on and off.
2. We will instruct you on how to change the batteries in the pump.
3. We will instruct you on how to give yourself a boost of the drugs.
4. We will regularly review your catheter system and try to maximise your pain relief.
5. We will make sure that you know whom to contact for troubleshooting or emergency problems.

The risks

As with all medical procedures there are risks and possible complications.

Very common complications (1 in 10) include:

- It may not work or your pain may get worse. This is normally only a temporary problem while the pump settings are adjusted.

Common complications (1 in 100) include:

- Disconnection of the catheter system, causing a leak at the disconnection site of the spinal fluid from around your spinal column or it may cause an increase in pain or withdrawal symptoms. We are usually able to rectify this quite easily but it may involve you coming back to theatre to reconnect it.
- Bleeding from the wound site causing bruising, bleeding from the deeper tissues causing fainting or temporary weakness of limbs.
- A severe headache can occur for a week or two after the insertion. This is caused by a leak of the spinal fluid that surrounds the spinal column, which occurs due to the hole made to pass the catheter. This can settle on its own or has an effective treatment, but this would require you to come back into an acute hospital for a day.

Uncommon complications (1 in 1000) include:

- Infection at the wound site or spreading down the catheter to cause meningitis or encephalitis.
- Tissue formation (granuloma) around the tip of the catheter after the catheter has been in place for a long time can stop it working so effectively.
- A leak of air from the lung (Pneumothorax) at time of procedure when tunnelling the catheter up the back. This may cause some breathing difficulties and may require you to stay in hospital and very rarely would require a chest drain to be inserted.

Rare and very rare complications (1 in 10,000 to 1 in 100,000) include:

- Nerve damage.
- Bleeding in the epidural space causing pressure on your spinal nerves with limb weakness and numbness. If this occurs it will do so in the first 48 hours.
- Inflammation of the spinal nerves (arachnoiditis) causing increased pain.

What are the alternatives?

You do not have to have this procedure. Discuss alternative ways of providing pain relief with your Consultant.

You will have the chance to ask questions about all of the above before you decide. It may be sensible to write down any questions that you have so that you remember to ask them.

More information about pain management and intrathecal drug delivery can be found here

<https://www.britishpainsociety.org/british-pain-society-publications/patient-publications/>

Tell us what you think of this leaflet

We hope that you found this leaflet helpful. If you would like to tell us what you think, please contact: Debbie Hunter, Advanced Nurse Specialist Pain Management, The York Hospital, Wigginton Road, York, YO31 8HE, telephone 01904 725395.

Teaching, training and research

Our Trust is committed to teaching, training and research to support the development of health and healthcare in our community. Healthcare students may observe consultations for this purpose. You can opt out if you do not want students to observe. We may also ask you if you would like to be involved in our research.

Patient Advice and Liaison Service (PALS)

PALS offers impartial advice and assistance to patients, their relatives, friends and carers. We can listen to feedback (positive or negative), answer questions and help resolve any concerns about Trust services.

PALS can be contacted on 01904 726262, or email pals@york.nhs.uk.

An answer phone is available out of hours.

Leaflets in alternative languages or formats

Please telephone or email if you require this information in a different language or format, for example Braille, large print or audio.

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或發電

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