Insertion of a Tunnelled Pleural Catheter

A tunnelled pleural catheter, also known as a tunnelled chest drain, is a flexible soft plastic tube that passes from the space between the lung and the ribcage (the pleural cavity) and has an external connector to allow fluid to be drained as often as necessary, without the need for hospital admissions

Your doctor has advised you to have a tunneled pleural catheter. This leaflet tells you about the procedure and explains what is involved and the possible risks.

It is not meant to replace informed discussion between you and your doctor, but can act as a starting point for such a discussion. You should have plenty of time to discuss your situation with your consultant and perhaps even your own GP.

You should have had sufficient explanation before you sign the consent form, you may at any time after that withdraw such consent. Your signature confirms that you understand the procedure, the reasons for it, the possible alternatives, the potential risks and side effects and have made an informed decision to go ahead with the procedure.

What is Insertion of a Tunnelled Pleural Catheter?

A tunnelled indwelling pleural catheter is a specially designed small tube to drain fluid from around your lungs easily and painlessly whenever it is needed. It avoids the need for repeated painful insertion and removal of chest tubes every time fluid needs to be drained. The drainage can be performed at home, either by you on your own or with the help of a nurse.

The catheter is a soft flexible tube that is thinner than a pencil, which remains inside the chest and passes out through the skin. There is a valve on the outer end of the tube to prevent fluid leaking out.

Why would I need this procedure?

The pleural space consists of two thin membranes - one lining the lung and the other lining the chest wall. Between these layers there is usually a very small space which is almost dry. In your case fluid has collected in this space, preventing the lung from being able to expand fully. This makes you breathless.

Draining away the fluid helps relieve breathlessness for a time, but the fluid often builds up again, making you more short of breath.

Whilst it is possible to have repeated drainage of fluid in this way, it can be uncomfortable and can mean many trips to hospital. With repeated procedures, the fluid can also become localised into a number of separate pockets (known as loculation), and successive drainage procedures become less and less effective.

The indwelling catheter is a way of allowing fluid to be repeatedly drained without you having to come to the hospital and having repeated uncomfortable fluid drainage procedures. Because the catheter is able to collect fluid from quite a large area of the pleural cavity, the likelihood of the fluid becoming loculated is much less.

In about a third of patients with tunnelled pleural catheters, the amount of fluid becomes less over time, and eventually stops, allowing the catheter to be removed

How is the catheter put in my chest?

The tube will normally be put into your chest in the Respiratory Ambulatory Care Unit on Jevington Ward or on the Ambulatory Emergency Care Unit. Your doctor will advise you where and when to attend.

The doctor will take an ultrasound scan to work out the best position for the catheter. They then clean the skin with an alcohol/chlorhexidine antiseptic fluid. A local anaesthetic (Lidocaine) is then injected into the skin to numb the area where the catheter will go. The anaesthetic can sting and ache slightly, but this quickly goes.

The doctor will make two small cuts in the numb areas of skin; one is for the catheter to pass through the skin, and the second is for it to be passed between the ribs into the pleural space. They will create a path under the skin for the catheter. This should not be painful although you will feel some firm pressure or tugging. The indwelling catheter is then gently inserted into the chest.

The tube is held in place with a stitch, and there may also be another, to close the second of the two cuts, though this is not always needed.

Will the procedure be painful?

A local anaesthetic is used so that you do not feel the drain going in. Painkilling medications are given to control any discomfort. At the end of the procedure the chest may feel and look bruised for about a week. Simple painkilling tablets (eg paracetamol, co-codamol or ibuprofen) are usually all that may be needed for this.

How long do I have to stay in hospital?

The procedure is carried out as a day case, though occasionally an overnight stay may be needed if there are complications. After the procedure you will have a chest X-ray to confirm the catheter position and to check how much fluid or air remains in the pleural space. If this is satisfactory you will then be able to go home.

It is advisable for someone else to drive you home, as your chest may be feeling a bit bruised and this can make driving quite uncomfortable.

How does the catheter stay in position?

Indwelling catheters are designed to be a permanent solution to the problem of pleural fluid, although they can be removed if they are no longer needed. There is a soft band, rather like Velcro, on the section of tube that lies under the skin. Scar tissue forms around this, as the skin heals, and tethers the tube securely in position. This process takes about a week, after which it is very rare for a catheter to be able to fall out.

Two stitches will be put in when your tube is inserted. One of these will be removed after 5 to 7 days, whilst the other can stay in place indefinitely. The stitches can be removed by the practice nurses at your local surgery.

Who will drain the fluid from my tube once it is in place?

Drainage of the fluid is a straightforward procedure. There are various ways that this can be arranged. Either one of the nurses on the ward, or one of the District Nurse Team will be able to teach you, a relative or a friend how to drain the fluid, so that it can be done in your own home. However, if you are unable to do this, we will arrange for a member of the District Nursing Team to do this for you. We will make these arrangements so you will not need to organise any of this for yourself.

When you leave the ward after insertion of the catheter, the nurses will provide you with some drainage kits to take home. This enables the district nurses to start. Further drainage kits will come via prescription from your GP.

If the District Nurses will not initially be available to support you at home (for example, over a weekend), we can arrange for the drainage procedures to be carried out on Jevington Ward until the necessary arrangements are in place at home. The ward staff and District Nurse service will liaise about this.

How often can I drain fluid and how often do I need to do this?

When your catheter is inserted, most of the fluid from your chest will be removed at the same time. The rate at which the fluid comes back varies considerably between people; some people may need daily drainage, while others may only need it weekly or sometimes even less. You can drain fluid as often as is needed to keep your breathing comfortable. We will discuss with you how often this may need to be done.

Can I wash and shower normally?

Initially after insertion there will be a dressing placed on the catheter and we ask you to keep this dry until the stitch is removed seven days later.

Providing the site is then clean and dry you will be able to bath and shower normally. After a month it is even possible to go swimming.

Can the tunnelled indwelling catheter taken out and, if so, when?

Indwelling catheters are designed to remain in position permanently. However, sometimes the fluid in the chest dries up and the catheter is no longer needed. In this case, the catheter can be removed as a day case procedure.

Are there any possible side-effects or complications?

The possible risks of inserting a tunnelled catheter are:

- **Pain** – the local anaesthetic or painkilling injection should help to make you feel comfortable. If you have any pain during the procedure, let your doctor know. If you have pain when you are at home, use painkillers such as paracetamol.
- **Breathlessness** can occasionally increase for a few minutes after the procedure, particularly if a large amount of fluid is drained rapidly at the time of insertion. The effect generally wears off within 20 to 30 minutes. If you begin to feel more breathless during the procedure you should let the doctor know.
- **Bleeding** can occur from the drain site, but the bleeding usually stops on its own. Make sure that your doctor knows if you are on any blood thinning drugs such as warfarin or if you are on clopidogrel, as these will need to be stopped several days before the procedure **Infection** can occur; either in the skin or in the pleural space, in about one in fifty procedures. It will generally settle with antibiotic treatment.

- **Allergic reaction** to the drugs, equipment or materials used in the procedure. Ensure you tell your doctor if you have had allergic reactions to drugs, tests or equipment in the past.

Generally, tunnelled indwelling catheters are well tolerated in the long term.

- The main risk is infection entering the chest down the tube. This risk is minimised by good catheter care and hygiene. We will teach you how to look after your catheter.

- In patients who have a long term catheter to help deal with fluid accumulating due to a cancer, the cancer tissue can sometimes affect the area around the catheter. Please let your doctors know if you develop a lump, or any pain, around your catheter in the weeks after it is inserted. If this problem does develop your doctor will advise you on appropriate treatment.

How do I prepare for the procedure?

Your doctor should discuss any specific preparations with you in clinic. Other than considering when to stop any anticoagulant or blood thinning medication, very little preparation is required:

- There is no need to starve before this procedure.
- Most regular medication that you would normally take should be taken as usual.
- Any inhalers should be taken as normal in the morning (e.g. salbutamol). Please bring them with you.
- If you are diabetic, there is no need to alter your normal treatment or meal schedule.

- **If you are on treatment with warfarin or other anticoagulants (blood thinning drugs) by tablet or injection you should discuss this with the doctor at the time of booking.**

- **Warfarin tablets** will need to be stopped 4-5 days before the procedure. In some people, other arrangements for anticoagulation may need to be made to cover the period between stopping warfarin beforehand and restarting it after the procedure.
- **Rivaroxaban, Apixaban and Dabigatran tablets**should be stopped at least 48 hours before the procedure.
- **Enoxaparin**, **Tinzaparin and Heparin injections** should be stopped at least 24 hours before the procedure.

What do I need to bring with me?

Please wear loose comfortable clothing and bring the following with you:

- A list of any regular medication (tablets, medicines or inhalers).
- A list of any allergies.
- The name and telephone number of the person who will be taking you home.
- Your reading glasses.

Do not bring any valuables with you, as the trust cannot take responsibility for any losses.

Do I need somebody to take me home?

You will need somebody to collect you. We do not recommend trying to drive yourself home, as your chest will be feeling quite bruised after the procedure and driving will be uncomfortable.

What should I do when I go home?

You can eat a normal diet and take your usual medication. We advise you to rest for the remainder of the day when you get home.

If you take clopidogrel, warfarin or any other anticoagulant (blood thinning) medication, this can start again at your normal dose the evening after the procedure.

How will I feel after I get home?

You should contact your doctor if you become unwell at home after having a thoracoscopy.

Serious side effects are rare, but if you develop any of the following symptoms you need to seek medical advice urgently (see page 6 for contact information):

- fever
- increasingly severe chest pain
- shortness of breath
- the area around the incision becomes very red or has pus coming out of it.

When can I return to work?

You should be able to resume normal activities 48 hours after discharge from hospital, though you may still have some discomfort for a few days

Important information

The information in this leaflet is for guidance purposes only and is not provided to replace professional clinical advice from a qualified practitioner.

Your comments

We are always interested to hear your views about our leaflets. If you have any comments, please contact the Patient Experience Team – Tel: 0300 13 14 500 Ext: 135860 or by email at: esh-tr.patientexperience@nhs.net

Hand hygiene

The Trust is committed to maintaining a clean, safe environment. Hand hygiene is very important in controlling infection. Alcohol gel is widely available at the patient bedside for staff use and at the entrance of each clinical area for visitors to clean their hands before and after entering.

Other formats

If you require any of the Trust leaflets in alternative formats, such as large print or alternative languages, please contact the Equality and Human Rights Department.

Tel: 01424 755255

After reading this information are there any questions you would like to ask? Please list below and ask your nurse or doctor.

_____
_____
_____
_____
_____
_____

Contact Details

If you have any concerns or worries following this procedure please contact one of the following:

Respiratory Secretaries - (Monday to Friday - 8.30am until 4.30pm)

Dr N Sharma and Dr D L Maxwell	Tel: (01323) 435802
Dr W R Perera and Dr J R W Wilkinson	Tel: (01323) 413718
Dr R Reddy and Dr R Venn	Tel: (01323) 413784

Lung Specialist Nurses
Jackie Dawson, Ann Markham, Sharon Baldock, Lucy Thomas
Tel: 0300 13 14 500 (switchboard will page them)

Jevington Ward
0300 13 14 500 Ext: 134710 / 134489
NHS 111
or attend your nearest Emergency Department.

Reference

The following clinicians have been consulted and agreed this patient information:
Dr James Wilkinson, Consultant in Respiratory Medicine

The directorate group that have agreed this patient information leaflet:
Medicine Division

Next review date:	September 2022
Responsible clinician/author:	Dr James Wilkinson, Consultant in Respiratory Medicine

Supplementary Information

Full instructions about the procedure, the date and time, medication advice and other specific instructions are written below. These will be confirmed by the clinic doctor at the time the procedure is arranged.

Please report to Jevington Ward Reception at:

Date: …… Time: ……

Specific advice including medication and diabetes instructions:

_____
_____
_____
_____
_____

Where is Jevington Ward?

- Jevington Ward is located in the main hospital building, in the Medical Wing. It is on Level 1 (the entry level)
- On entering the main entrance, pass straight through the entrance foyer and proceed down the long corridor beyond.
- At the end, on the right, are a stairwell, lifts and toilets. The Medical Wing is beyond this area.
- Go past the lifts and stairs into the Medical Wing.
- Jevington Ward is halfway along the corridor, on the left side (the second door on your left)

What if I have a query?

- For any queries before the procedure please contact either:
- Your consultant's secretary (see telephone numbers below)
- Alternatively, if you have a specialist lung nurse, they should be able to help.

Consultants' secretaries:

Dr N Sharma and Dr D L Maxwell	01323 435802
Dr W R Perera and Dr J R W Wilkinson	01323 413718
Dr R Reddy and Dr R Venn	01323 413784