Government of **Western Australia**
Department of **Health**

**Procedure Specific Information Sheet**

# TP06 Inserting a Peritoneal Dialysis Catheter

Expires end of December 2025

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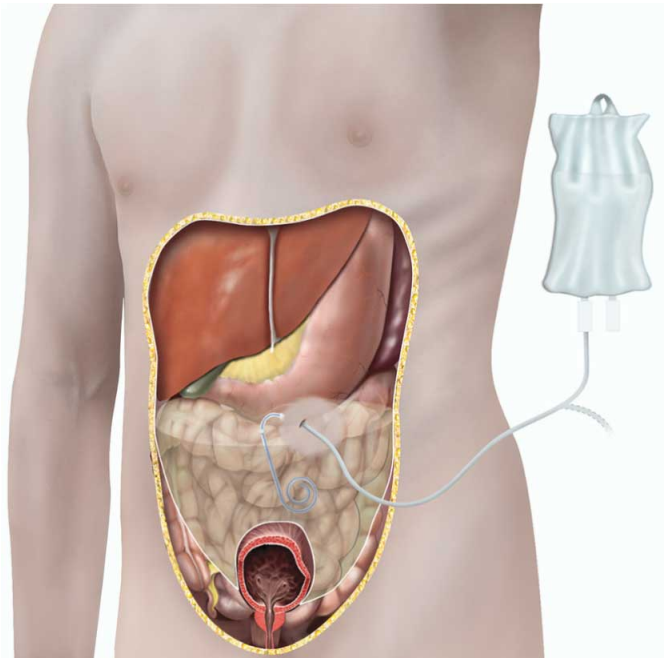
## What is peritoneal dialysis?

Peritoneal dialysis is where a dialysis fluid is run into the peritoneal cavity (the space that contains your bowels and other abdominal organs) using a small plastic tube called a peritoneal dialysis catheter. The lining of the peritoneal cavity (peritoneum) acts as a membrane, allowing excess fluid and wastes to move from the blood into the dialysis fluid. After a period of time, the fluid with the wastes is removed through the catheter and replaced with more dialysis fluid.



A peritoneal dialysis catheter

Your doctor has suggested an operation to insert a peritoneal dialysis catheter. However, it is your decision to go ahead with the operation or not. This document will give you information about the benefits and risks to help you to make an informed decision.

If you have any questions that this document does not answer, it is important that you ask your surgeon or the healthcare team. Once all your questions have been answered and you feel ready to go ahead with the procedure, you will be asked to sign the informed consent form. This is the final step in the decision-making process. However, you can still change your mind at any point.

## Why has peritoneal dialysis been recommended?

You have kidney failure so you need treatment to filter wastes and excess fluid from your bloodstream (dialysis). A kidney transplant is suitable for only about 1 in 3 people with kidney failure. If you are suitable, it can take 2 to 3 years (or sometimes more) for a kidney to become available.

There are two types of dialysis – peritoneal dialysis and haemodialysis. Haemodialysis is where wastes and excess fluid are filtered from the blood using a dialysis machine. Peritoneal dialysis has been recommended as the best form of dialysis for you.

## Are there any alternatives to inserting a peritoneal dialysis catheter?

You cannot have peritoneal dialysis without having a peritoneal dialysis catheter inserted.

## What will happen if I decide not to have the operation?

Without regular dialysis your condition will become life-threatening. If you decide not to have a peritoneal dialysis catheter, you should discuss this carefully with your doctor.

## What does the operation involve?

The healthcare team will carry out a number of checks to make sure you have the operation you came in for. You can help by confirming to your surgeon and the healthcare team your name and the operation you are having.

Various anaesthetic techniques are possible. Your anaesthetist and your surgeon will discuss the options with you. At the end of the operation, you may also have injections of local anaesthetic to help with the pain after the operation. You may be given antibiotics during the operation to reduce the risk of infection. The operation usually takes about 45 minutes.

The catheter is usually around half a centimetre thick and 45 centimetres long. One end sits in the peritoneal cavity, and the other end comes

out of your body (exit site). The end that sits in the peritoneal cavity has lots of holes in the side to allow the fluid to drain. There are usually felt cuffs on the side of the tube to help the catheter attach to your tissues. This fixes the tube so that it does not move and also reduces the risk of infection.

Your surgeon will make a small cut, usually 3 to 5 centimetres long, vertically on your midline just below your belly button.

Your surgeon will insert the catheter in the peritoneal cavity in the region of your pelvis. They will then tunnel the catheter under the skin in the front of your abdomen and bring the other end of the catheter out to the side, away from the cut. The place where the tube comes out will usually be just above or below your waist. The healthcare team will discuss this with you.

Your surgeon will close the cut with a stitch.

Sometimes the catheter is inserted using keyhole surgery. This involves making two or three small cuts (less than 1 centimetre long). Your surgeon will discuss the options with you and recommend the best technique for you.

If you have had previous surgery to your abdomen, your bowels may be stuck to each other and to your abdominal wall (adhesions). If you have lots of adhesions, your surgeon may need to release them during the operation. If you have too many, your surgeon may not be able to insert the catheter. If your surgeon manages to insert the catheter, it might be tangled in the adhesions and will not work. Your surgeon will discuss these possible problems with you.

## What should I do about my medication?

Make sure your healthcare team knows about all the medication you take and follow their advice. This includes all blood-thinning medication as well as herbal and complementary remedies, dietary supplements, and medication you can buy over the counter.

The healthcare team will advise you how many days before the operation you need to stop taking any blood thinning medications to avoid bleeding during or after the operation.

## What can I do to help make the operation a success?

If you smoke, stopping smoking now may reduce your risk of developing complications and will improve your long-term health.

Try to maintain a healthy weight. You have a higher risk of developing complications if you are overweight.

Regular exercise should help to prepare you for the operation, help you to recover and improve your long-term health. Before you start exercising, ask the healthcare team or your GP for advice.

You can reduce your risk of infection in a surgical wound.

- In the week before the operation, do not shave or wax the area where a cut is likely to be made.
- Try to have a bath or shower either the day before or on the day of the operation.
- Keep warm around the time of the operation. Let the healthcare team know if you feel cold.
- If you are diabetic, keep your blood sugar levels under control around the time of your procedure.

Speak to the healthcare team about any vaccinations you might need to reduce your risk of serious illness while you recover. When you come into hospital, practise social distancing and hand washing and wear a face covering when asked.

## What complications can happen?

The healthcare team will try to reduce the risk of complications.

Any numbers which relate to risk are from studies of people who have had this operation. Your doctor may be able to tell you if the risk of a complication is higher or lower for you. Some risks are higher if you are older, obese, you are a smoker or have other health problems. These health problems include diabetes, heart disease or lung disease.

Some complications can be serious and can even cause death.

You should ask your doctor if there is anything you do not understand.

Your anaesthetist will be able to discuss with you the possible complications of having an anaesthetic.

### General complications of any operation

- Bleeding during or after the operation. This may result in a swelling under your wound or around the exit site. A blood clot under your skin and on top of the catheter can lead to infection. You may need antibiotics to stop this from happening.
- Infection of the surgical site (wound) (risk: less than 1 in 10). It is usually safe to shower after 2 days but you should check with the healthcare team. Let the healthcare team know if you get a high temperature, notice pus in your wound, or if your wound becomes red, sore or painful. An infection usually settles with antibiotics but you may need special dressings and your wound may take some time to heal. In some cases another operation might be needed. Do not take antibiotics unless you are told you need them.
- Allergic reaction to the equipment, materials or medication. The healthcare team is trained to detect and treat any reactions that might happen. Let your doctor know if you have any allergies or if you have reacted to any medication or tests in the past.
- Chest infection. Your risk will be lower if you have stopped smoking and you are free of Covid-19 (coronavirus) symptoms for at least 7 weeks before the operation.

### Specific complications of this operation

- Inflammation of the lining of your abdomen (peritonitis). On average, this happens once for every 18 months that you have a catheter in place. Peritonitis can usually be treated with antibiotics but the catheter may need to be removed. If this happens, you will need to be on haemodialysis for a short while before a new catheter can be inserted. You will then be able to have perioneal dialysis again.
- Leaking of dialysis fluid from your wound or the exit site. This is more likely in the first week so, where possible, peritoneal dialysis will not start until after a week. If you need dialysis straight away and fluid leaks, your peritoneal dialysis treatment may need to stop for about 2 weeks. You may need to have haemodialysis until the risk of further leaking has gone down. Sometimes the fluid can leak into your abdominal wall or groin area, causing a swelling (risk: 1 in 100). Your dialysis treatment may need to stop for a few weeks for the leak to stop and the swelling to go down.
- Draining problems (risk: up to 7 in 100 in the first month). This usually happens if the catheter moves out of position or becomes blocked with fat. If draining problems continue, you may need another operation to put the catheter back in position or replace the catheter.
- Damage to a nearby organ such as your bladder or intestine. This is rare but can happen if an organ is stuck to the back of your wound as a result of previous surgery.
- Developing a hernia (risk: 4 in 100 for each year of peritoneal dialysis). This risk is higher than normal because the dialysis fluid in your abdomen puts greater pressure on your abdominal wall.
- Encapsulating peritoneal sclerosis, if you have peritoneal dialysis for a number of years (risk: 8 in 100 when on peritoneal dialysis for 4 to 5 years). This is a serious complication that can lead to your bowel becoming blocked and other problems in your abdomen.

### Consequences of this procedure

- Pain. The healthcare team will give you medication to control the pain and it is important that you take it as you are told so you can move around freely.
- Unsightly scarring of your skin.

## How soon will I recover?

### In hospital

After the operation you will be transferred to the recovery area and then to the ward.

You should be able to go home the same day or the day after. However, your doctor may recommend that you stay a little longer.

You will be trained by a specialist nurse who will show you how to do your peritoneal dialysis and prevent any infection. It is important to follow the advice you are given.

Drink plenty of fluid and increase the amount of fibre in your diet to avoid constipation as this can cause the catheter to move out of position.

If you are worried about anything, in hospital or at home, contact the healthcare team. They should be able to reassure you or identify and treat any complications.

## Returning to normal activities

If you had sedation or a general anaesthetic and you do go home the same day:

- a responsible adult should take you home in a car or taxi and stay with you for at least 24 hours;
- you should be near a telephone in case of an emergency;
- do not drive, operate machinery or do any potentially dangerous activities (this includes cooking) for at least 24 hours and not until you have fully recovered feeling, movement and co-ordination; and
- do not sign legal documents or drink alcohol for at least 24 hours.

It is common to have some discomfort for the first week.

Most people make a quick and straightforward recovery. You should be able to return to normal activities after 1 to 2 weeks but do not have a bath or play contact sports while the catheter is in place. If you want to swim, use a waterproof dressing.

If you want to do strenuous exercise, first drain out the dialysis fluid.

Regular exercise should help you to return to normal activities as soon as possible. Before you start exercising, ask the healthcare team or your GP for advice.

Do not drive until you can control your vehicle, including in an emergency, and always check your insurance policy and with the healthcare team.

## The future

Your dialysis treatment will usually begin after the first 2 weeks. You will need to take good care of your catheter by keeping it clean and changing the dressings regularly and carefully. This is so your dialysis treatment will be effective for a long time, and to reduce the risk of infection.

There is a risk that you may develop a hernia (risk: 4 in 100 for each year of peritoneal dialysis). A hernia is weak spot in your muscle which causes the contents of your abdomen to push through your abdominal wall. This creates a lump called a hernia. This risk is higher than average because the dialysis fluid in your abdomen puts greater pressure on your abdominal wall. If you can feel a lump in your groin or around your belly button, let your doctor know. Usually, the hernia can be repaired without needing to stop your peritoneal dialysis.

If you have peritoneal dialysis for a number of years, you may develop encapsulating peritoneal sclerosis (risk: 8 in 100 when on peritoneal dialysis for 4 to 5 years). This is a serious (and sometimes fatal) complication that may result in your bowel becoming blocked and other problems in your abdomen.

# Summary

Inserting a peritoneal dialysis catheter involves inserting a small tube into your peritoneal cavity. This will allow you to have regular dialysis treatment.

Surgery is usually safe and effective but complications can happen. You need to know about them to help you to make an informed decision about surgery. Knowing about them will also help to detect and treat any problems early.

Keep this information document. Use it to help you if you need to talk to the healthcare team.

Some information, such as risk and complication statistics, is taken from global studies and/or databases. Please ask your surgeon or doctor for more information about the risks that are specific to you, and they may be able to tell you about any other suitable treatments options.

This document is intended for information purposes only and should not replace advice that your relevant healthcare team would give you.

**Acknowledgements**

**Reviewer**

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**Illustrator**

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