Peritoneal Ports

A peritoneal (per-ih-toe-NEE-ul) port is a small reservoir that is surgically placed under the skin to withdraw excess fluid from or deliver medication into the peritoneal (abdominal) cavity. These ports replace the pain of repeated needle sticks and have a much lower chance of infection compared to other devices. Your doctor may use a peritoneal port to help treat ovarian cancer or ascites, a condition in which excess fluid builds up in the abdomen.

Your doctor will tell you how to prepare and whether or not you will need to be admitted and stay overnight in the hospital. Inform your doctor if there's a possibility you are pregnant and discuss any recent illnesses, medical conditions, allergies and medications you're taking, including herbal supplements and aspirin. You may be advised to stop taking aspirin, nonsteroidal anti-inflammatory drugs (NSAIDs) or blood thinners several days prior to your procedure. You also may be told to have nothing to eat or drink several hours beforehand. Leave jewelry at home and wear loose, comfortable clothing. You may be asked to wear a gown. If you are not to be admitted, plan to have someone drive you home afterward.

What is a Peritoneal Port?

A peritoneal port is a small reservoir or chamber that is surgically placed under the skin to provide a painless way of withdrawing excess fluid from or delivering anti-cancer drugs into the abdominal or peritoneal cavity (http://www.radiologyinfo.org) over a period of weeks, months or even years. The port has a silicone rubber top that can be penetrated by a needle and an attached small plastic tube that is designed to hang down into the abdominal cavity once it is placed inside the body.

The peritoneal port is implanted during a minimally invasive procedure so that patients may undergo treatments such as:

- serial paracentesis (http://www.radiologyinfo.org) , in which excess fluids in the abdomen are repeatedly withdrawn through a small plastic tube connected to the port.
- intraperitoneal therapy (http://www.radiologyinfo.org) , in which anti-cancer drugs are delivered into the peritoneal cavity through a small plastic tube connected to the port.

What are some common uses of the procedure?

Physicians use peritoneal ports to help treat:

- intractable ascites (http://www.radiologyinfo.org) , a condition in which excess fluid continually builds up in the abdominal, or peritoneal cavity. Ascites may be caused by cirrhosis (https://www.radiologyinfo.org/en/info/cirrhosisliver) (chronic liver disease), cancer, heart failure, *kidney failure, (https://www.radiologyinfo.org/en/info/kidneyfailure)* tuberculosis (http://www.radiologyinfo.org) or pancreatic disease.
- *ovarian cancer. (https://www.radiologyinfo.org/en/info/ovarian-cancer)*

How should I prepare?

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Your doctor may test your blood prior to your procedure.

Prior to your procedure, your doctor may test your blood to check your kidney function and to determine if your blood clots normally.

Tell your doctor about all the medications you take, including herbal supplements. List any allergies, especially to local anesthetic (http://www.radiologyinfo.org) , general anesthesia (http://www.radiologyinfo.org) , or contrast materials (http://www.radiologyinfo.org) . Your doctor may tell you to stop taking aspirin, nonsteroidal anti-inflammatory drugs (NSAIDs (http://www.radiologyinfo.org)) or blood thinners before your procedure.

Tell your doctor about recent illnesses or other medical conditions.

Women should always tell their doctor and technologist (http://www.radiologyinfo.org) if they are pregnant. Doctors will not perform many tests during pregnancy to avoid exposing the fetus (http://www.radiologyinfo.org) to radiation. If an x-ray is necessary, the doctor will take precautions to minimize radiation exposure to the baby. *See the Radiation Safety (https://www.radiologyinfo.org/en/info/safety-radiation) page for more information about pregnancy and x-rays.*

You will receive specific instructions on how to prepare, including any changes you need to make to your regular medication schedule.

Other than medications, your doctor may tell you to not eat or drink anything for several hours before your procedure.

You may need to remove your clothes and change into a gown for the exam. You may also need to remove jewelry, eyeglasses, and any metal objects or clothing that might interfere with the x-ray images.

Plan to have someone drive you home after your procedure.

What does the equipment look like?

In this procedure, x-ray (http://www.radiologyinfo.org) or ultrasound equipment, a peritoneal port and catheter are used.

This exam typically uses a radiographic table, one or two x-ray tubes, and a video monitor. Fluoroscopy converts x-rays into video images. Doctors use it to watch and guide procedures. The x-ray machine and a detector suspended over the exam table produce the video.

The peritoneal port is a round chamber about the size of a quarter. It has a silicone rubber top that can be penetrated by a needle and an attached catheter that is designed to hang down into the abdominal cavity.

This procedure may use other equipment, including an intravenous (http://www.radiologyinfo.org) line (IV), ultrasound machine and devices that monitor your heart beat and blood pressure.

How is the procedure performed?

Image-guided, minimally invasive procedures such as the placement of peritoneal ports are most often performed by a specially trained interventional radiologist (http://www.radiologyinfo.org) in an interventional radiology (http://www.radiologyinfo.org) suite or occasionally in the operating room.

This procedure is often done on an outpatient basis. However, some patients may require admission following the procedure. Ask your doctor if you will need to be admitted.

Your doctor may provide medications to help prevent nausea and pain and antibiotics to help prevent infection.

You will lie on the procedure table.

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The doctor or nurse may connect you to monitors that track your heart rate, blood pressure, oxygen level, and pulse.

A nurse or technologist (http://www.radiologyinfo.org) will insert an intravenous (http://www.radiologyinfo.org) (IV) line into a vein in your hand or arm to administer a sedative. This procedure may use moderate sedation. It does not require a breathing tube. However, some patients may require general anesthesia (http://www.radiologyinfo.org) .

If you receive a general anesthetic (http://www.radiologyinfo.org) , you will be unconscious for the entire procedure. An anesthesiologist (http://www.radiologyinfo.org) will monitor your condition. If you receive conscious sedation, a nurse will administer medications to make you drowsy and comfortable and monitor you during the procedure.

The area of your body where the port is to be inserted will be shaved, sterilized and covered with a surgical drape.

Your doctor will numb the area with a local anesthetic (http://www.radiologyinfo.org) . This may briefly burn or sting before the area becomes numb.

The doctor will make a very small skin incision at the site.

The catheter is inserted through the skin and into the abdominal cavity. A few inches away, a second incision is made where the peritoneal port is placed in a small pocket under the skin. One end of the catheter is then connected to the port through a tunnel just under the skin. When the procedure is complete, the port and catheter will be completely underneath your skin.

A small, elevated area remains at the site of the port. The port has a silicone covering that can be punctured with a special needle. Stitches, surgical glue or tape will be used to help keep the port firmly in place.

An x-ray may be performed after the procedure to ensure the port is correctly positioned.

The doctor or nurse will remove your IV line before you go home.

This procedure is usually completed within two hours.

What will I experience during and after the procedure?

The doctor or nurse will attach devices to your body to monitor your heart rate and blood pressure.

You will feel a slight pinch when the nurse inserts the needle into your vein for the IV line and when they inject the local anesthetic. Most of the sensation is at the skin incision site. The doctor will numb this area using local anesthetic. You may feel pressure when the doctor inserts the catheter into the vein or artery. However, you will not feel serious discomfort.

If you receive a general anesthetic (http://www.radiologyinfo.org) , you will be unconscious for the entire procedure. An anesthesiologist (http://www.radiologyinfo.org) will monitor your condition.

If the procedure uses sedation, you will feel relaxed, sleepy, and comfortable. You may or may not remain awake, depending on how deeply you are sedated.

You will have to lay flat for about 30 to 45 minutes during port placement.

If you are not staying overnight at the hospital, you should rest at home for the remainder of the day following the procedure. You may resume your usual activities the next day, but should avoid lifting heavy objects for the next few days. Ask your physician when you may resume lifting heavy objects.

You will receive instructions on how to care for your incision(s) and your peritoneal port. For the first week, it is especially important to keep the port site clean and dry. Some, but not all, physicians will recommend sponge bathing around the port site, then cleaning the area with peroxide (http://www.radiologyinfo.org) , applying an anesthetic (http://www.radiologyinfo.org)

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ointment that contains an antibiotic and bandaging the area.

Incisions are held together by stitches, surgical glue and/or a special tape.

Having the port in place should not restrict your activities. Once the incision heals, reasonable exercise is allowed and since the port is located under your skin, you may bathe or shower as usual. You may continue with your normal diet.

You should inspect the skin around your port daily and call your doctor if you:

- develop redness, swelling or tenderness around the port site
- experience unusual abdominal pain
- develop a fever.

You will remain in the recovery room until you are completely awake and ready to return home.

Who interprets the results and how do I get them?

After the procedure is complete, the interventional radiologist (http://www.radiologyinfo.org) will tell you whether the procedure was a success.

Your interventional radiologist may recommend a follow-up visit.

This visit may include a physical check-up, imaging exam(s), and blood tests. During your follow-up visit, tell your doctor if you have noticed any side effects or changes.

What are the benefits vs. risks?

Benefits

- The procedure is minimally invasive, requiring only small incisions.
- Peritoneal ports have a substantially lower rate of infection compared with other access devices.
- Peritoneal ports spare the patient the discomfort and stress of repeated needle sticks.
- Placement of a peritoneal port is a great solution for those requiring long-term or repeated treatments such as chemotherapy.
- A port allows the removal of fluid from the abdomen to be performed at home.

Risks

- Any procedure that penetrates the skin carries a risk of infection. The chance of infection requiring antibiotic treatment appears to be less than one in 1,000.
- Ports require surgical insertion and removal if complications arise or when treatment ceases.
- An infection may develop at an incision site shortly after port placement. The risk is less if you carefully follow instructions about caring for the incisions as they heal.

Delayed Risks

- Two types of delayed infection may develop: skin infection at the port site or infection inside the abdomen (peritonitis). The risk of delayed infection can be decreased if you and anyone else who will be handling the device wash hands before flushing it or cleaning the insertion site. The site should be carefully inspected each time the dressing is changed. The risk of infection is higher for individuals who have low white blood cell counts.

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What are the limitations of peritoneal port placement?

Most types of implanted ports have a useful lifetime of about 1,000 punctures.

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