

Percutaneous Transhepatic Biliary Drainage in Interventional Radiology

Percutaneous Transhepatic Biliary Drainage

Is an x-ray procedure to look at a part of your liver called the bile ducts. A small needle is placed through your skin. The needle is moved into your liver. It is replaced by a soft tube called a catheter. The doctor uses x-ray dye (contrast) to see the bile ducts when placing the tube.

Why it is Needed

- If you have a blockage of your bile ducts, it can show where and how severe the blockage is, and what caused it.
- To prepare for surgery. It can help the doctors see where the bile duct problems are.
- It may be a way to open narrowed ducts, like a stent. If you have a long-term blockage, it may make you feel better.
- If there is an injury to the bile ducts it can help prevent problems such as infection.
- If you have a bile cholangitis (a bile infection) it may be part of the treatment to drain the infected bile.

Getting Ready

If you take a blood thinner our staff will call you and tell you when you should stop taking it.

Do **not** eat anything after midnight the night before. You may take your normal morning medicines with a sip of water.

If you take insulin, our staff will tell you how to adjust the dose before the procedure. Test your blood sugar in the morning before coming in. We will recheck your blood sugar when you arrive.

You need to have blood drawn first. Often, you will have the blood draw at the hospital the morning of your procedure.

Plan to stay in the hospital for at least 24 hours after the procedure so that we can watch you closely.

How it is Done

It is done in a procedure room in Interventional Radiology. Before we begin, the radiologist will explain the procedure to you and ask for your consent. Tell the radiologist if you are pregnant, think you may be pregnant, or you have any allergies to:

- Iodine
- Latex
- Contrast dyes
- Anesthesia
- Any medicines

An IV is placed. We give you fluid and an antibiotic through the IV. In most cases you will be asleep for the procedure. It is done with general anesthesia given by an anesthesia doctor, or sedation given by a nurse.

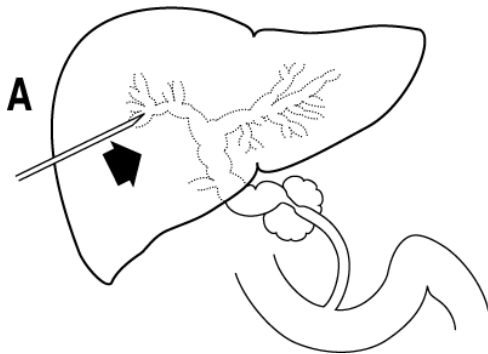
The needle and the tube are placed using:

- **Ultrasound** to show deep structures in the body using sound waves.
- **Fluoroscopy**, an exam of deep structures using x-rays.

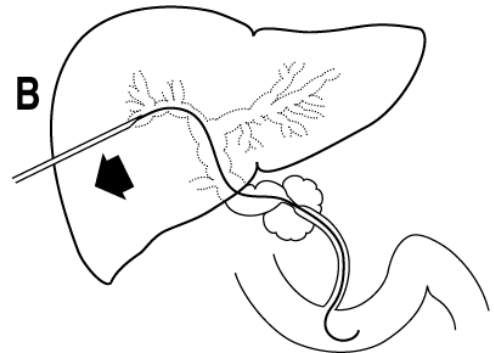
The doctor uses ultrasound over your abdomen to see your liver and other organs. We mark the area on your abdomen where the drain will be placed. Your skin is cleaned with Chlorhexidine or a solution. We cover you with sterile drapes to help prevent infection. The doctors wear sterile gowns and masks.

Using fluoroscopy, the doctor places a small needle through your skin and into your liver. The doctor will remove the needle and replace it with a soft tube in the bile duct. After placing the soft tube (catheter) into the bile duct, the doctor will give a small amount of contrast to see how bile flows. We use fluoroscopy to see the ducts when the contrast goes in. The pictures show how the tube is placed:

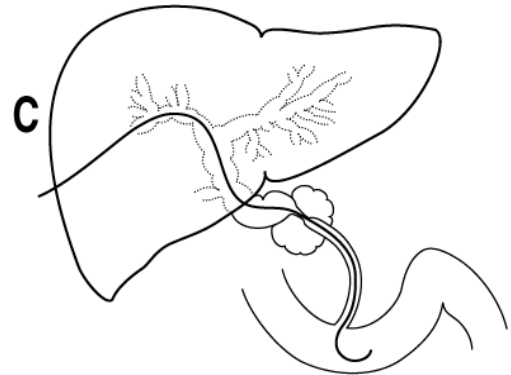
- A. Needle placed into liver and bile duct.



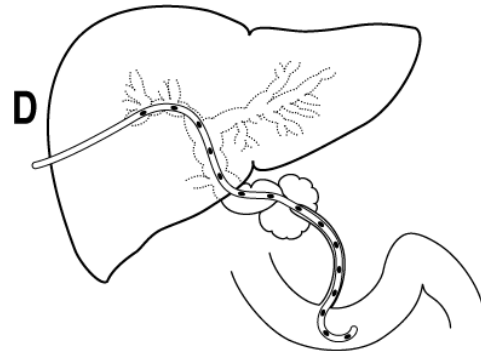
- B. A guidewire is passed through the needle and down into the bile ducts.



- C. The needle is removed from the liver.



- D. A soft plastic tube catheter is passed over the guidewire and into the bile ducts.



The end of the tube will be outside your body to drain bile into a bag. You will have stitches. A dressing is placed over the tube.

After the Procedure

You go to the recovery room. Once you wake up, you go to a hospital room where you will rest and recover. Nurses check your pulse, blood pressure, and temperature, and the amount and color of the bile that drains from the tube.

Tell your nurse if you have:

- Nausea
- Fever or chills
- A lot of pain at the tube site
- Trouble taking a deep breath or feel short of breath.

Home Care

Most patients are sent home with the drainage tube in place. You should change the dressing every 3 days or if dressing is soiled. Clean the tube site when you change the dressing.

Changing the Dressing

1. Gather supplies needed. Check with your doctor to see how often you need to change the drainage bag and tubing.
 - Mild soap like Dove®
 - Sterile 2x2 gauze dressings medium size Tegaderm™
Clear adhesive tape or paper tape (if you are sensitive to Tegaderm™)
 - Drainage bags
 - Extension tubing (CTU-14)
 - Blue caps for flushing and capping trial
2. Wash your hands well with soap and water for 30 seconds.

3. Open the sterile 2x2 gauze, and Tegaderm™. If your skin is sensitive to the Tegaderm™ dressing, you will follow the same steps, but the gauze can be taped in place. If the gauze is taped in place the dressing needs to be changed **daily**.
4. Remove the old dressing.
5. Check the tube site for signs of infection:
 - Increased tenderness or pain
 - Increased redness or swelling
 - Drainage that is green in color or has a bad smell
6. Check the stitches at the skin site to see if they are tight. They should not be loose.
7. Using a clean washcloth, clean the skin around the tube site with a mild soap and water.
 - Gently wash the skin around the site. Rinse with wet washcloth.
 - Wipe dry.
 - Allow the area to dry before putting the new dressing on.
8. Place the folded sterile 2x2 gauze under the tube and over the site.
9. Cover the gauze with the Tegaderm™ dressing.

Drainage Bag

Your tube will either connect to a drainage bag or be capped off. If your tube connects to a bag it should drain greenish bile. Keep the bag at waist level or lower to help the bile to drain.

Capped Off

If the tube is capped off, it will not drain bile. There will be a little cap at the end of the tube. Flush the tube once a day and change the dressing every 3 days.

Self-Capping at Home Within 24-48 Hours

Only do this if you have been told to do so:

1. Turn stopcock towards your body.
2. Leave the bag in place for several hours.
3. If you **do not** have a fever, chills, or pain, you can disconnect the bag from the stopcock, and attach blue cap.
4. If you **do** have fever, chills, or pain, re-open the bag to drain or reattach tubing and bag if removed.
5. Once bag is removed, place a cap at the end of stopcock to keep it covered.

You still flush tube as instructed.

If you fail the self-capping trial, please call the Radiology Department at **608-263-9729 option #3**.

Flushing the Tube

The tube needs to be flushed each day. We will give you a sheet that tells you how to flush your drain (*Health Facts for You* #5721).

If you are a patient receiving care at UnityPoint – Meriter, Swedish American or a health system outside of UW Health, please use the phone numbers provided in your discharge instructions for any questions or concerns.

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright © 10/2023 University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF#4608

When to Call

- Redness at the site.
- Green drainage at the site.
- Increased swelling at the site.
- If you have a fever greater than 100.4° F (38° C). Take your temperature if you are not feeling well.
- Decreased or no bile drainage from the tube.
- Pain at the tube site or in your side where the tube is placed that does not go away with pain medicine.
- The stitches at the site are loose or have come undone.
- The tube falls out.
- Severe nausea, vomiting, or diarrhea.

Who to Call

Radiology Department
Monday through Friday, 8:00 am to 4:30 pm
(608) 263-9729 option #3.

After hours call **(608) 262-0486**. Ask for the interventional radiologist on call. Give your name and phone number with the area code. The doctor will call you back. The toll-free number is: **1-800-323-8942**.