Transjugular Intrahepatic Portosystemic Shunt Placement (TIPS Procedure)

This handout explains how to prepare for a transjugular intrahepatic portosystemic shunt (TIPS) placement.

The liver has many jobs, and one of the most important is to clean your blood. Tiny blood vessels carry blood through the liver so it can remove toxins. When the liver becomes scarred (cirrhosis), blood cannot flow through it well, which raises pressure in the veins that lead into the liver. If the pressure gets too high, these veins can bleed (GI bleeding), and fluid can leak into the belly (ascites).

A TIPS does not make the liver work better. If your liver already has trouble helping your blood clot, clearing toxins, or helping with digestion, you will still have those problems after the TIPS.

Benefits
TIPS placement can help:

- **Improve blood flow through the liver.** It creates a new path between two major veins in the liver. A metal stent keeps this path open.
- **Lower fluid buildup in your belly (ascites).** This helps when other treatments have not worked.
- **Reduce the risk of GI bleeding.** This is bleeding in the stomach or intestines. If you have had GI bleeding, a TIPS can help prevent life-threatening bleeding.

Before the Procedure
To get ready for the TIPS, you may need tests such as:

- **Blood tests:** To check how well your liver and kidneys work and how well your blood clots.
- **CT scan or MRI:** To make sure it is safe to do the TIPS and help the doctors plan where to place it.
- **Paracentesis:** To remove fluid from your belly to check for infection. You'll need to treat any infection before we perform the TIPS.
- **Echocardiogram:** To check how strong your heart is and make sure your risk of heart failure is low enough to do the TIPS safely.

Allergies
Tell the Interventional Radiology staff if you are allergic to x-ray dye or any medicines.

Blood Thinning Medicines
You **must** call the doctor who prescribes this medicine to see if you need to stop or adjust your medicine before the procedure. That doctor will tell you how to safely do this.

If your doctor tells you **not** to stop your medicine, please call the procedure center.

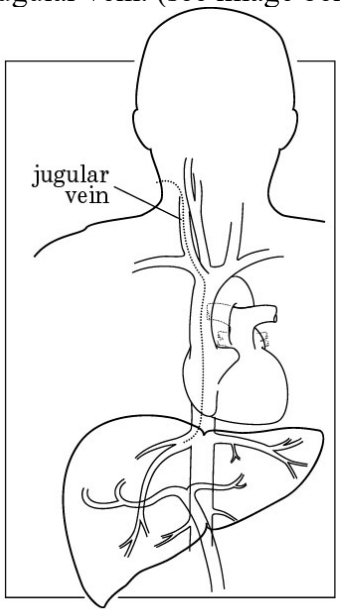
Diabetes and Weight Loss Medicines
You **must** call the doctor who prescribes this medicine to adjust your medicine before the procedure. That doctor will tell you how to safely do this.

If your doctor tells you **not** to stop your medicine, please call the procedure center.

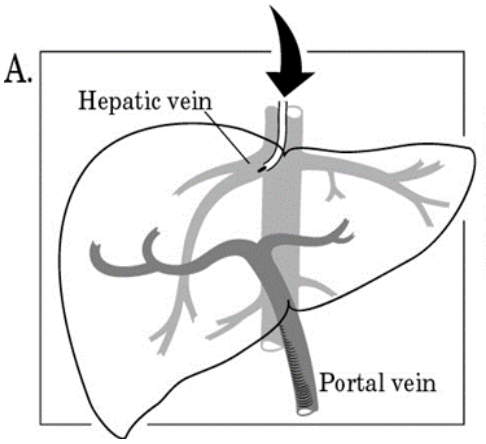
TIPS Placement
We will take you to a procedure room. Someone from the anesthesia team will discuss about the medicine that will help you sleep during the placement. Once you are asleep, the procedure will start.

TIPS Procedure
The pictures in this handout show how we do the TIPS. You will be asleep during the TIPS. We do the whole procedure using fluoroscopy, real time x-ray on TV screens to guide the interventional radiologist.

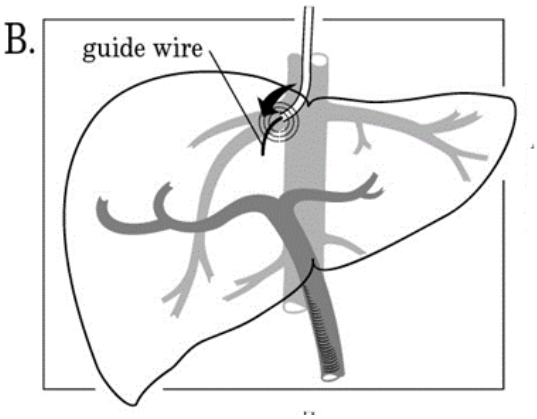
First, we will insert a small needle into the jugular vein. (see image below).



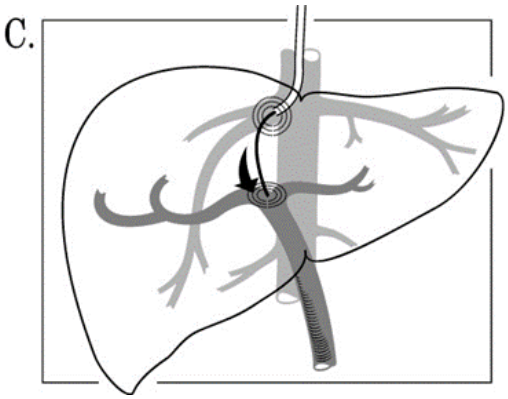
Then, we replace the needle with a thin wire and a small tube. We guide these into the hepatic vein (image A).



We use a guiding needle to make a path through the liver so we can reach a branch of the portal vein (image B).

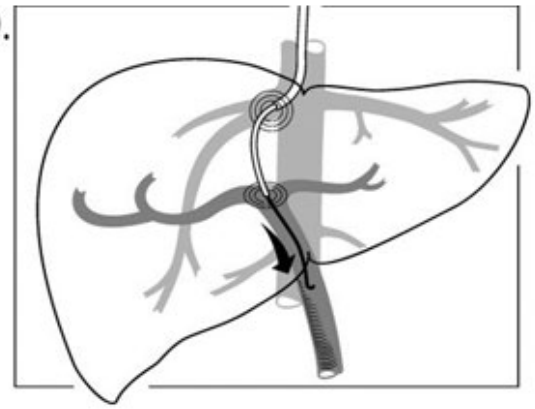


Then, we move the guidewire farther into the portal vein to keep our access open (image C).



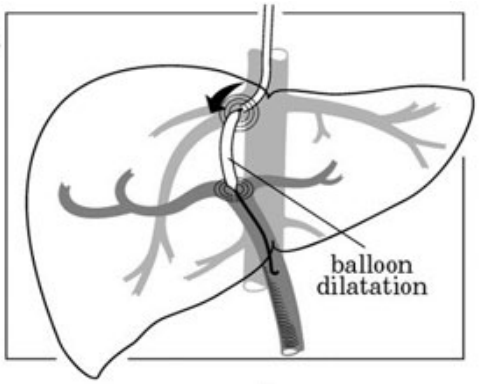
After that, we move a balloon catheter over the wire and into the portal vein (image D).

D.



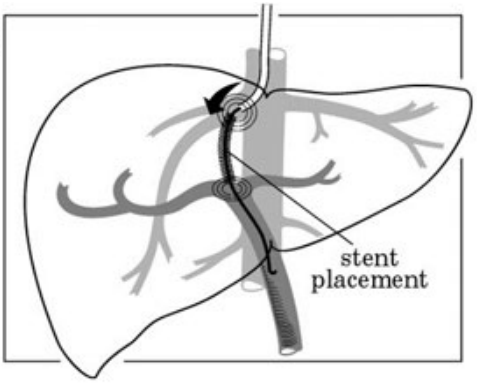
Then, we use a balloon dilation (angioplasty) that helps widen the newly formed pathway (image E).

E.



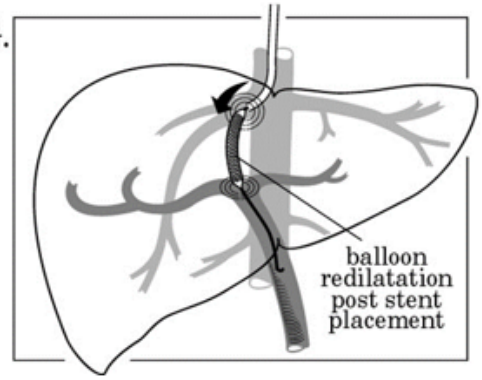
After that, we insert the metallic stent and place it in the new pathway between the hepatic vein and the portal vein (image F).

F.



We use the balloon catheter again. This helps to make sure the stent stays wide open so blood can flow from the portal vein to the hepatic vein (image G).

G.



As the final step, we remove the catheters and wires. Then we place a dressing over the puncture site at the internal jugular vein (at your neck).

Risks

Your care team will talk to you about the risks before your TIPS. Then, they will ask you to sign a consent form. Risks may include:

- Life threatening bleeding in the liver
- Infection
- Heart failure
- Worsening liver failure
- Increase in confusion (encephalopathy)
- Kidney problems

After the Procedure

We will admit you to the hospital after your procedure. Most people stay in the hospital 1 to 2 days after the placement.

Follow up Visit

You will return to our Interventional Radiology clinic in 7 to 10 days after the TIPS. At this visit, you will have an ultrasound to make sure the TIPS shunt has good blood flow. The TIPS works a little like plumbing. As blood flows through it, some material can build up inside. If this

happens, there is a higher chance of GI bleeding or fluid building back up.

After this visit, your hepatologist (liver doctor) will handle your follow-up care. They will schedule ultrasounds at 3 months, 6 months, and then once a year if the shunt looks good. These ultrasounds help us find any narrowing of the TIPS early.

It is important to have regular ultrasound exams of the TIPS to make sure it stays open.

Clearing Build up in the TIPS
If we see narrowing, we may need to open the TIPS again during an outpatient visit using moderate sedation. We will insert a balloon catheter into the vein in your neck. Using X-ray guidance, we advance the catheter down to the TIPS. Once it is inside the shunt, we inflate the balloon to clean out the TIPS.

After this, we remove the catheter from the vein in your neck. Then, we apply pressure to the area to prevent bleeding. You can go home the same day, but you will need a driver.

Reminder: A TIPS shows up on X-rays and is safe to have in an MRI (magnetic resonance imaging) machine.

When to Call
Call the clinic right away if you:

- Have signs of infection at the puncture site in your neck, such as:
  - Redness or warmth
  - Pus-like drainage or bleeding
  - Excess swelling
  - Temperature (by mouth) greater than 100.4ºF or 38ºC for 2 readings taken four hours apart
- Have severe pain or spasms in your belly
- Feel light-headed or faint
- Vomit blood or have blood in your stool
- Have new confusion

Who to Call
Interventional Radiology Department
8:00 am to 4:30 pm, Monday – Friday
(608) 263-9729 option #3

After hours, weekends, and holidays, call **(608) 262-2122**. This is the paging operator. Ask for the Interventional Radiologist on call. Leave your name and phone number with the area code. The doctor will call you back.

Toll free number is: **1-800-323-8942**.

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 © 1/2026. University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF#4640.