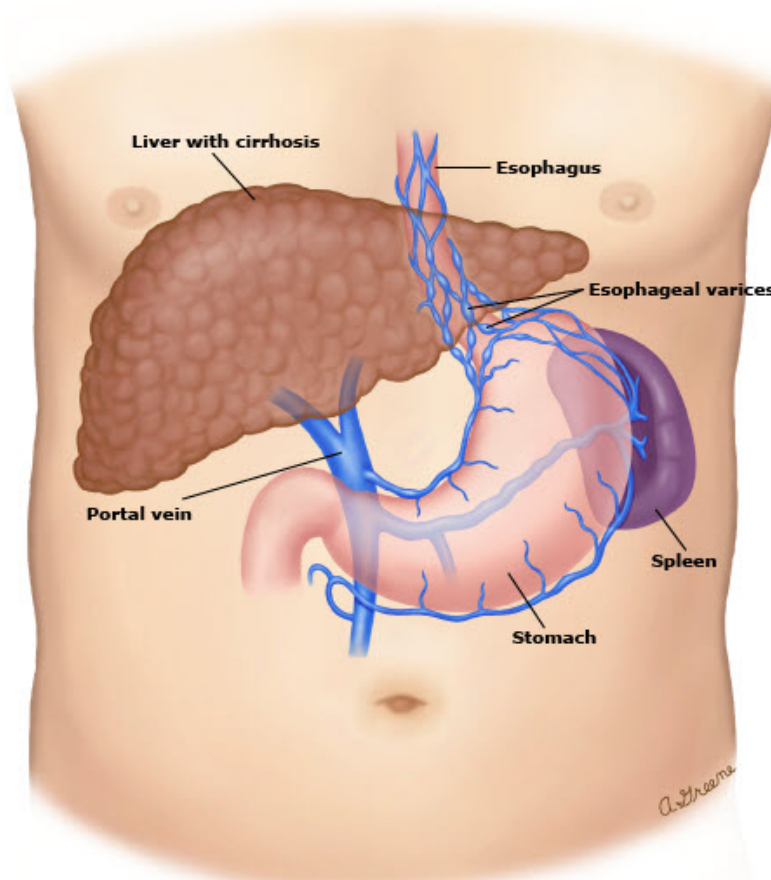


The Treatment of Decompensated Cirrhosis: Preventing bleeding from esophageal varices

What causes bleeding from esophageal varices?

A backup of blood from the scarred liver (traffic jam causing portal hypertension) may cause the veins in the wall of the esophagus to enlarge. The **esophagus** is the swallowing tube that connects the throat to the stomach. The pressure inside the enlarged veins, called **esophageal varices**, is higher than normal. The increased pressure can cause the veins to burst, leading to sudden and severe bleeding.



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What are signs of bleeding from esophageal varices?

Unless the varices break and bleed, you will have no symptoms. Signs of bleeding varices are life-threatening. **You must go to the emergency room, immediately, if you have any of the following symptoms:**

- Vomiting of large amounts of fresh blood or clots
- Black and tarry stool

What can be done to prevent serious bleeding?

If you have liver disease that could cause varices to form, your doctor may recommend that you have an upper endoscopy test (EGD) to determine if varices are present and what their size is. Larger varices have a higher risk of breaking and bleeding. There are two main treatments to prevent bleeding:

1. Medications called beta blockers
2. Banding

Your doctor may decide to use one, or both, of these treatments.

1. Beta blocker medication

Beta blockers are pills you can take to reduce blood flow and pressure in varices. Your doctor will generally start you on a very low dose of one of these drugs:

- Propranolol (Inderal®), taken twice a day
- Nadolol (Corgard®), taken once a day
- Carvedilol (Coreg®), taken once or twice a day

When using propranolol or nadolol, your doctor may check your heart rate (pulse). The goal of treatment is to give you enough of one of these drugs to reduce your heart rate by 25%. Carvedilol is not adjusted based on the heart rate. The dose of medication will be increased slowly until this goal is

reached. Most people with low blood pressure tolerate beta blockers well. Tell your doctor if you get dizzy or lightheaded after taking these medications.

2. Banding

If varices do bleed, doctors may apply rubber bands to the varices to block them. If the varices still bleed after treatment with medication and rubber bands, you may need a TIPS procedure (Transjugular Intrahepatic Portosystemic Shunt).

3. Transjugular intrahepatic portosystemic shunt or TIPS procedure

TIPS is the placement of a shunt (internal tunnel) within the liver to improve blood flow. It is performed through the veins and does not require surgery. TIPS can help control bleeding from varices if other simple measures fail. Sometimes it is used to prevent re-bleeding from varices. In some cases, it can also help to decrease fluid buildup (ascites). About 30 out of 100 (30%) of patients develop mental confusion after TIPS, and in some cases the shunt must be closed back down. Rarely, jaundice and liver failure develops after a TIPS procedure.

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Authors: Elliot Tapper, MD; Patricia Bloom, MD

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