Testing for Esophageal Varices
(Portal Hypertension)
Cirrhosis is a type of liver disease. Over time, it scars the liver. The most common causes of cirrhosis include:

- drinking too much alcohol
- chronic (ongoing) hepatitis B or C
- fatty liver due to obesity (being overweight)

What are esophageal varices?

- Varices are blood vessels that have expanded (gotten bigger). Varices usually happen in the esophagus and stomach. The esophagus is the swallowing tube that connects your mouth and stomach. Esophageal varices are a common problem in advanced cirrhosis.
• In people with cirrhosis, varices happen when blood flow through the liver is blocked by scarring. This increases the pressure inside the portal vein, which carries blood from the intestines to the liver. This condition is called portal hypertension.

• Portal hypertension can lead to higher blood pressure inside the veins of the lower esophagus and stomach. Since these veins were not designed for higher pressure, they may start to expand causing varices. Once varices happen, they may:
  › stay the same
  › get bigger
  › get smaller (if the liver disease improves)

You may still have portal hypertension even when your blood pressure is normal or low.

**Esophageal varices can be serious.**

• Without treatment, 25 to 40 percent of people will have serious bleeding (hemorrhage). This can cause major illness and even death.

• About 15 percent of people who bleed from varices will die.

It is very important to treat liver disease and prevent bleeding.

Varices are often not found until they start to leak or break open, leading to major bleeding.
Signs a varice is leaking or has broken include:
› throwing up blood  › lightheadedness
› dark-coloured or black stools (poop)  › passing out (if bleeding is very bad)

**Bleeding varices need emergency medical help right away.** Major blood loss can cause death. If you have one or more signs of varices, it is an **EMERGENCY. Call 911 or go to the nearest Emergency Department right away.**

It is important to be tested for varices if you have cirrhosis. Treatment can help prevent varices from bleeding.

**How are varices diagnosed?**
- A test called an endoscopy is the most common way to find varices. Before the test, you will get medicine to help you relax.
- Your health care provider will pass an endoscope (a special tube that bends, also called a gastroscope) through your mouth to the upper part of your stomach. The tube is about the size of a finger and has a small light and camera on one end. This tube lets your health care provider see the lining of your esophagus and upper stomach.
• **If no varices are found:** you will repeat the test in 3 years.

• **If varices are found:** you will repeat the test every 18 months to check on the size.

• If the varices are big, you will get medicine to lower the chance of bleeding. Your health care provider will explain how the medicine will work and any problems it may cause.

• How often you need to repeat the test depends on how the varices look, the cause of your liver disease, and your overall health.

**How do I get ready for the test?**

• You will get details about how to get ready before your test date. Please call your health care provider’s office or the endoscopy unit if you have any questions.

• Arrange for a friend or family member to stay at the hospital with you while you are having your test and drive you home after. The medicines used to help you relax during your test can make you drowsy and change the way you think and operate machinery (such as a car, a lawnmower, etc.) for up to 24 hours (1 day).

• You may need to change your medications before your test. **Ask your health care provider about this before your test.**
2 weeks before your test:
• If you are on a blood thinner like warfarin (Coumadin®) or Plavix®, call your primary health care provider to ask when to stop taking it and for how long.

5 days before your test:
• STOP all Aspirin® and non-steroidal anti-inflammatory medicines (such as Motrin®, Advil®, ibuprofen) for 5 days before and 2 days after your test.
• Do not eat or drink anything for 8 hours before your test. It is important for your stomach to be empty so your health care provider can see the whole area. This also prevents food or fluid from being vomited (thrown up) into your lungs during the test.
• If your test is in the afternoon, you may have clear liquids for breakfast before 8 a.m. Do not eat or drink anything after 8 a.m.

What are clear liquids?
› black tea or coffee (no milk)  › Jell-O® gelatin (not pudding)
› water  › clear broth
› clear juice, like apple or cranberry
On the day of your test:

- If you take insulin, **take half** of your morning dose. **DO NOT** take your afternoon dose until after your test.
- If you take **pills for diabetes**, take your morning dose with your usual breakfast.
- **Tell your health care provider right away if you notice any signs of low blood sugar**, like shaking, sweating, blurred vision, extreme (a lot of) hunger, tiredness, trouble thinking, or feeling lightheaded. A change in your routine can cause your blood sugar levels to be unusually high or low for up to 48 hours (2 days).

What will happen during the test?

- Before your test, the staff will review your medical and surgical history, including your current medicines.
- They will explain the test and may ask you to sign a consent. Be sure to have all of your questions answered before you sign.
- An IV needle will be inserted (put in) into a vein in your hand or arm. You will get medicines through the IV to help you relax and prevent discomfort. You can also choose not to have these medicines. Some people do very well with just a numbing spray on the back of the throat. This stops the urge to gag for a short time, making it easier to pass the scope.
• Your blood pressure, heart rate, and blood oxygen level will be monitored before, during, and after the test. This is not painful. You may be given oxygen during the test through a small tube that sits under the nose and fits around the ears.

• For safety reasons, you must remove your dentures before the test, if you have them.

**How is the test done?**

• The test will take about 10 to 20 minutes.

• You will lie on your left side.

• You may get medicine to numb your throat (a gargle or spray). A plastic mouth guard will be put between your teeth to prevent damage to your teeth and the endoscope.

• Most people have no trouble swallowing the endoscope after taking medicine to help them relax. Many people sleep during the test. Others are very relaxed and do not even notice that the test has started.

• Air is sent through the endoscope to open the esophagus, stomach, and intestine. This lets the scope pass more easily and gives the health care provider a clear view. The added air may make you feel some bloating or gas. This is not harmful. Burping may relieve this feeling.
• The endoscope does not get in the way of your breathing. Taking slow, deep breaths during the test may help you to relax.
• Tissue samples (biopsies) may be taken. This is not painful.
• Special treatments (such as dilation, removal of polyps, or treatment of bleeding) may be done during the test, if needed. This will be explained to you before your test.

What will happen after the test?
• If you have not had medicine to help you relax, you can leave right after the test is finished. You do not need someone to take you home.
• If you had medicine to help you relax, before or during the test, you must stay and be monitored until it wears off. This usually takes about 1 to 2 hours. The medicine causes most people to feel tired or have trouble thinking for a short time. **Do not drive or return to work after the test.**
• The most common discomfort after the test is feeling bloated. This usually goes away quickly. You may also have a mild sore throat. Most people are able to eat shortly after the test.
• Most people do very well with this test and feel fine after. You can expect to feel tired and plan to take it easy for the rest of the day.
• Your health care provider will tell you the results of your test before you leave the endoscopy unit. If you had biopsies taken or polyps removed, you can call for your results in 2 to 3 weeks.

What are the possible complications of this test?

This test is safe and complications are not common. Possible complications include:

• It is possible to breathe in food or fluids during the test. Not eating or drinking before the test will lower the chance of this happening.

• The endoscope can cause a tear or hole in the tissue being looked at. This is serious, but rare.

• Bleeding can happen if a biopsy is taken or polyps are removed. Bleeding is usually minor and stops quickly on its own, or can be easily controlled.

• You may have a reaction to the relaxing medicine. The health care providers will ask if you have any allergies or reactions to medicines, or any health problems, such as heart, lung, kidney, or liver disease. This info will help them to make sure that your test is done as safely as possible.
Call 811 to report these signs right away:
› severe (very bad) belly pain (more than gas cramps)
› a firm, swollen belly
› vomiting (throwing up)
› fever (over 38° C/100.4° F)
› trouble swallowing or severe throat pain
› a crunching feeling under the skin of your neck

Where can I get more info?
Your health care provider is the best source of info for questions and concerns related to your medical problem.

Looking for more health information?
Find this pamphlet and all our patient resources here: http://library.nshealth.ca/PatientGuides
Contact your local public library for books, videos, magazines, and other resources.
For more information, go to http://library.novascotia.ca
Connect with a registered nurse in Nova Scotia any time: call 811 or visit https://811.novascotia.ca
Learn about other programs and services in your community: call 211 or visit http://ns.211.ca

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