A barium enema also known as a lower GI is a particular x-ray that specializes in the large intestine, which will include the colon and rectum. Barium sulfate is a liquid that is used to create a contrast in the x-ray image to highlight detailed areas in the body creating clearer images. The barium sulfate is placed in the rectum for testing purposes and will exit the body with bowel movements.

**Test Description**

Barium enema testing is generally performed at the radiology department in a hospital or in your doctor’s office. You will lie flat on a tilting radiographic table and have an initial x-ray taken for comparisons later. Next you be asked to lie on your side so that the barium sulfate will be inserted into your body through a very well lubricated tube into your rectum. That tube is attached to the bag of barium sulfate allowing it to gently flow into your colon.

The tech will monitor the flow of the barium by way of an x-ray fluoroscope screen. If need be there is a small balloon on the tip of the enema tube that can be slightly inflated to assist in keeping the barium inside the colon during testing.

You will be asked to move around into various positions and the table can be tilted a little to get diverse views. To achieve clear images be prepared to hold your breath an remain still while the x-ray pictures are being taken.

Once the series of x-rays are finished the enema tube will be removed and you can be either helped to the toilet or use a bedpan to empty your bowels and remove as much of the barium as possible. More than likely a couple more x-ray images will be taken after you have used the toilet.

There are two kinds of barium enemas that can be performed:

- The single contrast barium enema uses the barium to highlight the large intestines.

- For the double contrast barium enema the tube is removed, and the patient expels the barium, a couple more x-rays are taken. There will be a thin film of barium remaining on the colon next air is then slowly delivered into the colon to expand it and a few more images will be taken.

**Test Preparation**

Follow your health care provider’s instructions; it is very important that you empty your bowels completely before the exam. This is generally achieved through laxatives or an enema in addition to a clear liquid diet. Don’t forget that the importance is stressed on the thoroughness
of the cleansing of the large intestine so that the pictures will turn out clear and accurate.

What To Expect During the Exam
There should be very little or no discomfort from the enema tube, however when the barium is released into the colon you may have the sensation of needing to have a bowel movement. As it fills up you may have some discomfort, a feeling of fullness, and there could be some moderate to severe cramping. This would be the time to take a couple of deep long breaths and find that happy spot. Relaxing is the key to comfort.

Purpose of Test
The barium enema is generally a safer test that is performed if there is a risk of a diverticulitis attack. It is a gentler test that is used to protect the large intestines thus producing nice sharp clear images to help look for any abnormalities and assist in a proper diagnosis.

Test Results

**Normal**
The barium should fill the colon equally, showing regular bowel shape and position with no blockages.

**Abnormal**
Anything out of the ordinary will be generally caught right away. The main focus will be on any diverticular pockets, infections, or possible perforation. Other intestinal conditions may be detected also.

Risks
X-rays are always regulated and monitored so as to have only the smallest amount of radiation exposure needed to produce the correct images. There is also the slight risk of a perforated colon, or allergic reaction. Many experts feel strongly that the risks far outweigh the benefits of what can be discovered. Keep in mind that pregnant women and children are more sensitive to the exposure of an x-ray.