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Barium enema

Barium enema is a special x-ray of the large intestine, which includes the colon and rectum.

How the Test is Performed

This test may be done in a doctor's office or hospital radiology department. It is done after the colon is completely empty. Your doctor will give you instructions on how to empty the colon.

You will lie flat on your back on the x-ray table and an x-ray will be taken.

- You will then be told to lie on your side. The health care provider will gently insert a well-lubricated tube (enema tube) into your rectum. The tube is connected to a bag that holds a liquid containing barium sulfate. It is placed in the rectum.
- The liquid is a type of contrast material that highlights specific areas in the body, creating a clearer image. The barium flows into your colon, and eventually passes out of your body with your stools.

A small balloon at the tip of the enema tube may be inflated to help keep the barium inside your colon. The health care provider will monitor the flow of the barium on an x-ray fluoroscope screen, which is like a TV monitor.

There are two types of barium enemas:

- Single contrast barium enema uses barium to highlight your large intestine.
- Double contrast barium enema uses barium, but also delivers air into the colon to expand it. This allows for even better images.

You will be asked to move into different positions and the table will be slightly tipped to get different views. At certain times when the x-ray pictures are taken, you will hold your breath and be still for a few seconds so the images won't be blurry.

The enema tube will be removed after the pictures are taken. You will be given a bedpan or helped to the toilet, so you can empty your bowels and remove as much of the barium as possible. One or two x-rays may be taken after you use the bathroom.

How to Prepare for the Test

You must completely empty your bowels before the exam. This may be done using an enema or laxatives combined with a clear liquid diet. Your health care provider will give you specific instructions. Thorough cleaning of the large intestine is necessary for accurate pictures.

How the Test Will Feel

When barium enters your colon, you may feel like you need to have a bowel movement. You may also have a feeling of fullness, moderate to severe cramping, and general discomfort. Try to take long, deep breaths during the procedure. This may help you relax.

Why the Test is Performed

The barium enema is used to detect colon cancer, although it is used much less often than in the past.

It may also be used to diagnose and evaluate the extent of inflammatory bowel disease (IBD) or other bowel disease.

Normal Results

Barium should fill the colon evenly, showing normal bowel shape and position and no blockages.

What Abnormal Results Mean

Abnormal test results may be a sign of:

- Acute appendicitis
- Colitis due to Crohn's disease
- Colorectal cancer
- Colorectal polyps
- Diverticulitis
- Twisted loop of the bowel (volvulus)
- Ulcerative colitis

Other conditions under which the test may be performed:

- Hirschsprung's disease
- Intestinal obstruction
- Intussusception

Risks

There is low radiation exposure. X-rays are monitored and regulated to provide the smallest amount of radiation exposure needed to produce the image. Most experts feel that the risk is low compared with the benefits. Pregnant women and children are more sensitive to x-ray risks.

A more serious risk is a perforated colon, which is very rare.

Considerations

Colonoscopy is another way to diagnose and monitor diseases in the colon.

Alternative Names

Lower gastrointestinal series; Lower GI series

References

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