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Contrast Enema Study

What is a contrast enema study?

A contrast enema study is a type of imaging to look at the lower gastrointestinal (GI) tract (the large intestine, also known as the colon). The study uses a kind of X-ray called fluoroscopy and a contrast material that can be seen on the X-ray to help detect disease and problems in the lower GI tract.

Two types of contrast material are used, depending on the reason for the test:

- Barium contrast material, a milky-white liquid
- Water-soluble contrast material, a clear liquid containing iodine

Both water-soluble and barium contrast materials are effective and safe for enemas in infants and children.

Why might a child need a contrast enema study?

A contrast enema study might be ordered to look at the large intestines to help find the cause of your child's symptoms and diagnose diseases. Some reasons for contrast enema include:

- Abdominal pain
- Change in bowel habits
- Chronic diarrhea
- Detecting problems with the structure of the large intestine
- Rectal bleeding
- Severe constipation
- Unexplained weight loss

What happens before a contrast enema study?

You should inform your provider of any medications your child is taking and if your child has any allergies/reactions to iodine or contrast materials. Also inform your provider about any recent illnesses or new medical conditions for your child.

There are different instructions to prepare for a contrast enema study depending on your child's age, diagnosis, or reason for the study. You will be given specific instructions when you make your child's appointment. It is important that you follow all preparation instructions or the study may need to be rescheduled. In general:

- For most contrast enemas, no special preparation is necessary; your child may eat or drink before the study. However, some contrast enemas require that your child not eat or drink for a specific period of time before the study. Be sure to ask your provider for instructions before your child's procedure.
- Your child often can be given his or her usual medication on the day of the study, but check with your provider if they want any medications stopped for a period of time before the study (including any laxatives or stool softeners).

What happens during a contrast enema study?

A radiology technologist and a radiologist (a physician trained to supervise and interpret radiology examinations) will guide you and your child through the procedure. It can be helpful to bring your child's favorite toy, book, or activity to keep them distracted or calm.

Your child will be positioned on an examination table, and an X-ray is usually taken first to evaluate your child's anatomy. The radiologist or technologist will then insert a small tube into the rectum to deliver the contrast material for the study into the colon. The size of the rectal tube is determined by your child's age and/or size.

Once the contrast material is delivered, a series of X-rays are taken using a fluoroscopy machine. Fluoroscopy converts X-rays into video images that appear on a monitor and allow the radiologist to guide the procedure.

During the study, your child may feel the need to use the bathroom—this is normal. They also may feel some abdominal pressure or minor discomfort, but this is usually temporary.

When the examination is complete, you may be asked to wait until the radiologist determines that all the necessary images have been obtained. A contrast enema study usually takes 15–60 minutes to complete.

What happens after the contrast enema study?

Once the X-ray images are completed, most of the contrast material is removed through the tube.

Your child may resume their usual activities and diet after the study.

Depending on the contrast that is used, your child's stool may appear white for a day or a few days as the contrast material is cleared from their body.

What are the risks of a contrast enema study?

- There is a small exposure of radiation with any X-ray study. However, the benefit of an accurate diagnosis outweighs the risk. Special care is taken during X-ray examination to use the lowest possible amount of radiation while producing the best images. Modern X-ray systems have very controlled methods to minimize radiation to other parts of the body that are not being imaged.
- In rare cases, the barium from the contrast material could leak through an undetected hole in the lower GI tract, producing inflammation in surrounding tissues.
- Even more rarely, the barium can cause blockage in the GI tract, called barium impaction.
- Iodinated contrast material delivered through the rectum may cause allergic reactions, but this is rare.

When should we seek medical advice?

If your child has a sudden change in their health after the study, please call your provider or go to a local emergency room as soon as possible.

References

<https://www.radiologyinfo.org/en/info/lowergi>

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IMPORTANT REMINDER: *This information from the North American Society for Pediatric Gastroenterology, Hepatology and Nutrition (NASPGHAN) is intended only to provide general educational information as a definitive basis for diagnosis or treatment in any particular case. It is very important that you consult your doctor about your specific condition.*

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