

## What you need to know about...

# Contrast Agents

Although bones show up clearly on x-ray images, some other organs and tissues do not. Contrast agents, also known as contrast media, often are used during medical imaging examinations to highlight specific parts of the body and make them easier to see. Contrast agents can be used with many types of imaging examinations, including x-ray exams, computed tomography scans and magnetic resonance imaging.

Contrast agents are administered in different ways: Some are given as a drink, others are injected or delivered through an intravenous line or an enema. After the examination, some

contrast agents are harmlessly absorbed by the body; others are excreted through the urine or bowel movements. Contrast agents are not dyes; they do not permanently discolor internal organs. Instead, they temporarily change the way x-rays or other imaging tools interact with your body.

If the exam your physician requested for you requires a contrast agent, a radiologic technologist will explain how it is used before the exam begins. Radiologic technologists are skilled health professionals who have specialized education in the safe use of contrast agents as well as in radiation protection, radiographic positioning and procedures.

The technologist will answer any questions you have about the examination or the contrast agent.

Some contrast agents carry a small risk of allergic reaction, so it is important to tell the radiologic technologist who will perform your examination if you have any type of allergy. Also, if you notice any unusual or uncomfortable symptoms during the examination, be sure to tell the technologist. It is his or her job to make you as comfortable as possible while obtaining the best image possible.

One of the most commonly used contrast agents is barium sulfate. Barium blocks the passage of x-rays, so barium-filled organs stand out better on x-ray exams. For an examination of the esophagus or stomach, patients are asked to drink a mixture of barium sulfate and water, sometimes with vanilla or fruit flavoring added. This mixture usually is thick and white.

For an examination of the rectum or colon, barium is administered rectally through an enema tube. After the exam is finished, you can go to the bathroom and expel the barium. It is a good idea to increase your fluid intake after the exam to help remove the contrast from your body. Your bowel movements may be white for a few days.

Contrast agents containing iodine are used to image the gallbladder, urinary tract, blood vessels, spleen, liver and bile duct. Iodine contrast agents are clear liquids and usually are injected. Patients who are allergic to iodine should not receive this type of contrast agent. Be sure to tell the technologist which medications you are taking and your current medical conditions before the exam begins. Some conditions and medications make the use of iodine contrast agents riskier.

You may notice side effects associated with the use of iodine-containing contrast agents. These include a feeling of warmth or flushing, a metallic taste in the mouth, light headedness, nausea, itching and hives. Usually, these symptoms are mild and disappear quickly. However, it is a good idea to tell the radiologic technologist if you experience any of them. In extremely rare instances, these side effects can be serious. The technologist will monitor you carefully for signs of side effects.



*An x-ray film showing the large intestine filled with barium, a common contrast agent.*

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