



FLUORESCEIN AND INDOCYANINE GREEN (ICG) ANGIOGRAPHY

In order to examine the retina and choroid (a layer of blood vessels under the retina), your doctor has recommended one or both of these diagnostic techniques.

What is fluorescein and ICG?

Fluorescein and ICG are both non-radioactive dyes that are injected into a vein in your arm. The dye then travels through the blood stream and enters the blood vessels in your eye. As the dye passes through these vessels in your eye, a special camera takes photographs (not x-rays) of the retinal and choroidal blood vessels. Fluorescein angiography is the best way to examine the retinal blood vessels, but often times, the choroidal blood vessels are difficult to visualize with fluorescein alone. Therefore, ICG is occasionally used in conjunction with or instead of fluorescein because it demonstrates choroidal vessels much more clearly.

Why do I need angiography?

Angiography helps your doctor see what is happening in your retina or choroid. The dye highlights abnormalities that may not be detectable by examining your eye alone. It is most often used to help diagnose and monitor eye diseases such as macular degeneration, diabetic retinopathy, retinal vein occlusions and cystoid macular edema. It is also used to determine the need for and guide laser surgery as well as monitor the effects of laser surgery.

How is angiography performed?

After your pupils are dilated with drops, an experienced technician will insert a small needle into a vein in your arm and inject one or both dyes. As the dye enters your bloodstream and then passes through the vessels in your retina and choroid, a special camera will be used to take a series of photographs. Your doctor will then review the photographs with you. The entire procedure takes less than 30 minutes.

Are there any side effects?

Side effects are rare and minimal. The most common side effects include:

- Leakage of the dye from the site of injection under the skin. This usually creates a burning sensation at the injection site and slight, temporary discoloration of the skin.
- Your skin may turn a slight yellowish color for several hours.
- Because fluorescein dye is removed from your body by the kidneys, your urine may turn dark orange for up to 24 hours.
- Occasionally, fluorescein dye can make you nauseous for a few minutes after injection.
- Your vision will be blurry due to the eye drops you received to dilate your pupils, or from the bright flashes from the camera. These effects are not permanent and will generally wear off within several hours.

Rarely, allergic reactions can occur to either of these dyes. They often may cause a skin rash, itchy skin, or breathing difficulty. Such reactions are usually treated with oral or injectable anti-histamines (such as Benedryl), depending on the severity of the symptoms. ICG contains iodine, and if you are allergic to iodine or other substances that contain iodine, such as shellfish or x-ray dye, you must inform your doctor.