

Fluorescein / Indocyanine Green Angiography

Ophthalmology

Introduction

This leaflet contains information for patients who require a Fluorescein / Indocyanine Green Angiography. It has been designed to give you a better understanding of what the test involves.

What is Fluorescein / Indocyanine Green Angiography?

This is a diagnostic test which allows the blood vessels inside your eye to be imaged (photographed) through a dilated pupil.

A fluorescent dye is injected into the blood stream via a vein in your arm or hand. This circulates to the eye, and then a series of images (photographs) are taken.

What is Fluorescein / Indocyanine Green?

Fluorescein and Indocyanine Green are concentrated coloured dyes. Fluorescein is a yellow dye and Indocyanine Green is a green dye. The dye solution highlights blood vessels when imaged or photographed with a special coloured camera filter.

Why do I need to have the test done?

The test will provide more information about the blood vessels inside your eye. It shows any abnormal blood vessels or leaking area, which may be causing problems and will help your doctor decide on future care.

Consent

We must seek your consent for any procedure or treatment beforehand. Your Doctor / Practitioner will explain the risks, benefits and alternatives where relevant before they ask for your consent. If you are unsure about any aspect of the procedure or treatment proposed please do not hesitate to ask for more information.

The prevention of infection is a major priority in all healthcare and everyone has a part to play.

- Please decontaminate your hands frequently for 20 seconds using soap and water or alcohol gel if available
- If you have symptoms of diarrhoea and/or vomiting, cough or other respiratory symptoms, a temperature or any loss of taste or smell please do not visit the hospital or any other care facility and seek advice from 111
- Keep the environment clean and tidy
- Let's work together to keep infections out of our hospitals and care homes.

How do I prepare for the test?

- You will be asked about your allergies to Iodine, Fluorescein, Sulphur drugs, Latex and other medication
- You should also let staff know if you have a medical history of Uraemic or liver disease
- Please advise staff if you are on a low sodium diet as the drug contains sodium
- Caution should be exercised in the use of the drug in pregnancy. Please advise staff if you feel you may be pregnant
- Take all your medications as normal. When you attend, it is important you bring a list of your current medication, as this can affect the test
- For Fluorescein Angiography, contact lenses must be removed prior to the test and must not be worn for 48 hours afterwards. This is because the dye may remain in the tears and can be absorbed by the contact lens.

What if I am diabetic?

If you are diabetic, please ensure you take your normal medication and eat your normal diet before and after the test.

The Fluorescein dye discolours the glucose testing strip, making the results less reliable. However, the procedure will not affect your diabetes control.

What will happen on the day of the test?

You will be in the department for approximately 1½ - 2 hours.

Before the test:

The procedure will be explained to you and any questions you have will be answered. You will then be asked to sign a consent form.

On the day of the test, you will have your vision tested.

Drops are administered into both eyes to enlarge the pupils. This is to ensure the best images (photographs) possible. It is important to take images (photographs) of both eyes, even if you only have a problem with one eye.

You will have your blood pressure checked and you will once again be asked about any allergies, medications and medical conditions.

During the test:

This will take place in the photography room, you will be seated in front of a camera with your chin and forehead firmly on the rests, and if necessary, the nurse will help you keep your head in position.

A small needle is inserted into a vein in your arm or hand. The lights will be turned off and the dye injected into your arm/hand. Once the dye flows through the blood vessels inside your eye, (this only takes a few seconds), the photographer will begin to take lots of photos using flash photography.

The light from the camera is quite bright but it's very important that you keep your eyes open; a nurse will help you, if necessary. You will then have a short rest before another series of images (photographs) are taken a few minutes later. The whole procedure takes five to ten minutes.

After the test:

You will be asked to wait in the waiting area for about 30 minutes, to check that there is no reaction to the dye. The needle will then be removed and a small plaster or dressing will be placed over the injection site. You will usually be given another appointment to discuss the results and plan your treatment with the doctor; this may possibly be on the same day as the test.

What happens when I go home?

- You are advised not to drive for the rest of the day after you have had this procedure, until your vision returns to normal

Fluorescein Angiography can affect some blood test results following the procedure. It is, therefore, advisable to inform staff who are taking any blood tests for 3 - 4 days after the test

- Following Fluorescein Angiography, it is not advisable to breast feed for seven days. This is because the dye can be found in breast milk during this time. Breastmilk should be expressed and discarded.

Are there any risks involved?

Like all medicines, Fluorescein and Indocyanine Green can cause some side effects, although not everybody gets them.

The common side effects:

- With Fluorescein, there can be a yellow discolouration of skin. Urine can remain orange-green in colour for 24-36 hours - because the dye is passed from your body via your kidneys
- With Indocyanine Green, there can be a green discolouration of stool
- Nausea and vomiting
- Skin rash.

Less common side effects:

- Breathing problems
- Fainting
- Itching
- Bleeding into the skin
- Abnormal sense of taste
- Stomach problems
- Skin rash
- Headache.

Uncommon side effects:

An allergic reaction can occur, which can range from mild skin rash to anaphylaxis (a severe collapse that can occur as the result of an allergic reaction similar to peanut or bee sting allergy).

Extravasation - This is where the dye leaks into the tissues of the skin. This can result in severe local pain and skin damage.

You will be observed throughout the test so that any reaction will be treated immediately to prevent it from worsening.

What are the benefits of having the test performed?

- To aid diagnosis of retinal and choroidal disease
- To ensure appropriate treatment of retinal and choroidal disease.

What alternatives are there to this test?

If it is not possible to perform this test, an alternative test called optical coherence tomography (retinal scan) may be considered. However, this test does not provide as much detail as Fluorescein / Indocyanine Green Angiography.

Where can I get more information?

We are here to help, please do not hesitate to contact us if you need any further information or advice:

Monday – Sunday:	08:30 - 17:00
Minor Procedures Dept.	01902 695813 / 695831
Eye Referral Unit	01902 695805
Out of Hours:	NHS 111

If you have any personal access needs or require wheelchair access and wish to talk to a member of staff, please get in touch using our contact details.

References

- Macquire, J. and Federman, J. (2009) Intravenous fluorescein angiography. In: Tasman W, Jaeger EA, eds. Duane's Ophthalmology. 15th ed. Philadelphia, Pa: Lippincott Williams and Wilkins.
- Yannuzi, L. et al (1986) Fluorescein angiography complication survey, *Ophthalmology*, 93(5), pp. 611-617.
- Watkinson, S. et al (2003) Nurse-led management of IV fluorescein angiography, *Nursing times*, 99(18), p. 34.
- Law, M. (2001) A study of adverse reactions to ophthalmic intravenous fluorescein angiography, *Ophthalmic Nursing*, 5(2), pp.10-14.
- Kwiterovich, K. et al (1991) Frequency of adverse systemic reactions after fluorescein angiography, Results of a prospective study, *Ophthalmology*, 98, pp.1139-1142.

English

If you need information in another way like easy read or a different language please let us know.

If you need an interpreter or assistance please let us know.

Lithuanian

Jeigu norėtumėte, kad informacija jums būtų pateikta kitu būdu, pavyzdžiui, supaprastinta forma ar kita kalba, prašome mums apie tai pranešti.

Jeigu jums reikia vertėjo ar kitos pagalbos, prašome mums apie tai pranešti.

Polish

Jeżeli chcieliby Państwo otrzymać te informacje w innej postaci, na przykład w wersji łatwej do czytania lub w innym języku, prosimy powiedzieć nam o tym.

Prosimy poinformować nas również, jeżeli potrzebowaliby Państwo usługi tłumaczenia ustnego lub innej pomocy.

Punjabi

ਜੇ ਤੁਹਾਨੂੰ ਇਹ ਜਾਣਕਾਰੀ ਕਿਸੇ ਹੋਰ ਰੂਪ ਵਿਚ, ਜਿਵੇਂ ਪੜ੍ਹਨ ਵਿਚ ਆਸਾਨ ਰੂਪ ਜਾਂ ਕਿਸੇ ਦੂਜੀ ਭਾਸ਼ਾ ਵਿਚ, ਚਾਹੀਦੀ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

ਜੇ ਤੁਹਾਨੂੰ ਦੁਭਾਸ਼ੀਏ ਦੀ ਜਾਂ ਸਹਾਇਤਾ ਦੀ ਲੋੜ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

Romanian

Dacă aveți nevoie de informații în alt format, ca de exemplu caractere ușor de citit sau altă limbă, vă rugăm să ne informați.

Dacă aveți nevoie de un interpret sau de asistență, vă rugăm să ne informați.

Traditional Chinese

如果您需要以其他方式了解信息，如易读或其他语种，请告诉我们。

如果您需要口译人员或帮助，请告诉我们。