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Kingston Hospital  
NHS Foundation Trust



# Intravitreal injections

## Patient information leaflet

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Authors: Rowena Domingo, Su-yin Koay, Mostafa Elgohary

## **What is an intravitreal injection?**

The vitreous is a transparent gel-like structure that lies behind the iris (coloured part of your eye) and lens; and is in front of the retina (light sensing tissue at the back of the eye). An intravitreal injection is where an injection is given into the vitreous cavity of the eye. It is given through the sclera (white of the eye). It may be a one off injection, or more commonly it is a course of treatment where more than one injection are needed.

## **Why do I need an intravitreal injection?**

Intravitreal injections are given to treat conditions of the retina or the vitreous that would not be otherwise successfully treated. These injections allow us to deliver medications in high enough concentrations that would not be possible to achieve otherwise e.g. if the medications are given as eye drops or pills.

## **What medications are injected, and which conditions do they treat?**

### **1. Anti-VEGF (vascular endothelial growth factor) drugs - Eylea**

*(aflibercept), Lucentis (ranibizumab) and Avastin (bevacizumab)*

- The most commonly injected medications
- They are used in the treatment of:
  - o Wet age-related macular degeneration (AMD): leaking blood vessels under the retina at the back of the eye due to age-related wear & tear.
  - o Diabetic macular oedema: leaking blood vessels within the retina causing water-logging of the central part of the retina due to diabetes.

- o Macular oedema due to retinal vein occlusion: blockage of a blood vessel at the back of the eye causing leaking of fluid and water-logging of the central part of the retina.
- o Myopic choroidal neovascularisation: leaking blood vessels under the retina at the back of the eye due to short sightedness.
- o Proliferative diabetic retinopathy: thin-walled blood vessels that grow on the retina or nerve at the back of the eye and may bleed or cause retinal detachment.

**2. Steroids** – *Triamcinolone, Orzudex (dexamethasone implant) or Iluvein (fluocinolone implant)*

- Helps control inflammation in the eye
- Used in the treatment of:
  - o Diabetic macular oedema
  - o Macular oedema due to retinal vein occlusion
  - o Macular oedema due to uveitis (inflammation in the eye)
  - o Macular oedema that develops after surgery: waterlogging of the central retina following eye surgery e.g. cataract surgery.

**3. Antibiotics, antivirals or antifungal** - *vancomycin, amikacin, ceftazidime (antibiotics); ganciclovir, foscarnet (antivirals) or amphotericin (antifungal)*

- Used in the treatment of severe eye infections due to bacteria, viruses or fungus

#### **4. Other medications: *Jetrea (ocriplasmin) & Actilyse (atelplase)***

- Jetrea: is used in conditions of adhesion between the vitreous gel and retina that causes the vision to become distorted.
- Alteplase: this is a blood clot-buster that is used in patients with severe bleeding underneath the retina.

There are many other conditions that may benefit from intravitreal injections. Specific information will be discussed with you by your doctor when the treatment options are being discussed.

#### **Which medication will I get?**

The treatment will be discussed with you in details by the doctor in clinic. Generally speaking, the choice of the medication will depend on:

- The cause of your eye problem
- The severity and duration of the problem
- Any previous treatment you have had (injections, laser, etc)
- Whether you have previously had cataract surgery
- Whether you have had glaucoma (eye condition which can cause high pressure in the eye)

More information is available in the specific information leaflets for each eye condition.

### **What should I expect on the day of my appointment?**

A nurse will check your vision, eye pressure, and instil dilating eye drops to make the pupils (the black part of the eye) large. This will cause blurry vision and large pupils for 4-6 hours, this is why you should not drive to your appointment or back home after the injection. Scans and photographs of the eye may then be taken, which give us more information about your eye condition and help us decide if you would benefit from intravitreal injections. Occasionally further tests are required, these will be discussed with you if this is the case.

### **How is the injection performed?**

The injection is performed in a clean room or in an operating theatre at the Royal Eye Unit.

You will be lying down on a special chair. Prior to the injection, you will have local anaesthetic drops put in to numb the front surface of your eye. The skin around the eye is then cleaned with an antibacterial solution (usually iodine) to reduce the risk of infection. Your face is then covered with a small plastic sheet to keep the area sterile. A small clip (eye speculum) is used to help you keep the eye open. More numbing eye drops can be given at this point.

Finally, the medication is injected through the white of your eye (sclera) into the vitreous. This only takes a few seconds to administer. We always

check to ensure you can count fingers or see our hand moving following the injection, as this gives us an indication of your vision.

### **Will the injection be painful?**

The vast majority of our patients report no or only minimal discomfort or pressure feeling. This is often similar to the scratch you feel when you get a blood test.

### **Who will give the injection?**

These injections will be given either by an eye doctor or an experienced nurse practitioner. We cannot guarantee that a particular individual will perform your injection, but all staff who inject will have the appropriate training and experience.

### **What should I expect after the injection?**

Your eye may become blurring or feel bruised, irritated and look bright red. This gets better a few hours to a few days later.

Lubricant drops can be used to provide moisture and to help make the eye more comfortable after the injection.

Patients sometimes see more floaters (black swirls) for a few days following the injection.

### **How long will I need to be in the eye unit for?**

As mentioned above, the actual injection only takes a few seconds to perform. The process of getting you and your eye ready for the injection

may take up to 10-15 minutes. However the entire visit to the Royal Eye Unit may take a few hours. It is best to set aside the entire morning or afternoon for your appointment.

### **How many injections will I need?**

Most patients require a course of treatment, which means that injections may need to be repeated every 4 to 12 weeks. Most patients will receive at least 3 injections at the beginning of the treatment. This varies depending on how the eye is responding, and also the condition we are treating. The frequency of injections can change over time.

### **What are the benefits of treatment?**

The aim of treatment is to stabilise your vision and prevent further deterioration. Some patients may also experience improvement in vision. It is important to remember that we may not be able to give you back the vision that has already been lost, and that your vision may get worse even though you are receiving the injections.

### **What are the risks of treatment?**

The main risks include:

- Corneal abrasion (scratch on the surface of the eye) – this will become evident once the anaesthetic drops wear off 1-2 hours after the injection, and cause a painful and watery eye. This will heal within 24-28 hours but can be very sore.

- Serious eye infection (endophthalmitis - see leaflet) - which may cause loss of vision (1 in 1000)
- Increase in eye pressure
- Inflammation or bleeding in the eye
- Retinal tears or detachment – which will require further surgery
- Theoretical risk of increased blood clots leading to a heart attack or a stroke. Reassuringly this is extremely rare, but please let your doctor know if you have had a stroke/mini-stroke or heart attack, especially if it is within the last 3 months.

### **Contact details**

#### **Royal Eye Unit**

Mon-Fri 8.30am to 5pm

0208 934 6404

#### **Moorfields at St Georges' Hospital (Duke Elder Ward)**

Mon-Fri 5pm to 8.30am, weekends and Bank Holidays

020 8672 1255 ext 2064/0638