

Autologous Serum Eyedrops



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Some patients, for a variety of reasons, suffer from severe dryness of the eye that can lead to redness, itching and pain. Many can be helped by intensive treatment with artificial teardrops. However, for some patients these symptoms are not completely relieved.

The National Blood Service (NBS) has recently developed an alternative to these artificial drops. They are called autologous serum eyedrops and are made from a patient's own blood. These eyedrops naturally contain ingredients that are known to speed up healing and increase lubrication of the surface of the eye. Your Consultant has suggested that you may benefit from this type of treatment.

How are these eyedrops made?

The eyedrops are made using the clear part (serum) of your blood. The serum is diluted with saline and bottled into eyedropper bottles that need to be kept in the freezer until use. The drops contain no additives or preservatives, just your own serum diluted with saline.

What will happen if I agree to try this treatment?

To make your eyedrops the NBS will need to collect some of your blood, in the same way that blood is collected from blood donors. The only difference is that your donation will be collected into a special pack and only used for the purpose of making your eyedrops. This special pack will be placed into a machine that spins the blood at a very high speed, causing the red cells to separate from the serum.





Before the NBS can take your blood they must assess your general health to make sure that donating blood will not harm you. You will be asked to complete a health check questionnaire and to have a discussion with one of the doctors or nurses at the Blood Donor Centre. If it is considered safe to proceed, up to 470ml (almost a pint) of blood will be collected at the Blood Donor Centre. Your blood will be tested for hepatitis B, hepatitis C, HIV, syphilis and HTLV (Human T-cell lymphocytotropic virus - a virus that affects white cells) and you will be asked to consent to this testing when the blood is collected.

Following the collection of your blood, it will take the NBS approximately 3 – 4 weeks to test your blood and make your eyedrops. The eyedrops will be returned to you via your Eye Clinic and will be supplied frozen. You could be supplied with up to 150 bottles; however, the quantity will depend on several factors, including how much blood the NBS was able to collect from you.

These bottles need to be kept in your freezer at home and you will be instructed to remove one bottle each day, leaving it to thaw at room temperature. The Eye Clinic doctors will advise you how frequently you should use the drops. After thawing, the bottle should be kept in the refrigerator. At the end of the day the bottle and any remaining contents should be discarded and a fresh bottle used each day.



After care

The Eye Clinic will monitor your progress while you are on this treatment, and will decide whether the treatment should be continued.

If your treatment is to be continued, you will need to notify your Eye Clinic when you are down to six weeks' supply of eyedrops. Arrangements will be made for the NBS to collect more blood and to make some more eyedrops for you.

Will my blood definitely be returned as eyedrops?

Usually the answer is yes. However, sometimes there are reasons why your blood cannot be used. The main reasons are:

- There was a problem with the manufacturing process e.g. the blood pack has become damaged during processing.
- If any of the blood screening tests are found to be positive.

If either of the above happens, you will be informed and appropriate further action discussed.





What are the possible risks of this treatment?

There are some minor risks associated with collecting blood. These include fainting, anaemia and bruising or infection at the site where the blood was taken. The NBS try to minimise these risks by assessing you before and during the collection of your blood. This includes checking your iron (haemoglobin) level to make sure that you are not becoming anaemic.

Another possible risk is an infection caused by the eyedrops as they do not contain any preservative. To minimise the possibility of this occurring, the NBS will test each batch of drops for the presence of any infection before they issue the drops to you. The risk of infection can also be minimised by only using one bottle per day and discarding the bottle and remaining contents at the end of each day.

There is also a very small chance that a protein deposit could collect on the surface of the eye. This is very rare and can easily be resolved by stopping the treatment.

If any adverse effects occur when using the eyedrops you should notify your Eye Clinic immediately and seek their advice.



Further Information

If you have questions arising from this leaflet or there are things that concern you, please ask your consultant or eye clinic.

Large Print or Braille

A copy of this leaflet is available in Large Print and Braille. To obtain a copy, please call 01865 440042.

Data Protection

The National Blood Service (part of the NHS) keeps records of all the tests it performs, and of the advice it offers, in order to run its service effectively and safely. Your data will be held securely, and in accordance with your rights, under the Data Protection Act (1998).