

Eye issues

Health information after cancer treatment as a child or teenager

The purpose of this factsheet is to tell you about long-term side effects (called 'late effects') that can happen after having cancer treatment. They can happen soon after treatment has finished or later in life. The medical team at the hospital where you received your treatment or are attending follow-up checks will be able to help you with specific information about which late effects are relevant to you.

Certain treatments for childhood cancer can affect your eyes in the longer term or you may have had an eye removed. As this may impact your daily living, it is important for survivors who are at risk of eye and visual problems to have their eyes assessed regularly.

Who is at risk of developing eye issues?

The following may increase your risk of developing eye issues:

- radiotherapy treatment to your eye, orbit (the cavity in which your eyeball sits) or the parts of the brain that are responsible for visual processing, such as the optic nerves
- radioactive iodine (RAI), usually taken to treat thyroid cancer
- chemotherapy drugs such as actinomycin D and doxorubicin when given together with radiation
- having had chronic graft versus host disease (GvHD) after a bone marrow or stem cell transplant
- diabetes, high blood pressure and frequent exposure to sunlight
- removal of an eye

What eye and vision issues can occur following treatment for childhood cancer?

- cataracts - clouding of the lens of the eyes
- dry eyes - not producing enough tears leading to pain on the surface of the eye and sensitivity to light
- tear duct narrowing - if the tear ducts shrink, tears are not able to drain away leading to excess watering of eyes

Less common problems may include:

- poor growth of eye and orbit
- reduced vision or loss of vision
- reduced field of vision
- increased pressure within the eye (glaucoma)

What symptoms should I look out for?

If you develop blurry vision, double vision, blind spot, sensitivity to light, poor night vision, on-going irritation of the surface of the eyes or eyelids, major tearing/watering of the eye or dry eyes, you may need to see an eye specialist (ophthalmologist) regularly at hospital. It is recommended that patients see their local optician regularly to make sure their eyes are healthy.

Are there any treatments available for these long-term complications?

Dry eyes

Your ophthalmologist will advise you on this. Sometimes, the use of artificial tear drops may help your eye to feel more comfortable and reduce the risk of infection.

Artificial eye

If your eye was removed as part of your treatment and you now have an artificial eye, you will remain under the care of the National Artificial Eye Service (NAES) throughout your life. You will have a prosthetist (a specialist who cares for artificial eyes) at a local centre and receive regular socket checks as well as replacement eyes as needed. If you notice any changes in discharge or in the socket itself, contact your local eye team or GP for advice.

What are cataracts?

A cataract is when the lens of the eye becomes cloudy preventing light passing through to the back of the eye. Common symptoms of cataracts include painless blurring of vision, double vision, blind spots, sensitivity to the light, poor night vision, fading or yellowing of colours and the need for frequent changes in glasses or contact lens prescription.

The following treatments may increase your risk of developing cataracts:

- radiotherapy to the lens
- total body irradiation (TBI)
- radiotherapy to the eye or orbit

Other risk factors include:

- certain chemotherapy drugs
- steroids such as prednisolone and dexamethasone
- poorly-controlled blood sugars
- chronic graft versus host disease (GvHD)

Not all patients with cataracts need treatment. Your ophthalmologist will discuss the options with you and will advise treatment if, and when, it becomes necessary. This treatment involves removing the lens and replacing it with an artificial lens, often performed as an out-patient.

What can I do to help?

Eye protection

It is strongly recommended that young people with only one seeing eye should wear eye protection, with polycarbonate safety lenses, when taking part in sporting activities or other activities which may result

in eye injury (such as woodwork or metalwork). These lenses are more shatter-proof than any other plastic and will protect the eyes better than standard plastic lenses in glasses. You should consider possible risks and injury to the good eye before participating in contact sports.

If you are at high risk you will be monitored by an ophthalmology team. You can also protect your eyes by wearing sunglasses with UV protection when in bright sunlight, using protective eye wear when undertaking certain sports, avoiding playing with fireworks or sparklers and taking care when working with household chemicals. It is advisable to wear protective eye wear if working in a workshop or in the garden and, in the event of an eye injury, seek medical help promptly

Driving and future employment

If you have had one eye removed, or you have reduced vision, you may have questions about your ability to drive. DVSA (Driver and Vehicle Standards Agency) standards require a good level of vision and a full field of vision in order to drive. This can be assessed more accurately and discussed with your eye team or optician using visual field tests. Most young people with normal vision in one eye will be able to drive although there may be restrictions concerning the ability to drive heavy goods vehicles or buses. Your ophthalmologist will advise you further on this.

Where can I find more information?

National Artificial Eye Service:
www.naes.nhs.uk

www.gov.uk/eye-conditions-and-driving

www.gov.uk/driving-eyesight-rules



the EXPERTS
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Written by CCLG Late Effects Group, a national network of experts who specialise in looking after young cancer survivors, in conjunction with the CCLG Information Advisory Group, comprising multiprofessional experts in the field of children's cancer. If you have any comments on this factsheet, please contact us. CCLG publications on a variety of topics related to children's cancer are available to order or download free of charge from our website.

Children's Cancer and Leukaemia Group (CCLG) is a leading national charity and expert voice for all childhood cancers.

Each week in the UK and Ireland, more than 30 children are diagnosed with cancer. Our network of dedicated professional members work together in treatment, care and research to help shape a future where all children with cancer survive and live happy, healthy and independent lives.

We fund and support innovative world-class research and collaborate, both nationally and internationally, to drive forward improvements in childhood cancer. Our award-winning information resources help lessen the anxiety, stress and loneliness commonly felt by families, giving support throughout the cancer journey.

Our work is funded by donations. If you would like to help, text 'CCLG' to 70300 to donate £3. You may be charged for one text message at your network's standard or charity rate. CCLG (registered charity numbers 1182637 and SC049948) will receive 100% of your donation.