

Puberty: Males

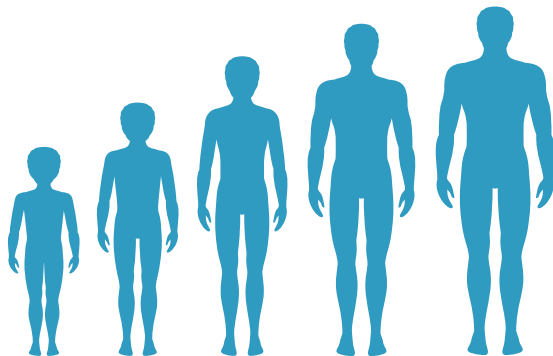
Health information after cancer treatment as a child or teenager

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.

What is puberty?

Puberty is the time in your life when your body begins to change from a child into an adult. This stage usually starts around 12 years old and lasts for about three or four years. Your body grows rapidly during this time until you reach your final adult height.

Cancer and its treatment can affect puberty happening at the usual age. Sometimes it may happen too early, late, not at all, or puberty may start and not finish.



During puberty, your testicles (or 'balls') start making the main male hormone called testosterone. This hormone makes your penis grow bigger and your testicles to develop into mature adult size. Testosterone is also very important for your bones to stay healthy and for you to have a growth spurt.

Your testicles are signalled to produce testosterone by messenger hormones from your pituitary gland called luteinizing hormone (LH) and follicle stimulating hormone (FSH). These messenger hormones stimulate the testicles to make testosterone and sperm (see CCLG late effects factsheet - pituitary gland).

Who is at risk ?

Puberty issues can occur if you have had a tumour or treatment that affects the pituitary gland or testicles, including:

- tumours of the brain
- brain surgery
- radiotherapy to the brain, head and neck, or whole body (total body irradiation TBI)
- tumours of the testicles
- surgical removal of the testicles
- radiotherapy to the abdomen, pelvis, testicles
- chemotherapy which includes certain drugs that are known to damage the testicles
- stem cell (bone marrow) transplant and total body irradiation (TBI)

We know that sperm production is much more sensitive to damage than the cells that make hormones. This means that some males will have normal puberty but not be able to make sperm, whereas others will have issues with both hormone and sperm production.

After some cancer treatments, both pituitary hormones and testicles may be affected.

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How do we monitor puberty?

During your follow-up clinic appointments, your growth will be measured. Your doctor will ask you if puberty has started and how it is progressing. They may examine you for signs of puberty such as penis growth, body hair and testicle size. You may feel embarrassed about this examination, but your doctors will completely understand. You can talk it through with your parents and with your doctor or nurse as to how you want this done. You can choose if you want to have someone with you for reassurance.

Your doctor may also arrange for you to have blood tests to check your puberty hormones.

Issues with growth and puberty are usually monitored by a specialist doctor called an endocrinologist.

How are puberty issues treated?

If puberty is too early (often called 'precocious puberty') - usually before 9 years old - it can be paused with hormones. These are usually given as injections that switch off the messenger hormones from your pituitary. When it is the right time for you to go through puberty, the injections are stopped.

If puberty is late, your doctor may give you testosterone which is the male puberty hormone. This is usually given as an injection every four weeks, or occasionally as a gel to rub on the skin. Your doctors will start this at a low dose and increase it until you have finished growth and puberty, therefore copying the natural process as much as possible. You will have

normal male puberty development (such as an adult-sized penis, scrotum, body hair and voice breaking), however, your testicles may stay smaller. If you need testosterone to help you through puberty, it is quite likely that you will need to take it throughout life.

You may wish to talk about the effects of your treatment on being able to have children when you are older and you can discuss this with a fertility specialist (see CCLG late effects factsheet - male reproductive health).

What can I do?

You cannot stop puberty issues from developing but you can make sure they are picked up and treated early. It is very important that you attend all your check-ups, so that your growth and puberty can be monitored regularly. Do ask your team if you have any questions. A healthy lifestyle and healthy weight are important for everyone to ensure normal growth and puberty.

Where can I find more information?

Explain
www.explain.me.uk

British Society for Paediatric Endocrinology and Diabetes
www.bsped.org.uk/clinical-resources/patient-information

Children's Oncology Group
www.childrensoncologygroup.org/index.php/lateeffectsoftreatment

European Society for Paediatric Endocrinology
www.eurospe.org/patients/english-information-booklets



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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.

