

# Growth 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 your long-term follow-up team will be able to help you with specific information about which late effects are relevant to you.

Your body's growth and final height is affected by many different things, some of which are not related to cancer and its treatment. Genetics plays a big part and if your parents are smaller than average you may be smaller as an adult.

Being unwell for a while and losing weight means that you may not grow during this time but you will probably catch up later. If eating and nutrition are difficult as a child, this can affect your growth.

Having had cancer and its treatment as a child or teenager can affect your growth in a number of ways, by altering levels of hormones in your body which are important for your health and wellbeing. These hormones include:

- **growth hormone** is made by the pituitary gland which is located at the base of the brain, and is essential for you to grow during childhood and teenage years (see CCLG late effects factsheet - pituitary gland)
- **thyroid hormone** is important for normal growth as it controls your metabolism and whether your body works slowly or quickly (see CCLG late effects factsheet - thyroid gland)
- **puberty hormones** are important for your overall final height as an adult as well as helping to keep your bones strong (see CCLG late effects factsheets - puberty)

### Who is at risk?

Growth problems can occur if you have had:

- diet and nutrition affected during treatment
- long-term or high dose steroids
- radiotherapy to your spine or whole body
- cancer of your brain, hypothalamus or pituitary gland
- surgery to your brain, hypothalamus or pituitary gland
- radiotherapy to your head or neck
- stem cell (bone marrow) transplantation with total body irradiation
- puberty happen earlier or later than expected (see CCLG late effects factsheets - puberty)

### How do we monitor growth issues?

Growth and puberty issues are usually monitored by an endocrinologist (hormone specialist).

In your routine clinic appointments, measuring your growth is very important, including your sitting height to check if your back is growing. Your growth is compared with what is expected by checking your parents' heights. It is also important to check whether you show signs of puberty at the right age. You may have a wrist X-ray to look how mature your bones are ('bone age') which gives an indication of how long you have left to grow.

Continued →

Your doctor will arrange routine blood tests to check general health but also specifically to look at growth and puberty hormones. If growth hormone deficiency is likely, then a specific growth hormone test will be arranged. This usually involves an injection followed by blood tests over several hours.

## How are growth issues treated?

Your medical team will ensure you grow as well as possible. Eating well and having good general health is always essential.

If growth hormone deficiency is diagnosed, then you can have synthetic growth hormone treatment which is given as a small, daily, under-the-skin injection with a pen-like device, like those used in diabetes. Growth hormone treatment is usually continued until you complete all your growth. Then your growth hormone levels are checked again and some people may be suitable for adult growth hormone to help with energy levels, muscle strength, fat metabolism and bone health. This will be discussed with you in detail.

Cortisol levels (natural steroids) will also be checked in the growth hormone test. This is a key hormone for health and wellbeing, and if low, it can affect growth. It can be replaced with tablets, if required.

If tests show low thyroid hormone levels, you will be given thyroxine (thyroid hormone replacement) which is a small tablet easily monitored by routine clinic blood tests usually every six months.

If puberty starts too early or too late, you can be treated with hormones (see CCLG late effects factsheets - puberty).

## What can I do?

You cannot stop growth problems from developing but you can make sure problems are picked up and treated early. Attend all your check-ups, so that your growth can be monitored regularly. Speak to your doctor if you are worried about your growth. If your tests show you do have a hormone problem, you should take your medication as recommended. A healthy diet and lifestyle are very important for growth too.

## Where can I find more information?

**British Society of Paediatric Endocrinology and Diabetes**  
[www.bsped.org.uk/clinical-resources/patient-information/](http://www.bsped.org.uk/clinical-resources/patient-information/)

**www.explain.me.uk**  
**Provides help and information for young people with various endocrine issues**

**Teenagers and Young Adults with Cancer**  
[www.tyac.org.uk/late-effects/endocrine-problems](http://www.tyac.org.uk/late-effects/endocrine-problems)



Children's Cancer and Leukaemia Group  
Century House, 24 De Montfort Street  
Leicester LE1 7GB

0333 050 7654  
[info@cclg.org.uk](mailto:info@cclg.org.uk) | [www.cclg.org.uk](http://www.cclg.org.uk)

ChildrensCLG CCLG\_UK

Registered charity in England and Wales (1182637)  
and Scotland (SC049948).

© CCLG 2022  
Date published: September 2022  
Next review date: September 2025



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.