

Bone health: Osteoporosis

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.

During childhood and young adulthood, our bones become denser (heavier) until they reach maximum density (peak bone mass) in our mid-twenties. As we get older we all lose bone density – this occurs in women from the time of the menopause and in men much later in life. Mild reduction of bone density is known as osteopenia and severe reduction is known as osteoporosis. Having osteoporosis means that an individual is more likely to break their bones. Loss of bone density can occur with certain childhood cancer treatments and therefore mean that an individual is at greater risk of osteoporosis.

Who is at risk?

The following treatments may affect bone health:

- corticosteroids - particularly for acute lymphoblastic leukaemia (ALL) or treatment of chronic graft versus host disease (GvHD)
- methotrexate
- radiotherapy treatment including total body irradiation

Some conditions that occur as a consequence of cancer treatment may also affect bone health and these include:

- low levels of male or female hormones including early menopause
- growth hormone deficiency
- prolonged inactivity/immobility

How do we monitor bone health?

Your clinical team may ask you to have a DEXA scan. This stands for dual X-ray absorptiometry and is a special type of X-ray that looks at the density of your bones. This scan involves lying still for about 20 minutes. The results tell your doctor how dense your bones are compared to the general population, this is known as a Z-score or a T-score. Your doctor can then use this score to decide if you have osteoporosis and whether you need treatment.

How is osteoporosis treated?

The following will help to relieve some of the symptoms from osteoporosis:

- **regular exercise** – jogging, hopping, skipping and resistance exercises (whilst swimming and cycling are good all round exercises these do not help with bone health). Some cancer treatments can also affect your heart – check with your doctor before taking on an exercise programme.
- **good intake of calcium** – calcium is found in dairy products (milk, cheese, yogurt) and leafy green vegetables.
- **normal vitamin D levels** – most of our vitamin D is made by the skin when it is exposed to sunshine. Since you should use sunscreen in the sun to reduce your risk of skin cancer your doctor may check your vitamin D levels and recommend supplements if your levels are low.
- **don't smoke** as this can reduce bone density.

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Where can I find more information?

The Royal Osteoporosis Society has a discussion forum and local support groups
www.theros.org.uk

The NHS has a range of information about osteoporosis
www.nhs.uk/conditions/osteoporosis



Children's
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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.