

Osteoporosis

The health of your bones after childhood cancer treatment

Background

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 is osteoporosis screened for?

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.

Published in conjunction with Aftercure: A guide for teenage and young adult survivors of childhood cancer

www.aftercure.org





How is osteoporosis treated?

Your doctor will firstly review your calcium intake and vitamin D levels to make sure you are receiving enough. If you have any hormone deficiencies these may also be supplemented. You may also need treatment with medicines known as bisphosphonates. Your doctor will discuss this with you.

What can I do?

Improvement of bone density can take place until your mid-twenties. The following can help with this and should be maintained lifelong:

- **Regular exercise.** Jogging, hopping, skipping and resistance exercises (whilst swimming and cycling are good all round exercises these do not help with bone health) REMEMBER 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.

Where can I find more information?

The National Osteoporosis Society has a discussion forum and local support groups

www.nos.org.uk

The NHS has a range of information about osteoporosis.

www.nhs.uk/conditions/osteoporosis/pages/introduction.aspx

www.aftercure.org

The full range of factsheets for childhood and teenage cancer survivors are available on the CCLG and Aftercure websites in conjunction with CCLG's booklet entitled 'Aftercure: A guide for teenage and young adult survivors of childhood cancer'.



Children's Cancer and Leukaemia Group
University of Leicester
Clinical Sciences Building
Leicester Royal Infirmary
Leicester LE2 7LX

0116 252 5858
info@cclg.org.uk
www.cclg.org.uk

ChildrensCLG

CCLG_UK

Registered charity number 286669



Written by CCLG's Late Effects Group, a national group of experts who specialise in looking after children and young adult cancer survivors, in conjunction with the CCLG Publications Committee, comprising multiprofessional experts in the field of children's cancer.

© CCLG 2016
Published by CCLG January 2016
Next review date: January 2019

Children's Cancer and Leukaemia Group is a leading children's cancer charity and the UK and Ireland's professional association for those involved in the treatment and care of children with cancer. Each week in the UK and Ireland, more than 30 children are diagnosed. Two out of ten children will not survive their disease.

We bring together childhood cancer professionals to ensure all children receive the best possible treatment and care. We fund and support research into childhood cancers, and we help young patients and their families with our expert, high quality and award-winning information resources.

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.