

Patient information

Bone Healing and Limb Reconstruction

Therapies Department

Bone Healing

Many factors affect the rate at which bones heal. Following limb reconstruction surgery, it is important to understand what you can do to help your bone to heal and things to avoid.

Factors that encourage bone healing

Weight bearing

If you are allowed to weight bear through your limb, it is important that you do this as it will stimulate new bone formation. The amount of weight you can safely take through your limb may change during your rehabilitation. The limb reconstruction team will advise on weight bearing individual to you.

Well-balanced diet and vitamin D

A healthy balanced diet will help bone healing and should include sufficient calcium, protein, vitamins, and minerals. Vitamin D supplementation may need to be considered.

Calcium

Calcium is vital for a healthy skeleton as it gives bones their strength. Adults over 19 years of age need 700mg of calcium per day. Below is a table with the calcium content of some foods. If you do not feel that you get enough calcium please speak to your Dietitian, Limb Reconstruction Team, or GP about calcium supplementation.

Food	mg of calcium
One cheese omelette (120g)	300mg
200ml glass of milk	240mg
200ml glass of calcium fortified soya milk	200mg
30g cheese	220mg
120g yogurt	200mg
Half tin (200g) of rice pudding	176mg
Two (80g) tablespoons of cottage cheese	100mg
50g (half tin) sardines	258mg
Half tin (200g) of baked beans	100mg
One medium orange	75mg
One small white pitta bread	100mg
Two sausages (pork or vegetarian)	100mg
A third of (43g) plain naan bread	100mg
One medium slice of white bread	50mg
One thick slice of wholemeal bread	50mg
One (110g) large portion of broccoli	50mg
One (110g) large portion of broccoli	50mg

Protein

Protein is important for growth and repair of muscles and for bone health. It is recommended that adults should consume two to three servings of protein a day as part of a healthy balanced diet.

Dietary sources of protein

- Meat
- Fish
- Dairy
- Dairy alternatives – soya and almond products
- Nuts and seeds
- Beans
- Pulses
- Eggs.

Vitamin D

Vitamin D helps to absorb and use calcium to keep bones strong. Vitamin D is also important for muscle function. Most of our Vitamin D from sunlight. In the UK we can only absorb Vitamin D from April to September. Vitamin D is also found in some foods however it has been found that food sources of Vitamin D may not be enough to keep levels sufficient.

Food sources of Vitamin D include:

- Oily fish – salmon, sardines, pilchards, trout, herring, and kippers
- Cod liver oil
- Egg yolk
- Meat
- Fortified foods (some margarines, yogurts, breakfast cereals)

Some groups of people may not be able to get enough Vitamin D from sunlight and food and may find that a Vitamin D supplement is useful. It is recommended any supplement should contain 10 micrograms of Vitamin D3.

At risk groups of not getting enough Vitamin D from sunlight include:

- People over 65 years.
- People with darker skin.
- People who spend little time outside such as night shift workers.
- People who cover up most of their skin when outside.

Factors that limit bone healing

Smoking

Smoking can prevent tissues in the body getting enough oxygen to repair themselves which can delay bone healing. The effects of healing can be partially reversed if you stop.

You are strongly advised to stop smoking during your treatment.

Call the free Smokefree National Helpline on **0300 123 1044** or visit:
<https://www.nhs.uk/live-well/quit-smoking/>

Non-steroidal anti-inflammatory drugs

Non-steroidal anti-inflammatory drugs such as Ibuprofen, Naproxen, Diclofenac can have a negative effect on bone formation. Please inform the Limb Reconstruction Team if you are prescribed any of them.

Feedback

Your feedback is important to us and helps us influence care in the future.

Following your discharge from hospital or attendance at your outpatient appointment you will receive a text asking if you would recommend our service to others. Please take the time to text back, you will not be charged for the text and can opt out at any point. Your co-operation is greatly appreciated.

Further information

Contact:

Limb Reconstruction Therapy Gym (Monday-Friday, 8am-4pm)

Ward 3

Broadgreen Hospital

Tel: 0151 282 6928

If your concerns are in the evening or at the weekend, please contact NHS 111.

Author: Therapies Care Group

Review date: January 2027

All Trust approved information is available on request in alternative formats, including other languages, easy read, large print, audio, Braille, moon and electronically.

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