

A GUIDE FOR PEOPLE WITH EATING DISORDERS

FREE!



BONE HEALTH



## ABOUT THIS GUIDE

This booklet was developed in collaboration with young people and staff from FREED – First Episode Rapid Early Intervention for Eating Disorders. FREED services are based in NHS Trusts across the UK and aim to provide quick and effective early intervention for eating disorders.

**For more information see [www.freedfromed.co.uk](http://www.freedfromed.co.uk)**

Text by Lauren Robinson, Mariana Lopes and Caroline Pimblett  
Design and illustrations by Mariana Lopes  
In collaboration with Daniela Beivide

Acknowledgements:



We know that eating disorders are associated with bone mass loss, and increased risk for developing osteoporosis and suffering bone fractures. There are a number of reasons why someone with an eating disorder could have impaired bone health, including reaching very low body weight or limiting their intake of essential nutrients.

Osteoporosis can develop silently, without someone even being aware, and can be difficult to treat. It is very important that you understand why it can happen and what you can do to protect your bones.

This leaflet will provide information on what osteoporosis is, what we know about osteoporosis in eating disorders and what you can do to protect your bones.



We are having the "Bone Celebration Day"!

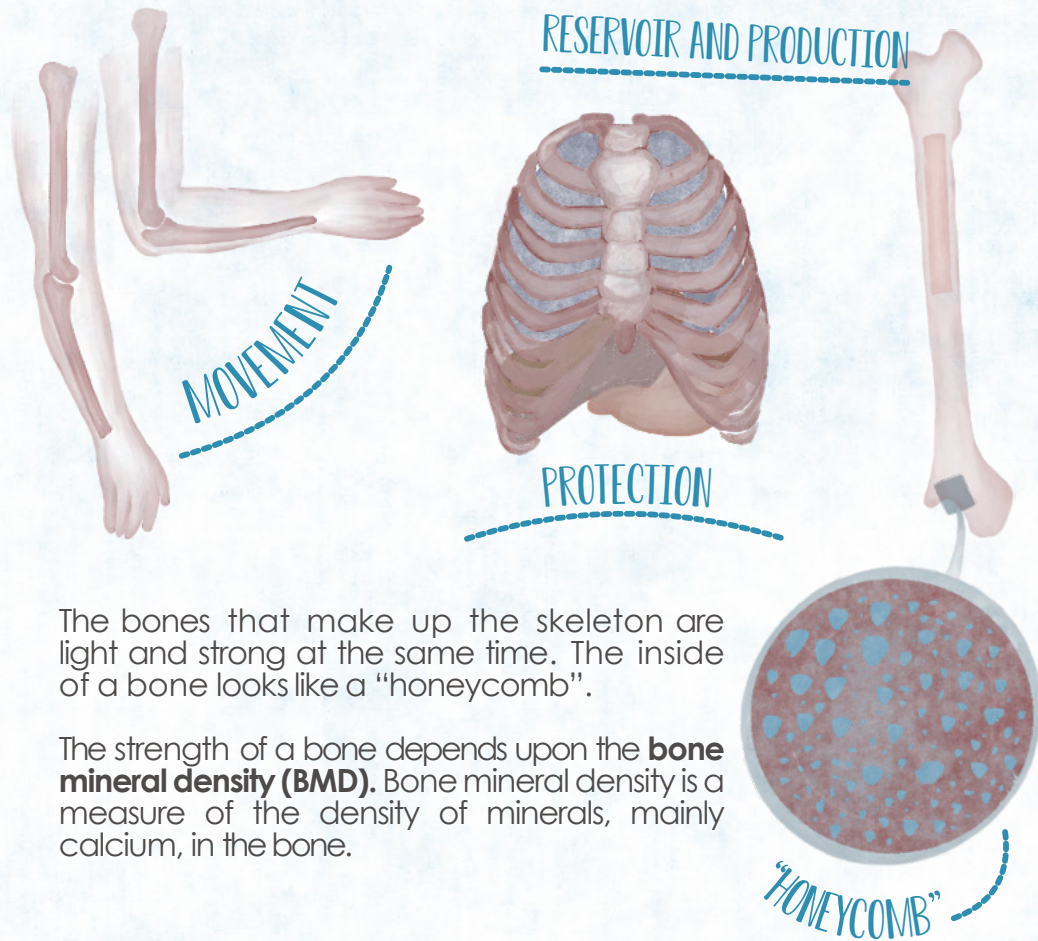
You weren't here last Halloween! C'mon, I'll show you the posters!

Hey, why is everyone dressed up today?

BONE DAY

# BONE HEALTH

The skeleton has a range of important functions: movement and support for the body, protecting vital organs, producing blood cells, and acting as a reservoir of minerals (e.g. calcium).



The bones that make up the skeleton are light and strong at the same time. The inside of a bone looks like a “honeycomb”.

The strength of a bone depends upon the **bone mineral density (BMD)**. Bone mineral density is a measure of the density of minerals, mainly calcium, in the bone.

Osteopenia and osteoporosis are conditions in which the bone mineral density is reduced, making the bones weak and susceptible to fractures.

IN GREEK “OSTEON” IS THE WORD FOR BONE

Osteoporosis means “porous bone” and osteopenia “poor bone”.

Research shows that being beyond the menopause and ageing put people at higher risk of osteopenia and osteoporosis. That's why, there are more cases of fractures in women over 50 and in the elderly.

These conditions are usually not painful and come to light only when a bone is broken. However, in the long-term, osteoporosis can cause severe back pain and limit day-to-day activities.

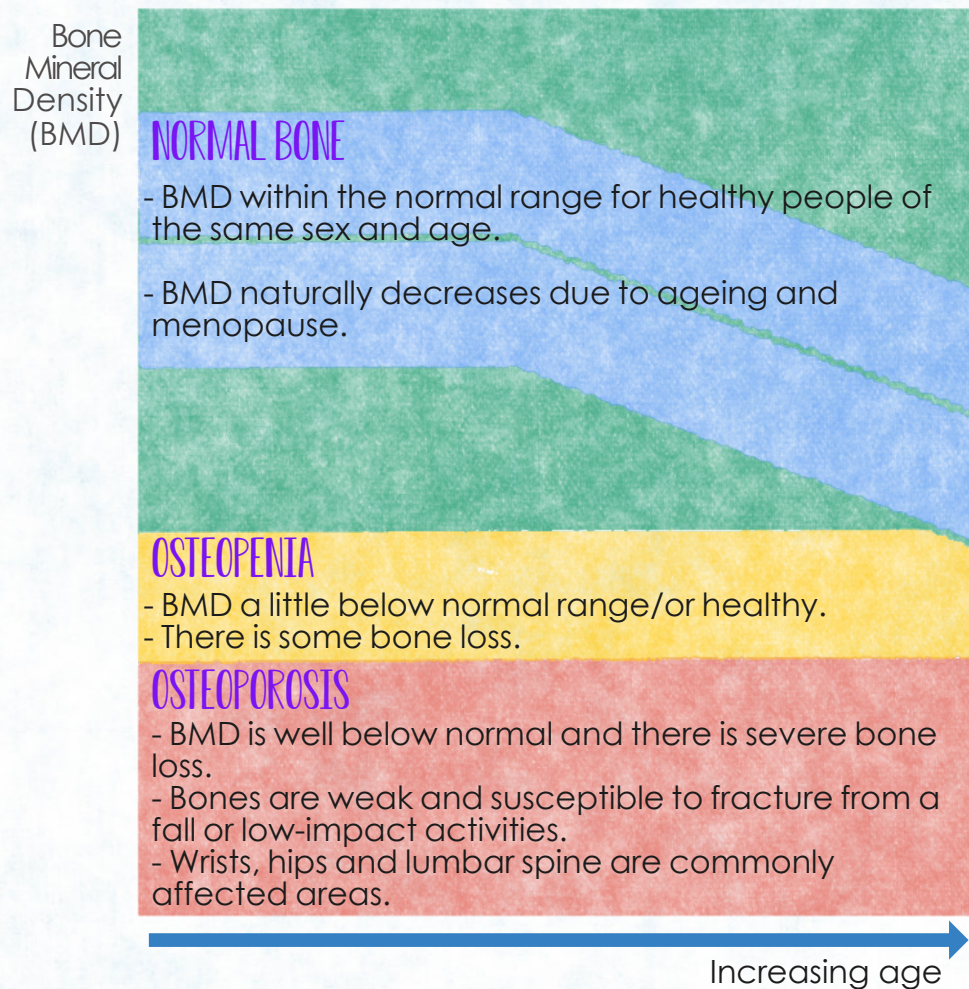
Osteoporosis, osteopenia and fractures can occur as a consequence of having an eating disorder.

I thought this only happened to older people...

You're right, it usually occurs in the elderly. But there are other reasons, like eating disorders, that increase the risk in young people. Let me show you some numbers.

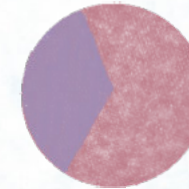
# THE NUMBERS

Bone mineral density changes naturally with age and/or in the presence of certain conditions as shown in the figure below:

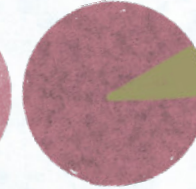


In individuals with eating disorders it is estimated:

45% have osteopenia  
22% have osteoporosis



Anorexia nervosa (AN)



Bulimia nervosa (BN)

13% have osteopenia  
2% have osteoporosis



Women and girls with anorexia nervosa are 7 times more likely to have bone fractures than healthy people. Due to lack of research we know much less about the risk for men.

It really seems to affect people with anorexia nervosa.

Most studies have investigated bone health in anorexia. But there is evidence that people with bulimia nervosa and other eating disorders may also be at risk for osteoporosis. Especially those who have had anorexia in the past.

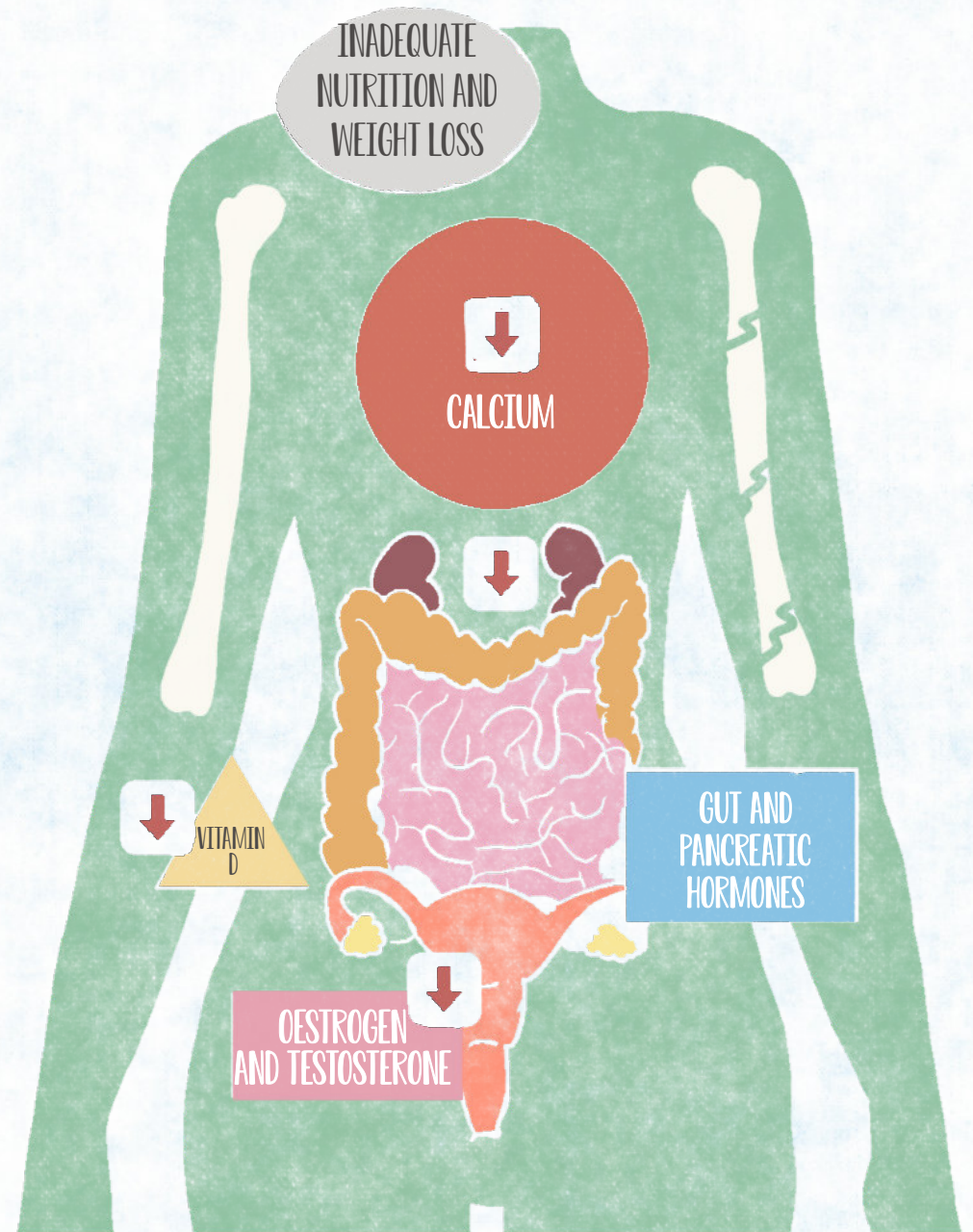
## BONE HEALTH AND EATING DISORDERS

From birth, our bones are constantly being built and most people reach their peak bone mass around the age of 30.

For bones there is a critical phase between 16 and 25 years when they build bone density. It is vital to protect the bones during this time period as they build at a much slower rate after this stage.

There is no single reason why people with eating disorders develop osteoporosis; it is usually due to an interaction between several factors, such as weight loss, changes in gut and pancreatic hormones, decreased sex hormones, and nutritional deficiencies.

Being or having been very underweight and, for females, having had an absence of 3 or more menstrual cycles, are key warning signs for osteoporosis.



I never thought about the effects of my eating disorder on my bones. How does this happen?

It is related to growth during adolescence, low weight, different hormones, and lack of nutrients. Look at this image over here!

## TAKING CARE OF YOUR BONE HEALTH

These are the main factors that can protect your bones:



Reaching and maintaining a **good body weight**, for women a weight at which you have regular **menstrual cycles**, by eating a healthy, balanced diet.

Including dietary sources of **calcium and vitamin D** is important to provide the nutrients that bones need. Good dietary sources of calcium are **milk and dairy foods, fortified plant-based milks** and **calcium-set tofu**.



During the spring and summer, most people make sufficient vitamin D from **short sun exposure**. During autumn and winter, supplements may be needed. **Oily fish** (salmon, sardines, herring and mackerel), **eggs**, and **fortified foods such as spreads and plant-based milks** are good sources of this nutrient.



**Weight-bearing** exercises such as lifting light weights, light cross trainer exercises or non-vigorous walking can help **strengthen your bones** and reduce the risk of an injury.



However, if you have very low weight or you are missing periods, you may be recommended to **limit physical activity** to protect your bones. Some gentle movement may be helpful to longer-term recovery and so it is important that you seek **specialist** eating disorder advice about physical activity.



BISPHOSPHONATES

These may be prescribed for people with recurrent **fractures** and **extremely low bone mineral density**. There is a risk that they can be harmful in pregnancy.



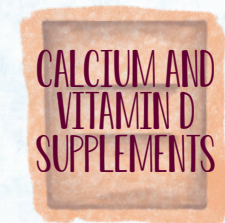
ORAL CONTRACEPTIVE PILLS

The pill isn't of benefit to bone health and **isn't recommended** to treat low bone density. Some women are prescribed the pill to regulate periods or as a method of contraception. If you want to consider taking the pill for contraception, you should discuss this with your GP.



OESTROGEN PATCHES

Recent trials suggest they might improve bone health in anorexia nervosa and your GP would seek **specialist advice** before offering these.



CALCIUM AND VITAMIN D SUPPLEMENTS

These may be recommended to protect bone health in eating disorders and can be **prescribed** by your doctor or bought over the counter at a pharmacy.

I didn't know any of this... I'm going to talk to my GP!

Do it! And now you know how important it is to care for your bone health!



And now you are prepared for the future.

We are happy to help!  
You can count on us!

Thank you very much, it was very interesting to me!





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