

Epilepsy and osteoporosis/osteomalacia

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Introduction

This fact sheet gives information about why some people with epilepsy may develop bone diseases due to their anti-epileptic drugs (AEDs). These bone diseases are osteoporosis and osteomalacia. It also explains where to get help.

Epilepsy, osteoporosis and osteomalacia

Epilepsy is a tendency to have recurrent seizures. To control seizures people with epilepsy are prescribed AEDs. Some AEDs can make some people more likely to develop osteoporosis and osteomalacia.

What is osteoporosis?

Osteoporosis is a disease that causes the bones to become fragile. This results in a loss of bone density (when the bones become porous) and increases the risk of bone fractures.

What is osteomalacia?

Osteomalacia is a disease that softens the bones causing muscle weakness and bone pain. It can also increase the risk of bone fractures.

Possible causes of osteoporosis and osteomalacia in people with epilepsy

Research has found that taking some AEDs long term can increase the risk of osteoporosis and osteomalacia. However, in some cases a reduction in bone density has been found during the first one to five years of taking some AEDs. These AEDs are carbamazepine, primidone, phenobarbital, phenytoin, topiramate and sodium valproate.

What seems to happen is that these AEDs can reduce the body's vitamin D level. Low vitamin D levels can cause a loss of bone density or softening of the bones.

It's not clear if there is a possible risk of osteoporosis or osteomalacia with the newer AEDs. More research is needed.

Risk of broken bones and fractures for people with epilepsy

People with epilepsy have a higher risk than average of broken bones and fractures. Here are some things that increase the risks.

- Having a fall during a seizure
- Taking AEDs such as carbamazepine, primidone, phenobarbital, phenytoin, topiramate and sodium valproate
- Being a woman who has been through the menopause
- Being an older man
- Rarely going out in the sunshine
- Being physically disabled

If anyone is concerned that they could be at risk of developing osteoporosis or osteomalacia, they could discuss it with their doctor.

Word list

AED - Anti-epileptic drug

Diagnosing osteoporosis and osteomalacia

The doctor will probably want to look at the person's medical history. They should also consider any drugs their patient is taking, or has taken in the past.

The doctor may ask about diet, any family history of bone disorders, and suggest blood tests or X-rays. X-rays can show any cracks or fractures in the bones.

There is limited access to bone density scans in some parts of the UK. So, the GP may be reluctant to make a referral. That is unless they consider their patient is at a particularly high risk of developing osteoporosis or osteomalacia. It's possible to have a bone density scan done privately or on the NHS. The GP can arrange one, if there is a bone density scanner in the area.

Treatment of osteoporosis and osteomalacia

The GP may prescribe a vitamin D supplement as a protection against developing osteoporosis. This is likely if the AEDs carbamazepine, primidone, phenobarbital, phenytoin, topiramate or sodium valproate, have been taken for a long time.

If osteomalacia is diagnosed, a prescription for a higher than usual dose of a vitamin D supplement will be given.

If osteoporosis is diagnosed, and there is no evidence of osteomalacia, an osteoporosis drug may be prescribed. Also, a calcium and vitamin D supplement may be prescribed.

Where you can get more information

National Osteoporosis Society, Camerton, Bath BA2 0PJ.

Tel: 01761 471 771 (for general enquiries),
fax: 01761 471 104, Helpline: 0845 4500 230,
website: www.nos.org.uk, email: info@nos.org.uk

Arthritis Research UK, Copeman House, St Mary's Gate, Chesterfield, Derbyshire, S41 7TD.
Tel: 0300 790 0400, fax: +44 (0) 1246 558007,
website: www.arthritisresearchuk.org, email: enquiries@arthritisresearchuk.org

About this publication

This fact sheet is written by Epilepsy Action's advice and information team, with guidance and input from people living with epilepsy and medical experts. If you would like to know where our information is from, or there is anything you would like to say about the fact sheet, please contact us.

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Word list

AED - Anti-epileptic drug