NHS
National Institute for Health and Clinical Excellence

Understanding NICE guidance

Information for people who use NHS services

Alendronate, etidronate, risedronate, raloxifene, strontium ranelate and teriparatide for preventing bone fractures in postmenopausal women with osteoporosis who have already had a fracture

NICE 'technology appraisal guidance' advises on when and how drugs and other treatments should be used in the NHS.

This booklet is about when **alendronate, etidronate, risedronate, raloxifene, strontium ranelate** and **teriparatide** should be used in the NHS in England and Wales to prevent bone fractures in postmenopausal women (that is, women who have gone through the menopause). It explains guidance (advice) from NICE (the National Institute for Health and Clinical Excellence). It is written for women with osteoporosis but it may also be useful for their families or carers or anyone with an interest in the condition.

The guidance covers women who have already had a fracture because of osteoporosis. Osteoporosis is usually diagnosed by a bone scan called a 'DXA scan', which measures bone density and shows how strong the bones are. The guidance does not cover preventing fractures in women who are on long-term steroids.

This booklet does not describe osteoporosis or the treatments in detail – a member of your healthcare team should discuss these with you. Some sources of further information and support are on the back page.

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These may not be the only possible treatments for osteoporosis. Your healthcare team should talk to you about whether these are suitable for you and about other treatment options available.

What has NICE said?

Whether or not a postmenopausal woman who has had a bone fracture because of osteoporosis is offered one of these drugs to prevent further fractures will depend on her age, her bone density and how many risk factors for fracture she has. The box on pages 4–5 gives further details. Your doctor will be able to explain this to you.

Alendronate is recommended as a possible treatment for preventing bone fractures in postmenopausal women who have had a fracture and have had osteoporosis diagnosed.

If a woman can't take alendronate, **risedronate** and **etidronate** are recommended under certain circumstances as possible alternative treatments to prevent further fractures.

If a woman can't take alendronate or either risedronate or etidronate, then **strontium ranelate** and **raloxifene** are recommended under certain circumstances as possible alternative treatments to prevent further fractures.

If a woman can't take alendronate, or either risedronate or etidronate, or strontium ranelate, **teriparatide** is recommended under certain circumstances as a possible alternative treatment to prevent further fractures. Teriparatide is also recommended as a possible alternative treatment for a woman who has another fracture when she has been taking alendronate, risedronate or etidronate for 1 year (and her bone density has fallen).

The guidance says that women who are 75 or over may not need a bone scan to diagnose their osteoporosis.

Osteoporosis

Some of the materials that make up bone are lost as part of normal ageing. This can lead to osteoporosis, a condition in which bones become fragile and break easily. These fractures are most common in bones of the spine, wrists and hips. Women who have gone through the menopause are at increased risk of osteoporosis because their ovaries no longer produce oestrogen, which protects against bone loss.

Alendronate, etidronate, risedronate, strontium ranelate, raloxifene and teriparatide

Alendronate, etidronate, risedronate, strontium ranelate, raloxifene and **teriparatide** protect against bone fractures by slowing down the loss of materials that make up bone. This makes bones stronger. Strontium ranelate and teriparatide also help to build new bone.

Alendronate, etidronate and risedronate belong to a group of drugs called bisphosphonates. Some people can't take bisphosphonates because they experience side effects, such as heartburn, or because they have trouble swallowing. Also, a woman might not be able to take certain bisphosphonates because it isn't possible for her to follow the special instructions for taking them – for example, having to remain upright for half an hour after taking the drug, and not eating for a while before and after taking it.

What does this mean for me?

When NICE recommends a treatment, the NHS must ensure it is available to those people it could help, normally within 3 months of the guidance being issued. So, if you are a postmenopausal woman who has had a fracture and been diagnosed with osteoporosis, you should be able to have treatment with alendronate on the NHS if your doctor thinks that it is the right treatment for you.

If you are unable to take alendronate, you may be eligible for treatment with etidronate, risedronate, strontium ranelate, raloxifene or teriparatide (see the box on pages 4–5).

Please see www.nice.org.uk/aboutguidance if you appear to be eligible for treatment with one of these drugs but it is not available.

These drugs work best when the woman has adequate levels of calcium and vitamin D. So if you are prescribed one of these drugs, you will also be given supplements of vitamin D and calcium unless your doctor is sure that you don't need these supplements.

If you are already taking alendronate, etidronate, risedronate, strontium ranelate, raloxifene or teriparatide, you should continue taking it. If the drug is not recommended for you in this guidance, you should be able to carry on taking it until you and your healthcare professionals decide that it is the right time to stop treatment.

More details about the treatments

Which drug you are offered will depend on a combination of your age, bone density and risk factors for fracture. The information below outlines these combinations and may help you to understand which drug your doctor may offer you.

Note that for women with osteoporosis, the bone scan gives a score for bone density which is a negative number. This means, for example, that a score of –3.5 is lower than a score of –3.

Risk factors for fracture are explained at the end of the box.

Alendronate

Alendronate can be offered to women who have had a fracture and have had osteoporosis diagnosed.

Risedronate and etidronate

Risedronate or etidronate can be offered to women who can't take alendronate, and who are:

- 70 or over, **or**
- between 65 and 69, with bone density of –3.0 or lower, **or**
- between 65 and 69, with bone density of –2.5 or lower and one risk factor for fracture, **or**
- between 55 and 64, with bone density of –3.0 or lower, **or**
- between 55 and 64, with bone density of –2.5 or lower and two risk factors, **or**
- between 50 and 54, with bone density of –3 or lower and one risk factor, **or**
- between 50 and 54, with bone density of –2.5 or lower and two risk factors.

Strontium ranelate and raloxifene

Strontium ranelate or raloxifene can be offered to women who can't take alendronate or either risedronate or etidronate, and who are:

- 75 or over, with bone density of –3.0 or lower, **or**
- 75 or over, with bone density of –2.5 or lower and one risk factor, **or**
- between 70 and 74, with bone density of –3.0 or lower, **or**
- between 70 and 74, with bone density of –2.5 or lower and two risk factors, **or**
- between 65 and 69, with bone density of –4.0 or lower, **or**
- between 65 and 69, with bone density of –3.5 or lower and one risk factor, **or**
- between 65 and 69, with bone density of –3.0 or lower and two risk factors, **or**
- between 55 and 64, with bone density of –4.0 or lower, **or**
- between 50 and 64, with bone density of –3.5 or lower and one risk factor.

Teriparatide

Teriparatide can be offered to women who can't take alendronate, or either risedronate or etidronate, or strontium ranelate, or who have had another fracture when they have been taking alendronate, risedronate or etidronate for 1 year (and their bone density has fallen), and who are:

- 65 or over, with bone density of –4.0, **or**
- 65 or over, with bone density of –3.5 and have had three or more fractures, **or**
- between 55 and 64, with bone density of –4.0 and have had three or more fractures.

Risk factors for fracture

When a woman has osteoporosis, a 'risk factor' is something that means she is more likely to fracture a bone than a woman with osteoporosis who doesn't have the same risk factor.

Risk factors for fracture are:

- one or both of the woman's parents had a hip fracture
- drinking 4 or more units of alcohol a day
- rheumatoid arthritis.

More information

The organisation below can provide more information and support for people with osteoporosis. Please note that NICE is not responsible for the quality or accuracy of any information or advice provided by this organisation.

- National Osteoporosis Society, 0845 4500230, www.nos.org.uk

NHS Choices (www.nhs.uk) may be a good starting point for finding out more. Your local Patient Advice and Liaison Service (PALS) may also be able to give you further advice and support.

About NICE

NICE produces guidance (advice) for the NHS about preventing, diagnosing and treating different medical conditions. The guidance is written by independent experts including healthcare professionals and people representing patients and carers. They consider all the research on the disease or treatment, talk to people affected by it, and consider the costs involved. Staff working in the NHS are expected to follow this guidance.

To find out more about NICE, its work and how it reaches decisions, see www.nice.org.uk/aboutguidance

This booklet and other versions of the guidance aimed at healthcare professionals are available at www.nice.org.uk/TA161

You can order printed copies of this booklet from NICE publications (phone 0845 003 7783 or email publications@nice.org.uk and quote reference N1726).

Information on NICE's guidance on treatments for women with osteoporosis who have not had a fracture is available at www.nice.org.uk/TA160 (or contact NICE publications and quote reference N1724).

We encourage NHS and voluntary sector organisations to use text from this booklet in their own information about osteoporosis.

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