Oral Bisphosphonates: your new medication

What are they?
Oral bisphosphonates are the most common type of osteoporosis medication prescribed to help strengthen your bones and reduce your risk of having a fragility fracture. Bisphosphonates work by slowing down the cells that break down bone. The oral bisphosphonates are: alendronic acid/alendronate, risedronic acid/risedronate, both of which are taken once a week, and ibandonronic acid/ibandronate, which is taken once a month.

Why have I been advised to take a bisphosphonate?
Your doctor has assessed your risk of breaking a bone is sufficiently high to warrant taking a treatment that reduces the risk of fracture. The assessment has been based on your DXA scan, your FRAX score (www.shef.ac.uk/FRAX), your fracture history, or all three.

How do I take a bisphosphonate?
Each bisphosphonate comes with specific instructions on how to take it. Following the instructions carefully ensures your treatment works effectively and minimises unwanted side effects.

All bisphosphonates should be taken on an empty stomach so they can be absorbed properly. Take the bisphosphonate first thing in the morning on the day of the week (alendronic acid, risedronate) or day of the month (ibandronate) that you and your doctor decide is your ‘treatment day’. Your bisphosphonate should be taken with a glass of water, and you should sit/stand upright for 30 minutes after taking the dose. This is to prevent side effects (see below). Wait 60 minutes before having any food, or drinks (other than water) and other medications.

If you are taking calcium supplements, then it is important that you do not take them on the same morning as taking your bisphosphonate. This is because if there is any calcium in your gut at the same time as the bisphosphonate then the bisphosphonate will not be absorbed into your body.

For how long do I take the bisphosphonate?
The length of time you need to take your bisphosphonate (the course of treatment) will depend on your risk of fracture. The usual course is for five years. Occasionally a three year course is advised. If your fracture risk is high then the course of treatment may be up to 10 years. The effect of a bisphosphonate can be quantified by the changes on a DXA scan. Typically these scans are advised once every three to five years.
It is important to take every dose and take the dose correctly. The positive fracture preventing effect of the oral bisphosphonates has been shown in research studies, only when people have taken every dose and every dose correctly. Taking a dose once every few weeks, or erratically, is unlikely to work in reducing your fracture risk.

**Are there side-effects?**

Most people do not experience any side effects. The most common side effects are:

- Indigestion, swallowing difficulties or heartburn
- Bone, joint or muscle pain including pain of the jaw/teeth, or of the hips
- Diarrhoea
- Headache

If any of the above side effects occur, contact the clinic immediately, as you may need to stop taking the bisphosphonate for a period of time.

To minimise the chances of jaw/dental side effects, (known as osteonecrosis of the jaw), you should maintain good oral hygiene, receive routine dental check-ups, and report any symptoms involving the jaw or teeth. Tell your dentist that you are taking this medication.

To minimise the chance of throat/stomach irritation, you should always take your bisphosphonate with a glass of water and remain upright for 30mins after taking your tablet.

There is a difference between bisphosphonates in the way they can cause side effects. Side-effects from one of them, does not necessarily mean you will get the same side-effects from another.

**Vitamin D and Calcium**

The positive fracture preventing effects of bisphosphonates are maximised if you have good vitamin D stores in your body (for young and middle aged adults >50nmol/L and for older adults >75nmol/L) and sufficient dietary intake of calcium. If your dietary intake of calcium is habitually low then your doctor may advise you take calcium supplements regularly.

There are many different forms of calcium supplements including chewy tablets and granules which dissolve in water. There should be one you find that is palatable to you; ask your doctor.

Calcium and vitamin D supplements generally, should be taken daily; however, it’s acceptable for simplicity sake, to miss taking them on the day you take your bisphosphonate. The omission of calcium tablets on one day won’t matter too much in comparison to the harmful effects mentioned above.
Alternative osteoporosis treatments

If there are side effects on trying at least two different oral bisphosphonates, then your doctor may consider switching your treatment to an injectable form of bisphosphonate (e.g. once yearly zoledronate infusion) or denosumab, which is also an injectable treatment (but not a bisphosphonate). Another non-bisphosphonate injectable treatment is available (daily rhPTH injection) but can only be provided through a hospital specialist department.

Developments in osteoporosis treatment

New osteoporosis treatments are being developed all the time and many are currently undergoing clinical trials, so hopefully will be available in the next few years.