Royal United Hospitals Bath
NHS Foundation Trust

Adjuvant Bisphosphonates for Early Breast Cancer

This leaflet is intended to support you in making decisions about the role of bisphosphonates in your breast cancer care.

What are bisphosphonates?

Bone constantly undergoes a process of renewal. Specialised cells break down old bone and replace it with new bone every day. This process helps to repair damage to the skeleton from everyday activities. We call this process bone turnover. However, as we age this process becomes less efficient and the bones become thinner and weaker. Bisphosphonates are a group of medications that have been used to treat thin bones (osteoporosis) for many years. Bisphosphonates control the cells that break down bone (osteoclasts) and allow the cells that rebuild bone (osteoblasts) to work better. As a result, they increase bone density and strength and this means that they reduce the risk of bone fractures, especially at the wrist, hip and spine (back bone).

Why are bisphosphonates being used to treat breast cancer?

Clinical studies have shown that breast cancers can recur in bones, often many years after patients have had surgery to remove the cancer from the breast. Doctors think this could be because the chemicals that control bone turnover could also encourage the growth of breast cancer cells inside bones.

Clinical trials of bisphosphonates in early breast cancer started in the 1990's. These drugs were added to standard treatments after breast surgery, like chemotherapy and tamoxifen, and compared to these standard treatments alone. These clinical trials found that bisphosphonates reduced the risk of breast cancer coming back in patient's bones and often meant that patients lived longer.

However not all patients had the same degree of benefit. The greatest benefits from bisphosphonates were seen in two groups of women:

- Post-menopausal women
- Pre-menopausal women who were treated with drugs to suppress their ovaries.

In these groups of women, 1 in 3 recurrences of breast cancer in the bone and 1 in 6 deaths from breast cancer at 10 years after diagnosis, were prevented.

Who can take bisphosphonates?

Specialists are prescribing this treatment to the following women:

- Post-menopausal women who have had their breast cancer completely removed.
- Pre-menopausal women who have had their breast cancer completely removed and who are on additional drugs to suppress their ovaries as part of their standard treatment after surgery.

Individuals whose kidneys are not functioning normally will take a reduced dose.

Bisphosphonates are not licensed for use in breast cancer patients to prevent recurrence of the disease, so they must be started by a specialist in hospital who has the appropriate experience. They will advise your GP on the recommended treatment and how long you should take the medication for.

How do I take bisphosphonates?

For patients who do not require chemotherapy or have finished their treatment, an oral tablet called Ibandronic acid (Ibandronate) at a dose of 50mg once daily is used and may be prescribed by your GP on the advice of a hospital specialist.

Ibandronic acid (known as Ibandronate) tablets – important things to note:

- They must be taken at least 30 minutes before the first food or drink of the day (other than plain tap water). These instructions are important because the drugs will only be effective if taken on an empty stomach.
- Tablets must be swallowed whole and taken with a glass of plain tap water (not less than 200ml or 7 fl oz).
- It is important to stay upright (sitting, standing or walking) for at least 60 minutes after taking the tablet to help it go down properly.
- It is recommended that it is taken at the same time each day. If you forget to take it on one day it can be taken the following day, do not double up to make up for a forgotten dose.

What side effects might I experience?

Most people will not experience side effects and if they do, they usually do not last long. Specific side effects include:

- Flu like symptoms such as fever, aching muscles or headaches.

Paracetamol can be taken regularly,following the instructions on packet.If you feel that you need regular Ibuprofen,you should discuss this with your doctor.

Oral ibandronate tablets may cause:

- Nausea
- Inflammation and ulceration of the oesophagus (food pipe)
- Stomach pains

Rare side effects for Ibandronic acid:

There is a link between drugs from the bisphosphonate family and the following rare conditions:

- Osteonecrosis of the jaw is a condition where some cells in the jawbone die. This means that the jaw may also be slow to heal. It is mostly associated with high doses of

bisphosphonate drugs and only a small number of cases are described worldwide, so the risk with the treatments we are recommending is low (probably fewer than 1 patient in 100).

- As a precaution, people taking this treatment must have a full dental assessment before they start treatment and get approval from their dentist to receive bisphosphonates. Patients are advised to have regular dental check-ups (ideally six-monthly minimum) but should not have non-emergency dental work done 6 weeks before or after a dose.
- A link to osteonecrosis of the auditory (ear) canal is also reported. This is very rare (fewer than 1 in 10,000 patients). People taking this treatment are advised to report persistent ear pain and / or discharge from the ear.
- There is also a possible link between taking long term use of bisphosphonate treatment and developing a stress fracture of the thigh bone. This is extremely unlikely to be a problem in the treatment of breast cancer (affecting fewer than 1 patient in 10,000) as we will be asking you to **take the medication for only 2 years in total**. If you develop aching pain in the thigh while taking treatment you should let your doctor know.

Is there anything I should look out for while taking bisphosphonates?

Some patients experience “flu-like” symptoms such as fever, aching muscles or headache when starting treatment, but these usually resolve after the first couple of days. If symptoms persist, speak to your Specialist or GP.
If you experience any of the following symptoms whilst taking this medication you are advised to see your doctor:

- Persistent ear pain and / or discharge from the ear.
- Persistent jawbone and / or ulceration of the gum.
- Aching pain in the thigh

Do I need to take extra calcium or vitamin D?

It is recommended that you have an adequate calcium and vitamin D intake whilst on bisphosphonate treatment. Calcium intake should be sufficient if you have a well balanced diet. Two glasses of milk and either a block of cheese (30g portion) or a yogurt daily should provide an adequate intake of calcium.
For vitamin D you should take a supplement (available from chemists and supermarkets, at a recommended dose of 800-1000 IU daily) or on prescription.

Where can I find further information?

This may be obtained from the staff treating you at the hospital or from your GP.
Information is also available from the National Osteoporosis Society www.nos.org.uk

Royal United Hospitals Bath NHS Foundation Trust
Combe Park, Bath, BA1 3NG

01225 428331 | www.ruh.nhs.uk

If you would like this leaflet in email form, large print, braille or another language, please contact the Patient Support and Complaints team on 01225 825656.

Date of publication: June 2025 | Ref: RUH BRU035
© Royal United Hospitals Bath NHS Foundation Trust