

Bone Loss and Bisphosphonates

Osteoporosis, bone loss, is often diagnosed by x-ray or bone density tests (DEXA scan). The conventional choice of treatment is the use of a class of drugs called biphosphates (Fosamax®, Boniva®, Actonel®).

The bone is a living structure, and a constant break down and rebuilding of bones is **necessary** to maintain healthy bones. The osteoclasts, which are cells that remove the calcium of old bones, work in conjunction with osteoblasts, which are bone-building cells, adding calcium to bones. When this process is in balance, normal bone density is maintained.

The bisphosphonates prevent the osteoclasts from working, so only the osteoblasts are left. When the bones are not being broken down, bone density will show an ‘apparent’ increase on x-ray or bone density scan. However, as times goes on, this will back fire. As bones become denser due to the lack of break down, they actually become **weaker**. Over time, the risk of fractures actually increases as the bone becomes more brittle. This finding is similar to a disease of the bones called ‘Pagets’ disease where the bones appear dense on x-ray and are actually very brittle. Studies are showing serious long-term side effects like jaw bone necrosis (decay) and an **increase in fractures**, including fractures of the femur (long bone of the leg), which is associated with increased mortality. It does not make sense that these chemicals, which interfere with a physiologic process necessary to maintain healthy bone structure, would work long term.



In addition, the biphosphates drugs may also cause serious inflammation in several regions of the eyes, possibly leading to the loss of vision and blindness. Other side effects include nausea, heartburn, abdominal pain, muscle cramps, irritability, back and joint pain, pain when swallowing, and diarrhea. Aspirin and other non-steroidal, anti-inflammatory drugs such as ibuprofen may also increase the damage to the stomach if taken with some bisphosphonates.

Part of the problem is the under-reporting or down playing of these adverse side effects of these drugs. Many of the physicians who publish articles in medical journals receive honorariums or speaking fees from the pharmaceutical companies who market the bisphosphonates.

Diet, exercise and hormone balance (testosterone) are critical to healthy bones, not foreign chemicals that interfere with necessary bone turnover (the influx and efflux of calcium). Even **men** who have low testosterone levels have bone loss.