

BONE DENSITY, OSTEOPOROSIS AND FRACTURE RISKS: UNVEILING THE HIDDEN DANGERS OF PERSONAL INJURY AND NEGLIGENCE CLAIMS

By Professor Paul Lee, consultant in orthopaedics and expert witness

⇒ **OSTEOPOROSIS**, a condition characterised by low bone density and increased fracture risk, is a silent epidemic affecting millions worldwide. As an expert in trauma and orthopaedics, I often encounter the severe consequences of osteoporosis, which can lead to significant personal injury and complex medical negligence cases. In this article I explore the intersection of osteoporosis and fracture risks, and the implications for personal injury and medical negligence claims, aiming to provide insights for legal professionals navigating these multifaceted issues.

Understanding osteoporosis and fracture risks

Osteoporosis occurs when bones lose density and become more fragile, increasing the risk of fractures even from minor falls or stress. The most common sites for osteoporotic fractures are the hip, spine and wrist. These fractures can lead to prolonged disability, significant healthcare costs and a reduced quality of life.

Key risk factors for osteoporosis include ageing, hormonal changes (especially in premenopausal and postmenopausal women), family history, low body weight and certain medications or medical conditions such as thyroid dysfunction. Diagnosing osteoporosis traditionally involves bone mineral density (BMD) testing using dual-energy X-ray absorptiometry (DXA), which provides a T-score indicating the degree of bone loss.

Advancements in bone density measurement

While DXA has been the standard for BMD testing for many years, advancements in technology have introduced new methods – such as radiofrequency echographic multi spectrometry (REMS). REMS offers a more accurate and comprehensive assessment of bone health by providing a detailed analysis of bone quality and density. This advanced technology can detect subtle changes in bone structure that DXA may miss, making it a valuable tool in both diagnosis and on-going management of osteoporosis.

Fracture risks and hormonal influences

Hormonal changes, particularly in premenopausal and postmenopausal women, play a significant role in bone health. Oestrogen deficiency after menopause accelerates bone loss, increasing the risk of osteoporosis and fractures. Hormone replacement therapy can mitigate those effects, but it must be carefully managed due to associated risks such as cardiovascular disease and certain cancers.

Thyroid function also affects bone density. Both hyperthyroidism and hypothyroidism can lead to bone loss, making regular monitoring and appropriate management of thyroid conditions essential in preventing osteoporosis.

The personal injury perspective

When handling personal injury claims involving osteoporotic fractures, it is crucial to determine whether the injury resulted from a pre-existing condition or an external event. The factors that should be considered are:

- Cause of the fracture: establishing whether the fracture was due to an accident or occurred spontaneously due to severe osteoporosis.
- Extent of osteoporosis: assessing the client's BMD scores and medical history to understand the severity of their condition.
- Impact on quality of life: documenting the extent of disability, pain and suffering resulting from the fracture.

In those cases the challenge often lies in differentiating between fractures caused by negligence, such as a slip and fall due to unsafe conditions, and those primarily due to the client's osteoporosis. Comprehensive medical records and expert testimonies are vital in establishing causation and securing appropriate compensation.

Evaluating osteoporosis treatments

Medications such as bisphosphonates, which include organic acids, are commonly prescribed for osteoporosis. These drugs work by slowing bone loss and improving bone density, thereby reducing the risk of fractures. However, they are not without complications; for instance, long-term use of bisphosphonates has been associated with atypical femoral fractures and osteonecrosis of the jaw.

That raises critical questions:

- Effectiveness of treatment: are the prescribed osteoporosis medications doing their job effectively?
- Risk of complications: how do the risks of atypical fractures and other side effects weigh against the benefits of those treatments?
- Alternative approaches: should patients also receive exercise prescriptions to improve bone density and overall musculoskeletal health?

Exercise, particularly weight-bearing and muscle-strengthening activities, has been shown to benefit bone health significantly. Failure to recommend or prescribe an appropriate exercise regimen could be seen as a gap in the standard of care for osteoporosis patients. That omission might lead to questions of personal injury or medical negligence, depending on the specific circumstances.

In conclusion, osteoporosis and related fracture risks present unique challenges in personal injury and medical negligence claims. Legal professionals must navigate the intricate details of medical history, diagnostic processes and treatment standards to advocate effectively for their clients. By leveraging expert opinions and thoroughly understanding the medical context, solicitors can ensure that justice is served, whether they are seeking compensation for personal injury or holding healthcare providers accountable for negligence. □

