



# osteoblast

## Managing Osteopenia

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Vertebral Fractures and Back Pain  
News Update

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# Managing Osteopenia

Osteopenia is defined as low bone density from a DEXA scan. The range sits between normal bone density and osteoporosis (T-score of  $-2.5$ ). These definitions are very useful when working to protect bone health in patients 50 years and over.

Consumers are becoming aware that supporting bone health with calcium, vitamin D and exercise are important. However mixed messages online can create confusion. The focus on enhancing these bone supporting measures should be linked to evidence-based management.

## Calcium

Dietary Calcium – Recommended Dietary Intake (RDI) is 1,000 mg per day for adults, increasing to 1,300mg for women over 50 years and men over 70 years.

Supplements – when dietary intake is low a supplement in the range of 500–600 mg is considered safe and effective.

## Vitamin D

Limited sun exposure should be encouraged (avoiding UV of 3 or above). A few minutes daily in summer and a few hours weekly in winter. Only at-risk groups should be tested for low vitamin D. Noting Vitamin D levels tend to be lowest at the end of winter.

Supplements – daily and weekly doses are available to correct low vitamin D and it can take several months before an initial improvement is experienced.

## Exercise

Research has demonstrated specific types of exercise deliver best results for bone health – weight bearing,

resistance and balance exercises. Exercise should be regular and increase in intensity.

In addition, numerous community campaigns warning of the negative impact of smoking and excessive alcohol on general health also apply to bone health. These habits should be raised when discussing behaviour change to support bone health.

## Fractures and Osteopenia

Osteopenia encompasses a broad range – if low bone density is closer to osteoporosis this should be monitored closely and when osteopenia is near normal there is less concern.

However, this general approach changes when a consumer with osteopenia sustains a minimal trauma fracture (also known as fragility fracture). In this scenario the fracture becomes the focus especially when the bone density T-score is less than or equal to  $-1.5$ .

Around half of all minimal trauma fractures occur in adults with osteopenia. Once the fracture occurs this is clinically



## WELCOME

In this issue, we hope to clarify osteopenia and highlight the importance of vertebral fractures. As osteopenia encompasses a range of bone density, management of osteopenia varies according to a person's absolute fracture risk. Osteopenia associated with a minimal trauma fracture is clinically considered as osteoporosis.

In addition, many patients accept height loss and back pain as part of ageing. However in a significant proportion of people, back pain is an important symptom and may indicate a vertebral fracture has occurred. Vertebral fractures can also be asymptomatic. In those who do experience back pain, Healthy Bones Australia is partnering with Pain Australia to improve awareness and to identify undiagnosed vertebral fractures.

**Dr Weiwen Chen**

### *Managing Osteopenia cont.*

considered as osteoporosis (fracture + low bone density). This tells us BMD is an important part of the story but not the whole story. Bone micro-architecture and other factors can impact bone health in individuals. Treatment is generally required if a fracture is present and the patient has osteopenia (low bone density) to protect against further fracture.

Treatment options for osteoporosis include:

- Tablets (weekly or monthly)
- 6-monthly injections
- Annual intravenous infusion

Specialist-only medications are an option for people not responding to standard medications. These have a limited course (ranging from 12 – 18 months) and have proven to be successful. PBS subsidies apply across all treatments.

As reported by the Australian and New Zealand Hip Fracture Registry almost half of hip fracture patients (the most costly type of osteoporotic fracture with major impact on patients) had sustained a prior fracture. Yet the majority were not on osteoporosis treatment.

We have a clear opportunity to intervene early when osteopenia is identified. Ideally, our aim is to prevent the first fracture but if and when a fracture is sustained, we must treat to prevent subsequent fracture.



## Vertebral Fractures and Back Pain

Pain Australia is helping to highlight vertebral fracture as part of the wider issue of Australians living with back pain. Acting CEO Monika Boogs said "we know back pain has multiple causes, it's extremely debilitating for those affected and has a big impact on work life and independence nationally. Chronic or recurring pain or discomfort is the most commonly experienced limitation for people who have back pain."



Vertebral fracture due to osteoporosis can be difficult to detect. Sudden back pain, height loss and spinal curvature in more extreme cases can signal vertebral fracture. Investigation to confirm suspected fracture with x-ray or CT scan can reveal crush or wedge fractures within individual vertebrae. However this is not always top of mind.

General Practitioner Dr Jane Elliott says "patients can present with sudden back pain and this can be incorrectly attributed to more common muscular, disc or arthritic conditions. This becomes an issue when undiagnosed vertebral fracture is not identified early. So a patient needs to be considered for the possibility of osteoporosis if they have risk factors such as loss of height, family history of hip fracture or other secondary causes."

Consumer advocate Carole David has been promoting awareness of this issue for over a decade and was personally impacted. Carole explained "My story continued over several years but the short version is multiple fractures in my spine were causing me extreme pain and were thought to be related to my intestine or groin. I wasted valuable time being sent to specialists unable to find a diagnosis. When I ended up in emergency seeking pain relief a hospital scan revealed multiple vertebral fractures. Only then was I diagnosed with osteoporosis, received the treatment I needed and started seeing a specialist who now manages my bone health." Carole wants others to avoid her experience and says it was very distressing to be in such pain and not receive a diagnosis.

A/Professor Peter Wong Medical Director of Heathy Bones Australia says spinal fracture must become part of the mix when thinking about sudden back pain "It is estimated that 19% of fractures due to osteoporosis in 2022 will be vertebral fractures<sup>1</sup> As medical practitioners we need to consider the full spectrum of back pain issues and use this knowledge to create better outcomes for our patients."

<sup>1</sup> References available upon request.

## NEWS UPDATE

### Updated Clinical Guidelines for GPs Coming Soon

Healthy Bones Australia is working with the RACGP to update current clinical guidelines on management of osteoporosis. A National Guideline Review Committee has been established, consisting of general practitioners and clinical specialists to review the guidelines and deliver an updated edition addressing prevention, diagnosis, management and treatment of osteoporosis in general practice. Chair of the committee Associate Professor Peter Wong expects the updated guidelines to be available later this year.

### Accredited GP Education Online

Access GP education online which addresses common queries received from GPs regarding osteoporosis investigation, diagnosis and treatment (including length of treatment and changing treatment).

The module is CPD activity recognised by RACGP and ACRRM. The module includes casestudies and can be completed in your own time. The education module was produced in partnership with Healthy Bones Australia and is available at ThinkGP <https://www.thinkgp.com.au/education/managementosteoporosis-general-practice>

### Medication Update

Teriparatide (Brand name Forteo) will be delisted in Australia from 1 June 2022. This restricted use medication previously prescribed by specialists was available for patients with osteoporosis and fracture who had not responded to other treatments.

**Note:** other specialist prescribed treatments will remain available for patients not responding to standard osteoporosis treatments.

### Fact Sheets for Your Patients

New resources to assist GPs are now available online. A range of consumer fact sheets explaining how bone health may be affected by other conditions/medications are available at the Resource Hub of the Healthy Bones Australia website ([www.healthybonesaustralia.org.au](http://www.healthybonesaustralia.org.au)).

Topics include:

- Anorexia Nervosa and Bone Health
- Coeliac Disease and Bone Health
- Breast Cancer and Bone Health
- Prostate Cancer and Bone Health
- Glucocorticoids and Bone Health
- Rheumatoid Arthritis and Bone Health
- Thyroid Conditions and Bone Health

Prevention information is also provided with individual fact sheets explaining Calcium, Vitamin D and Exercise to support healthy bones.

### New ANZBMS Life Member

Professor Rebecca Mason has been named a Life Member of the Australian and New Zealand Bone and Mineral Society (ANZBMS).



Professor Rebecca Mason

Professor Mason is a Past President of ANZBMS, current Board member of Healthy Bones Australia, a former Deputy Director of the Bosch Institute at the University of Sydney and a recognised vitamin D expert.

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**Resources for General Practice**  
Information and resources for general practice can be accessed online under the Healthcare Professional section of the Healthy Bones Australia website:  
[www.healthybonesaustralia.org.au](http://www.healthybonesaustralia.org.au)