



**Stay
On Your
Feet WA[®]**

e-Bulletin



L to R: Karina Moore (WA Health Networks),
Dr Nicholas Waldron (Clinical Lead of Falls Health
Network) and Deborah Costello (CEO of ICCWA)

this issue...

Welcome
Shedding Light on Fracture Risk
Osteoporosis Australia
Diary Dates

Nine Steps To Stay On Your Feet[®]

Be Active

Manage Your Medicines

Manage Your Health

Improve Your Balance

Walk Tall

Foot Care and Safe
Footwear

Regularly Check Your
Eyesight

Eat Well For Life

Identify, Remove and
Report Hazards

Welcome

Welcome to the first edition of the Stay On Your Feet WA[®] e-Bulletin!

Stay On Your Feet WA[®] is a collaborative state-wide falls prevention program aimed at reducing the incidence and severity of fall-related injuries among seniors. It is a program funded by the WA Health Department and coordinated by the Injury Control Council of WA (ICCWA), which is the leading, not-for-profit organisation involved in injury prevention and community safety promotion in Western Australia. ICCWA currently sits on the Falls Prevention Health Network.

Stay On Your Feet WA[®] organises many events for health professionals and key stakeholders, most recently 'No Falls Day' and 'Stay On Your Feet WA[®] Week'. This e-Bulletin is produced as a joint effort of ICCWA and WA Health Networks and primarily targets health professionals and key stakeholders.

This edition features a guest article from Dr Charles Inderjeeth and Tony Petta on reducing fracture risk with calcium and vitamin D. We hope that you enjoy the first publication of the Stay On Your Feet WA[®] e-Bulletin.

*Deborah Costello
CEO of ICCWA*

WA Falls Prevention Health Network

The Falls Prevention Health Network is led by Dr Nick Waldron (pictured above), whose research focuses on bridging the gap between evidence and clinical practice in patients presenting to the emergency department following a fall. The Falls Prevention Health Network consists of health professionals, staff from hospitals, other government agencies, and health related services (e.g. community home care providers and aged day centres), residential care facilities, non-government organisations and consumers from across WA.

ISSUE

01

DECEMBER
2009

Shedding Light on Calcium and Vitamin D to Reduce Fracture Risk

Dr Charles A Inderjeeth (featured) and Mr Tony Petta



Falls and Osteoporotic fractures represent a significant health burden for older Australians. The risk of falls and osteoporosis increase with age, with at least 30% of people over the age of 65 fall annually. Approximately half of all women and one third of all men over the age of 60 will be affected by a fracture due to osteoporosis in their lifetime¹. One fracture can lead to further fractures, known as the *fracture cascade*. About 50% of people affected by Osteoporosis will have a further fracture. It is predicted that by 2021, Osteoporosis will affect 13.2 % of the Australian population². Optimising bone health to prevent fracture represents an essential health strategy for older Australians and the health professionals involved in their care.

Optimising Bone Health

Peak Bone Mass is achieved in early adulthood and starts to decline soon after. Lifestyle measures such as diet and physical activity during formative years are important determinants of Peak Bone Mass. Optimal calcium and vitamin D levels are also important in the maintenance of musculoskeletal health. Health professionals can encourage their clients to follow some simple principles to maximise their bone health. A nutritious diet high in calcium is essential. Regular physical activity that includes targeted weight bearing and progressive resistance exercise can produce positive effects on bone. Maintaining vitamin D levels within the optimal range is crucial. Lifestyle risk factors for Osteoporosis such as cigarette smoking and excess alcohol should also be discouraged.

The benefits of calcium and vitamin D in keeping bones healthy and minimising falls risk are well established. Studies confirming the benefit of available anti-osteoporosis treatments have only been demonstrated in patients where calcium and vitamin D have been optimised prior to initiation of treatment. Optimal vitamin D is essential for calcium absorption and calcium is an essential structural requirement for strong bones. Low vitamin D levels, however, not only contribute to Osteoporosis but may also cause muscle weakness and impaired mobility, which are key risk factors for falls. Vitamin D deficiency is also associated with other health problems that can include diseases of the immune system and reduced cognitive performance.

How much Calcium and Vitamin D is required?

The recommended daily intake of Calcium and Vitamin D varies according to age, disease, lifestyle and sunlight exposure.

“Optimal Vitamin D is essential for calcium absorption and calcium is an essential structural requirement for strong bones”

Continued from Page 2...

Calcium

The efficiency of calcium absorption declines with age, so over time, people require higher amounts of calcium. A minimum of 1,300 mg of calcium is required for women over the age of 50 and men aged 70 and over, as opposed to a minimum of 1,000mg are suggested for all other adults, which is equivalent to 3–4 serves of dairy products per day. Dairy products such as milk, cheese and yoghurt and even salmon are high in calcium. One serve of calcium is equivalent to a glass of milk, a small tub of yoghurt or a slice of cheese. Some fortified products may have larger amounts. Calcium supplements are recommended if people have difficulty reaching their daily requirements.

The absorption of calcium from supplements is usually similar to dietary sources, provided that there is no pathology that affects stomach acidity. Supplements such as Calcium Carbonate are best absorbed when taken with meals as they require gastric acidity, whilst the supplement Calcium Citrate can be taken at any time. Calcium supplements are available over the counter without prescription.

Vitamin D

Vitamin D has a number of forms. Cholecalciferol or Vitamin D₃ is formed from a chemical reaction that results in the skin with Ultra Violet exposure. Ergocaliferol (Vitamin D₂) is obtained through Dietary sources. Levels of Vitamin D in the blood can be measured with a routine blood test. The most useful and widely reported measure of vitamin D is known as 25-hydroxyvitamin D (25OHD). Although the optimal level of vitamin D has not been determined, levels greater than 75 nmol/l are generally recommended for optimal bone and muscle health.

The main source of Vitamin D is from sunlight. Western Australia has no shortage of sunlight; however research has shown that many people in WA are vitamin D deficient³. Many people have concerns about developing sunburn and skin cancer; however safe exposure to sunlight to meet daily Vitamin D requirements can occur without increasing the risk of skin cancer.

Recommended sun exposure times to produce adequate Vitamin D are usually before 10.00am and after 3.00pm to avoid high levels of UV exposure that can increase the risk of skin cancer. The minimal recommended duration to optimise vitamin D levels range from 5-9 minutes in summer and 9–47 minute in winter depending on latitude. As a general rule longer duration of exposure is recommended for people living further from the equator. Barriers such as clothing, glass windows and sunscreen reduce direct skin exposure to the sunlight and reduce the skin's ability to produce Vitamin D.

“Western Australian has no shortage of sunlight; however, research has shown that many people in WA are vitamin D deficient³”

Do you like what you see?

What are your thoughts of our first edition of the e-Bulletin?

Please fill out this quick and easy 1-minute [Survey](#)

Check out these websites

Click on the links:

[WA Health Networks](#)

[Stay On Your Feet WA® Website](#)

[ICCWA Website](#)

[Online Publication Order System](#)

[Falls Prevention Model of Care for the Older Person](#)

Continued from Page 3...

The main alternative source of vitamin D are foods such as oily fish (e.g. salmon, mackerel), liver and fortified manufactured foods such as margarine. However, regular and large quantities need to be ingested to meet dietary requirements for an optimal vitamin D level. Vitamin D supplements are recommended for those who are deficient or in a high risk group for low Vitamin D. These include older people living in residential care, those who are housebound, those with dark skin pigmentation or are fully covered in clothing for cultural or health reasons. The recommended dose of Vitamin D is at least 800 International Units (IU) per day, although some people may require a higher dose. Patients with established Osteoporosis who are on a prescribed oral bone preserving agents now generally receive free Vitamin D supplements with their osteoporotic medication.

1. [Calcium, Vitamin D and Osteoporosis](#). A guide for GP's.2008. Osteoporosis Australia.
2. Access Economics 2001. [The Burden of Brittle Bones; Costing Osteoporosis in Australia](#). Canberra, 2001
3. Inderjeeth CA, Glennon D, Petta A, Soderstrom J, Boyatzis I, Tapper J. [Vitamin D and muscle strength in patients with previous fractures](#). The New Zealand Medical Journal. 21 September 2007;120 (1262).

Have Your Say...

To write a response or comment about this article, please email:

Stay On Your Feet WA@

Medication Information

Falls and fall injuries are one of the most common health problems among older adults. However, since falling is not a single disease, clinicians may not recognise it as a treatable health problem. While some factors that increase risk of falling, such as age and previous falls cannot be changed - a number of important ones can be.

Vitamin D and calcium supplementation studies have been shown to significantly reduce fracture rates in older adults living in residential care and independently in the community. A table of [daily requirements and quantities in common supplements](#) (external link) has been developed by the South Australian Vitamin D Working Party.

Osteoporosis Australia (www.osteoporosis.org.au)

Osteoporosis Australia is the peak consumer body in the bone arena and aims to reduce fractures and improve bone health in the community. The organisation has a proactive Board, expert Medical & Scientific Committee and Events & Fundraising Committee. Osteoporosis Australia is responsible for providing services and Osteoporosis information to the community and health professionals.

The website above provides valuable information about Osteoporosis that is easy to access and download. Under the health professionals section of the website, you will be able find a section that contains Osteoporosis-related research papers and a selection of recent position papers produced by the Medical and Scientific Advisory Committee. The website also contains a range of resources produced by Osteoporosis Australia for health professionals.

If you would like to contact the office, please call 1800 242 141 or for more information on this topic visit the Osteoporosis Australia Website (www.osteoporosis.org.au).



Have an Event Coming Up?

To include your event, contact:

[Stay On Your Feet WA®](#)

ICCWA Contact Details

City West Lotteries House
2 Delhi Street
West Perth 6005

Telephone: (08) 9420 7212
Fax: (08) 9486 7955

Email:

[ICCWA](#)

[Stay On Your Feet WA®](#)

Diary Dates

December		
22	ICCWA Office Closure	
January		
4	ICCWA Office Opens	
February		
26-28	GAIT 2010 3 rd International Congress on Gait & Mental Function Washington DC, USA www2.kenes.com	
March		
5-6	Osteoporosis Prevention: A Workshop on Calcium, Vitamin D and other Nutritional Aspects http://www.osteoporosis.org.au/health_events.php	
April		
1	No Falls Day Injury Control Council of WA t: 08 9420 7212 http://www.stayonyourfeet.com.au	
May		
3-6	Climate for Change: Ageing into the Future International Federation on Ageing (IFA) 6 th Global Conference Melbourne, Victoria www.ifa2010.org	
6-8	Golden Opportunities Australian Practice Nurse Association (APNA) 2 nd Annual Conference Gold Coast, Queensland www.corporatecommunique.com.au/apna/index.html	

Wish to Subscribe?

To subscribe, send 'bulletin-subscribe' to: [Stay On Your Feet WA®](#)

To unsubscribe, send 'bulletin-unsubscribe' to: [Stay On Your Feet WA®](#)