Osteoporosis National Action Plan launched

Research Bites: Research Review
Premature Menopause and Bone Health
News Update
Osteoporosis National Action Plan launched

On World Osteoporosis Day osteoporosis interest groups came together to launch the Osteoporosis National Action Plan that clearly sets out 3 key areas for action:

- Increasing Awareness & Support
- Improving Osteoporosis Prevention & Treatment
- Finding a Cure for Osteoporosis

The National Action Plan outlines 20 recommendations to achieve these action items and stresses the human and clinical burden of osteoporosis and related fractures will only get worse unless action is taken now to combat this major health issue.

Greg Lyubomirsky CEO of Osteoporosis Australia said “We understand poor bone health is prevalent in Australia but we commonly overlook the scope of the problem – it leads to over 155,000 fractures each year, reducing quality of life and burdening the health system. Timely diagnosis and intervention needs to become the norm to reduce subsequent fractures. It needs to be a much higher priority both for health professionals and for government.”

The National Action Plan is signed by representatives from Australian & New Zealand Bone & Mineral Society, Garvan Institute of Medical Research, Osteoporosis Australia, and several universities including University of Sydney, University of NSW, Monash University and University of Melbourne.

Three past presidents of the Australian and New Zealand Bone & Mineral Society are co-signatories to the National Action Plan and they have a clear message for health professionals and government.

Professor John Eisman AO said “I have been treating osteoporosis for over 30 years and I see many patients with obvious signs for osteoporosis who have gone undiagnosed and un-treated. In some cases I see patients who are up to their fourth fracture and have not been picked-up. This is not acceptable and something we must change.”

Professors Markus Seibel and Peter Ebeling AO also support this view and consider the National Action Plan an important step forward. Prof Seibel said “we know what to do, we have solutions, what we require is action.”

Professor Peter Croucher said “The role of research is a key component of the plan. We have excellent long-running Australian and international studies in osteoporosis, which have provided valuable insights to shape current prevention and treatment approaches. We are confident research in the bone field will bring broad improvements in diagnosis, treatment and our understanding of genetic factors involved in osteoporosis.”

The National Action Plan details the best approaches to achieve action and details patient stories from both men and women affected by the disease. Key recommendations:

- Establish Osteoporosis as a National Health Priority.

Very recently, the American Society for Bone & Mineral Research has warned that “the remarkable progress made over the past 30 years to reduce fractures…is rapidly being reversed.” In a report entitled ‘A Crisis in the Treatment of Osteoporosis’ the authors state that “too many patients at high risk for fractures are not being diagnosed or treated to prevent them.” Part of the problem are a lack of education and awareness but also “media and public concern about rare side effects with a decline in the use of osteoporosis drug prescriptions and an increase in hip fractures.”

Very much the same happens here in Australia: High risk patients don’t get diagnosed and treated, predisposing them to catastrophic fractures and the morbidity and mortality we know is associated with every single one of these events. With its 20 concrete recommendations, the National Osteoporosis Action Plan aims to change this situation which truly is unworthy of a rich and developed country like ours. The Action Plan highlights 3 major areas – Increasing Awareness & Support; Improving Osteoporosis Prevention & Treatment; and Finding a Cure for Osteoporosis. Have a read and think how you may contribute to the success of this important initiative!

Prof Markus Seibel
Osteoporosis National Action Plan launched (Cont.)

- Better co-ordination and targeting of clear, consistent and evidence-based information for the community (to minimise risk, self-assess risk, understand significance of disease, address mis-conceptions around risks and benefits of osteoporosis treatments).
- Develop effective self-management resources.
- Develop a School Education Program on the importance of a healthy skeleton and relevance of attaining peak bone mass during the school years.
- Expand competencies in musculoskeletal health for medical trainees (especially those looking to enter related specialties).
- Further develop GP engagement programs to help identify patients at-risk and address osteoporosis in context of comorbidities and ageing (includes fracture risk calculators and updated GP Guidelines).
- Develop accredited ‘continuing medical education’ programs for HCPs (including GPs, radiographers, nurses, exercise physiologists, pharmacists, physiotherapists, occupational therapists).
- Develop a research program that includes how clinical research translates into the community, new education tools for GPs, evaluation of awareness-raising strategies that promote behaviour change, how messages on bone health may be incorporated in general health awareness programs used for other chronic diseases, feasibility and impact of population-based strategies.
- Remove obstacles to the knowledge-practice gap in primary care – includes fracture risk assessment and improved access to subsidised DXA scans and Medicare-subsidised treatment.
- Drive funding of Fracture Liaison Service (FLS) in hospital and primary healthcare settings as an effective intervention to reduce re-fracture.
- Improved co-ordination and targeting of information and support provided to people with osteoporosis and their carers – education on treatments, importance of persistence, a Medicare covered dental check-up prior to treatment, support strategies.
- Extend engagement to wider healthcare providers e.g.: Australian Dental Association on how to address osteoporosis patients.
- Develop a research program that includes best practice audit for the diagnosis/treatment of osteoporosis.
- Co-ordinate strategies to talk to state and federal government and private health insurance industry to increase support for streamlined and reimbursed diagnostic tests and treatment for women and men at 50 years of age. Plus a broader range of risk factors triggering diagnostic tests to ensure best practice.
- Develop a strategic plan for research into curing osteoporosis.
- Develop new bone anabolic drugs that build new bone not just stop further bone loss as currently available.
- Develop partnerships between researchers in other fields (e.g. oncology, endocrinology, immunology) into comorbidities and secondary causes of osteoporosis.
- Develop tools to evaluate new bone building drugs, including response to treatment.
- Develop translational strategy to see new drugs are quickly made available to the community.
- Establish a funding stream to ensure necessary long-term research that will cure osteoporosis.

Andrew Giles, CEO of the Garvan Research Foundation said “These recommendations form the basis of real change in the area of osteoporosis. Work is already underway in some key areas to achieve positive change. Our call for action is loud and will be ongoing.”

References available upon request.

“…Timely diagnosis and intervention needs to become the norm…”
Greg Lyubomirsky CEO, Osteoporosis Australia
Australia’s largest gathering of bone researchers, the Annual Scientific meeting of the Australian and New Zealand Bone and Mineral Society, was held jointly with the Endocrine Society of Australia and the Society for Reproductive Biology in August this year. The following is just a snapshot of some of the high quality osteoporosis research presented at this meeting, with special relevance to those working in general practice.

**High intensity resistance training is safe and effective for women with low bone density**

The bone health benefits of high intensity progressive resistance training (HiPRT) are well documented, but people with osteopaenia or osteoporosis are generally advised to avoid training with heavy weights due to a perceived increased risk of fragility fractures. Findings that appear to challenge this position were presented by Professor Belinda Beck and colleagues from Griffith University and the Menzies Health Institute. The LIFTMOR randomized controlled trial (n=84) compares the safety and efficacy of supervised HiPRT with home-based low intensity exercise in postmenopausal women (65 ± 5 years) with a T-score below -1.0. Women randomized to HiPRT for 8 months (twice weekly 30 minute sessions) demonstrated significantly improved lumbar spine BMD (+2.7±3.2% vs. -1.2 ± 2.5%, p<0.001) and femoral neck BMD (+0.15±2.7% vs -1.9 ± 3.1%, p=0.001), as well as increased height and improved functional measures, compared to the low intensity control group. Compliance was high, with only one minor adverse event reported in the HiPRT group. A small ‘real world’ analysis of a number of presentations at the meeting, with special relevance to those working in general practice.

**Bisphosphonates and mortality**

An intriguing but as yet poorly understood effect of bisphosphonate treatment on mortality was the subject of a presentation by Professor Jackie Centre, of Sydney’s Garvan Institute of Medical Research. The HORIZON zoledronic acid RCT, published in 2007, demonstrated a 28% reduction in mortality in the treatment arm of the study, of which only 8% could be attributed to a reduction in osteoporotic fracture. Several other cohort studies show similar findings. Bisphosphonates also have survival benefits in non-osteoporosis settings, including cancer and critically ill people. The underlying mechanisms are not completely understood, but animal studies suggest that potent bisphosphonates may have an effect on immune function via take-up by tumour associated macrophages. Suppression of bone turnover with bisphosphonates could also inhibit release of toxic substances or inflammatory factors that may increase mortality in compromised individuals. Further research is needed to understand the biology behind this potentially significant finding.

**High alcohol intake is a significant risk factor for osteoporotic fracture in men**

The long running Geelong Osteoporosis Study (GOS) continues to shed light on the factors associated with development of osteoporosis, and recent GOS findings were the focus of a number of presentations at the meeting. High alcohol consumption is a known risk factor for osteoporosis and is included in the FRAX® fracture risk prediction tool. Professor Julie Pasco and colleagues from Deakin University and the University of Melbourne reported an analysis of alcohol consumption and fracture risk in 591 men taking part in the GOS. 19% of this cohort were defined as ‘drinkers’, consuming 3 or more alcoholic drinks per day. FRAX estimates revealed a mean 20% increase in the risk of a major osteoporotic fracture in drinkers and a mean 35% increase in hip fracture risk in this group. (FRAX® cut–points for high risk of major osteoporotic fracture and hip fracture are ≥ 20% and ≥ 3%, respectively). When alcohol consumption was taken into account, the researchers observed a 1.7% increase in the number of men at high risk of hip fracture, underscoring the public health message to avoid high alcohol intake to preserve bone health.

**Under-use of DXA in men**

Health professional awareness of osteoporosis has improved over the last 2 decades, but despite 30% of osteoporotic fractures occurring in men, the disease is still commonly thought of as a female issue. Professor Nick Pocock and Dr Weiwen Chen, from St Vincent’s Hospital in Sydney, reported the results of a gender-stratification analysis of DXA utilisation between 1995 and 2015. In both males and females aged over 64, they found a progressive increase in DXA claims up to 2002, and a further slow increase in males up to 2007. DXA claims for both sexes jumped significantly after MBS reimbursement for the over 70s was introduced in 2007. Despite these overall improvements, the ratio of DXA use in males compared to females has remained consistently low over the last 20 years, with the exception of males aged over 85 years, where a steady rise in DXA utilisation has occurred. The authors concluded that there is a need for improved education of health professionals about the risk of osteoporosis in males aged 64-85.
Premature Menopause and Bone Health

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Premature menopause (PM) is defined as menopause occurring in women aged <40 years.1,2 PM may occur spontaneously, encompassing premature ovarian insufficiency (POI) or occur secondary to medical treatment including bilateral oophorectomy, pelvic radiotherapy or chemotherapy.1,2 Spontaneous POI affects 1% of women, with medically induced POI/PM affecting up to 10% of women. Causes of spontaneous non-iatrogenic POI include genetic abnormalities such as Turner Syndrome; however, in most women the cause of POI is unknown. PM is associated with an increased risk of low bone mineral density and fracture.1,2 The reported prevalence of osteoporosis (defined as T score ≤ -2.5) is 8-14% with an even higher prevalence of osteopenia.2 Reduced bone density was associated with low vitamin D levels, inadequate calcium intake, low body weight, lack of regular exercise, oestrogen deficiency (including delayed diagnosis, not taking oestrogen therapy, earlier POI onset) and varied with the cause of PM (including idiopathic, Turner syndrome, chemotherapy and oophorectomy).1-4 Although osteoporosis was the commonest long term fear associated with PM,5,6 gaps in consumer and health professional knowledge/ understanding exist which may contribute to suboptimal health related behaviours, screening and treatment.6 There are no large studies like the Women’s Health Initiative (WHI) to guide management; however, small studies indicate that oestrogen therapy can maintain and restore bone mineral density to normal levels although the response may vary with the dose and type of therapy used.

Recently published guidelines (www.esshre.eu) state that POI should be considered in women <40 years with oligomenorrhea/amenorrhea for at least 4 months and/or with symptoms of oestrogen deficiency.2 Biochemical confirmation is an elevated follicle stimulating hormone >25IU/L on two occasions at least 4 weeks apart.2 Following PM diagnosis, management of bone health should include:

- Assessment of additional osteoporosis risk factors.
- Bone densitometry (Medicare benefit for women <45 years with hypogonadism for >6 months) with monitoring every 2 years. The online FRAX fracture risk calculator only applies to women >40 years.
- Exclusion of secondary causes of osteoporosis (abnormal thyroid function and coeliac disease are associated with idiopathic POI).
- Life style measures including optimisation of calcium intake and vitamin D status, cessation of smoking, maintain healthy weight, avoid excess alcohol and weight bearing exercise.2
- Oestrogen therapy (unless contraindicated) should be instituted early and continued until the age of natural menopause (51 years).2,7,8 WHI results (average age of participants 63 years) should not be extrapolated to women with PM. The COCP or menopausal hormone therapy (MHT) doses suitable for women with usual age menopause may be inadequate to maintain bone health in younger women with PM.9,10 The aim is to optimise compliance and shared decision making is important. “MHT” may have negative associations for some women and long cycle/continuous COCP (to minimise oestrogen deficiency during the inactive pill week) is a potential alternative. Combined oestrogen+progestogen (cyclical or continuous) MHT must be used if a woman has a uterus. Available combined transdermal MHT only contains 50mcg oestradiol necessitating use of a transdermal 100mcg oestradiol patch (preferred dose and route)2 with an oral progestogen (www.menopause.org.au/for-women/information-sheets/426-ams-guide-to-equivalent-hrt-mht-doses). Similarly, available oral MHT contains 1-2 mg oestradiol and 2-4 mg oral oestradiol may be necessary. Oestradiol is preferred to conjugated equine oestrogen.2

- Specialist referral should be considered:
  - if the woman has a contraindication to oestrogen therapy (e.g. oestrogen dependent cancer).
  - if a decrease in bone density or fragility fracture occurs while taking oestrogen therapy.
  - prior to the use of specific osteoporosis medications (e.g. bisphosphonates).

References available upon request.
**Last chance for CPD points**

It’s nearly the end of the current triennium. Do you need additional CPD points? Our online ALM hosted by ThinkGP is free and flexible. The full ALM or individual modules provides the details you need to effectively treat and manage osteoporosis and fracture risk as well as provide key bone-health information to at-risk patients. Accreditation includes 40 CPD points with RACGP or 30 CPD points with ACRRM. Register today at [www.thinkgp.com.au/oa](http://www.thinkgp.com.au/oa)

**World Osteoporosis Day**

Osteoporosis Australia joined with the International Osteoporosis Foundation and patient societies around the world to promote better bone health on World Osteoporosis Day. The theme for 2016: Love your bones, Protect your future was used to highlight risk factors and prevention with a special focus on the common risk factors of coeliac disease, diabetes and glucocorticoid steroid use and impact on bone health.

Osteoporosis Australia Patron Helen Dalley said “World Osteoporosis Day is the time to think about your bone health and your family’s bone health. That includes a bone-healthy diet, regular exercise and consulting your doctor about osteoporosis risk.”

Osteoporosis Australia also encouraged the community to visit the newly launched [Know Your Bones](http://www.knowyourbones.org.au) website. The online self-assessment launched in partnership with the Garvan Institute of Medical Research provides users with a report showing results and risk factors for discussion with their doctor. This consumer resource is available to patients at [www.knowyourbones.org.au](http://www.knowyourbones.org.au).