Nutritional needs for skeletal health change as you age, says new scientific review

Review issued in advance of World Osteoporosis Day shows how bone-healthy diets throughout life help to protect against osteoporosis in old age.

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Whether you’re young or old, the right nutrition can make a difference to your bone health and influence your ability to live an independent, mobile, fracture-free life into your more senior years. That’s the key message of a new scientific review published today in the journal Osteoporosis International by leading bone and nutrition experts, in anticipation of World Osteoporosis Day on October 20.


The review summarizes the latest evidence relating to the nutritional needs of mothers, children and adolescents, adults and seniors, in relation to developing and maintaining a healthy skeleton. Placing particular emphasis on calcium, vitamin D and protein, it shows how adequate nutritional intake of these and other micronutrients can support the primary objectives for good bone health:

- Achieving genetic potential for peak bone mass in children and adolescents
- Avoiding premature bone loss and maintaining a healthy skeleton in adults
- Preventing and treating osteoporosis in seniors

Findings from international studies and trials are summarized as well as current dietary guidelines.

Professor Cyrus Cooper, co-author and chair of the International Osteoporosis Foundation (IOF) Committee of Scientific Advisors, stated, “This new report shows just how important nutrition is for our bone health throughout life. In fact, nutrition plays a key role in the development of a healthy skeleton even before birth. Healthy maternal diets as well as adequate vitamin D levels are associated with greater bone mass in the offspring.”

The report also underlines how lifestyle trends which lead to poor diet and nutrient deficiencies are a growing cause of concern in people of all ages. For the Asia-Pacific region this is of special concern. IOF Audits for the Asia-Pacific region and an IOF report on global vitamin D status have shown that insufficient levels of vitamin D are highly prevalent in Asia, and particularly in South and South East Asia. For example, studies have found vitamin D deficiency in 40-90% of Chinese children (where rickets is also common) and in an even greater percentage of adults. As well, the average dietary calcium intake for the adult Asian population has been found to be approximately 450 mg/day, far below international recommendations for calcium intake which range from 1000-1300 mg/day for adults. Lifestyle factors such as
excessive alcohol consumption, smoking, and a very high or low body mass index (BMI) also elevate fracture risk for a substantial number of people.

The impact of nutrition on falls and fracture prevention in seniors, who are a growing segment of the population and most affected by osteoporosis, is discussed. The review shows how deficits in protein intake as well as malnutrition, which is sadly common in older people, can negatively affect their bone and muscle health. It also highlights how together with appropriate exercise, adequate nutritional intake in those at high risk of fracture plays an important complementary role to pharmacotherapy. This is of special significance in Asia, where, due to the ageing of the population, the incidence of hip fracture has already risen 2- to 3-fold during the past 30 years.

Professor Bess Dawson Hughes, co-author and professor at the Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University in Boston, commented, “The baby boomer generation is ageing and as a result age-related musculoskeletal diseases are imposing an increasingly costly burden on society and health-care systems worldwide. This report shows how we can tap the potential of healthy nutrition within a systematic life-course approach to support osteoporosis and fracture prevention.”

The scientific review complements a comprehensive report entitled *Healthy nutrition, healthy bones: how nutritional factors affect musculoskeletal health throughout life* also released today. The report is available freely online in nine languages (including Chinese), together with a wealth of World Osteoporosis Day campaign resources: [www.worldosteoporosisday.org/resources/2015/thematic-report](http://www.worldosteoporosisday.org/resources/2015/thematic-report)

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Notes to Editors

Further reading and references

*Note: online access to Osteoporosis Int is available to IOF Professional Members for low annual fee. Register at www.iofbonehealth.org/become-member*

World Osteoporosis Day thematic report:

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About the International Osteoporosis Foundation
The International Osteoporosis Foundation (IOF) is a not-for-profit, nongovernmental organization dedicated to the worldwide fight against osteoporosis and related musculoskeletal diseases. IOF’s members - scientific researchers, patient, medical and research societies and industry representatives from around the world - share a common vision of a world without osteoporotic fractures. IOF, with headquarters in Switzerland, currently includes 232 member societies in 98 countries, regions and territories. Among its numerous programmes and activities, IOF mobilizes the global osteoporosis movement on World Osteoporosis Day, marked on October 20 every year.
About World Osteoporosis Day
World Osteoporosis Day is observed annually on 20 October, and marks the beginning of a year-long campaign dedicated to raising global awareness of the prevention, diagnosis and treatment of osteoporosis and related musculoskeletal diseases. Led by the International Osteoporosis Foundation (IOF), it generates worldwide media attention and supports public awareness campaigns organized by more than 200 national osteoporosis patient and medical societies from around the world.

World Osteoporosis Day is supported by unrestricted educational grants from:

Asia-Pacific Region:

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