

EDITORIAL

BREAKING DOWN THE WALLS OF OSTEOPOROSIS: A CALL TO ACTION

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Osteoporosis is a silent epidemic affecting millions worldwide, poses a significant public health challenge. It is a skeletal disorder characterized by decreased bone mass and micro architectural deterioration of bone tissue resulting in less bone tension and strength and increased risk of fragility fracture. A report suggests that 10 million Americans aged 50 or over have an active diagnosis of osteoporosis, with another 34 million in the “at-risk” category. Every year, 1.5 million Americans suffer from osteoporosis-related fractures which are predicted to triple in the USA by 2025 because of a lack of focus on bone health and prevention. Besides high-income countries, the high prevalence of osteoporosis and risk of osteoporosis is also reported for middle and low-income countries of Southeast Asia. However, early diagnosis and appropriate prevention methods and treatment significantly reduce the prevalence of osteoporosis, and fracture.

With an aging global population, the burden of osteoporosis-related fractures is expected to rise substantially. Fractures of the hip, vertebrae and distal forearm are considered as osteoporotic fractures with common epidemiologic characteristics with fracture incidences are higher in women compared to men. Important risk factors of osteoporosis are inadequate nutritional absorption, lack of physical activity, weight loss, cigarette smoking, alcohol consumption, air pollution, stress, older age, family history of osteoporosis, prolonged corticosteroid use, vitamin D deficiency and diabetes mellitus. The impact of osteoporosis-related fractures can lead to increase pain, disability, nursing home placement, total health care costs, and death. Evidence suggests that fifty percent of patients with osteoporotic fracture have

failed to return to their pre-fracture functional ability level. Furthermore, it has a very high economic burden because of higher treatment costs, extended hospital stays, and the need for special care at home after discharge from the hospital.

One of the key challenges in tackling osteoporosis is its asymptomatic nature until a fracture occurs. This lack of early warning signs often results in delayed diagnosis and intervention, allowing the disease to progress unchecked. It’s time to break the silence surrounding osteoporosis and raise awareness about the importance of bone health throughout the lifespan. To reduce the risk of fracture and economic burden in the health sector, it is crucial to assess bone health at an early age. The diagnosis of osteoporosis is primarily determined by measuring bone mineral density (BMD) using noninvasive dual-energy x-ray absorptiometry.

To stop the epidemic of osteoporosis paramount measures should be prevention of osteoporosis measures such as patient education, understanding the risk factors and adopting a bone-healthy lifestyle can significantly reduce the likelihood of developing osteoporosis.

First and foremost, regular physical activity is recommended in all age groups to maximize peak bone mass and maintain bone strength. Physical activity has been suggested as a non-pharmacologic intervention for increasing bone density in youth and preventing bone loss in the elderly. Both aerobic exercise and resistance training, the best forms of weight-bearing exercise, increase the rate of bone remodeling in postmenopausal women. However, resistance exercise training induces more effective favorable changes in BMD status than aerobic exercise

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training in postmenopausal women. A 10% increase in peak bone mass was predicted to delay the development of osteoporosis by 13 years and reduce the risk of fragility fractures after menopause by 50%. Adequate daily calcium and vitamin D is required to maximize bone mass and for the subsequent maintenance of bone health. Along with regular weight-bearing exercise, avoiding tobacco and excessive alcohol consumption, fall prevention strategies into patient care plans is essential for optimizing outcomes.

We have to play a crucial role in the early detection and management of osteoporosis. Incorporating bone density testing into routine healthcare assessments for at-risk populations can aid in early diagnosis and the implementation of preventive measures. Additionally, healthcare providers should prioritize educating patients about osteoporosis risk factors and the importance of adherence to prescribed treatments.

By integrating bone health education into public health initiatives, we can empower individuals to take proactive steps toward maintaining strong and resilient bones.

Institutional support is vital to create a comprehensive approach to osteoporosis prevention and management. Governments, healthcare organizations, and advocacy groups must work together to allocate resources for public awareness campaigns, educational programs, and research initiatives. By fostering a united front against osteoporosis, we can reduce the burden on healthcare systems and improve the quality of life for those affected.

Moreover, there is a need for increased research and development of innovative treatments for osteoporosis. While current medications exist to manage the condition, ongoing efforts to discover new therapies with fewer side effects and broader efficacy are essential.

Osteoporosis may be a silent threat, but its consequences are loud and clear. It's time for a collective effort to shatter the silence and build a

foundation of awareness, prevention, and treatment. By prioritizing bone health education, early detection, and ongoing research, we can break down the walls of osteoporosis and pave the way for a healthier, more resilient future.

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