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The bone disorder

WORLD OSTEOPOROSIS DAY (OCTOBER 20) HAS JUST PASSED BY. TIMES WELLNESS SCOUTS FOR ANSWERS TO THE PROBLEM OF OSTEOPOROSIS WHICH IS BECOMING MORE AND MORE COMMON IN OUR COUNTRY

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The prime function of our bones is to provide support to our body, help us move, protect internal organ from injuries and maintain calcium balance in the body. There are many kinds of bone disorders. The most common is osteoporosis which is a very common Endocrine disorder. The word osteoporosis means "porous bones". Normal bones are porous like a sponge or a honeycomb. If the bones are healthy the size of the pores are smaller. But in an osteoporotic bone the holes become bigger resulting in loss of solid part of the bone (leading to low density) which makes the bone thin and weak. Such a bone is prone to fracture easily. Osteoporotic fractures occur commonly at hip, spine and wrist but other bones can also break. Osteoporosis is usually a silent disease, it doesn't hurt. Many times, the first sign is a fracture. This highlights the importance of prevention, early detection and treatment. 1 in 4 women over the age of 50 has osteoporosis.

Osteoporosis is a bone disorder characterized by decreased bone strength as a result of reduced bone quality and quantity. Here the "Bank account" of bone tissue drops to a low level. When the bone density is low but not low enough to be considered osteoporosis is called osteopenia. Osteoporosis can occur prematurely or can occur at an accelerated pace by many conditions. Fragility fractures, as osteoporotic fractures are called, can have serious consequences like pain, deformity (particularly hunched back, loss of height and abnormal posturing). The disability due to a fracture can force a person to use a stick, a walker or a wheel chair. Disability is more with



FACTS ABOUT OSTEOPOROSIS

- It is a bone disorder characterized by decreased bone strength as a result of reduced bone quality and quantity.
- Osteoporosis is a very common endocrine disorder but it remains an ignored health problem
- Smoking, excessive consumption of alcohol, caffeine, and low calcium in diet can predispose to osteoporosis.
- Osteoporosis is usually a silent disease. Many times, the first sign is a fracture. This highlights the importance of prevention, early detection and treatment. 1 in 4 women over the age of 50 has osteoporosis.

a hip fracture. Data from developed world has shown that about 20% of people die within a year of their hip fracture due to complications. The cost of weak bones to the patient, his family and the country as a whole is huge. Caring for osteoporotic fractures costs America \$17 billion each year! There are many things which we can do to keep our bones healthy and strong.

Osteoarthritis (OA) should not be confused with osteoporosis. OA is a degenerative joint disease mainly affecting knees and hip leading to painful joint movements and deformity. A person can have both osteoporosis and OA at the same time. Thirty years ago, little was known about Endocrinological disorders like osteoporosis. Even health professionals believed that weak and broken bones were

just a part of old age and could not be avoided. Today we know that this is not true. **Conditions that may cause bone loss:** Old age, Malnutrition, Diabetes, Depression, Hypertension, Chronic liver and kidney disease, Intestinal mal-absorption, Menopause, Rheumatoid arthritis, Certain cancers like leukemia, multiple myeloma, breast and prostate cancer, Marked weight loss, etc. **Drugs that may cause bone loss:** Anti epileptics - phenobarbitone, phenytoin, Steroids, Excessive intake of thyroid hormones, Lithium, antidepressants (SSRI), Cancer chemotherapy, Methotrexate, Prolonged use of PPI - nexium, prevacid, prilosec, Smoking, excessive consumption of alcohol, caffeine, and low calcium in diet can cause osteoporosis.

PREVENTION

Certain things like age, gender, family history of osteoporosis are out of our control. There are many things which we can do to prevent osteoporosis. Adequate calcium and Vitamin D intake in diet and good physical activity is the mainstay in prevention.

Calcium and vitamin D daily requirement: 1000 to 1500 mg of calcium daily and 500 to 1000 mg of Vitamin D daily for adults. Children need little less.

Milk is a good source of calcium but it also contains calories and saturated fats. People with high cholesterol or with obesity and heart disease should take skimmed milk.

Calcium: Good sources are milk, curd, green leafy vegetables, tomato, fruits, buttermilk, cheese, fish, fortified juices. It's a myth that calcium intake can lead to stone formation.

Vitamin D: Vitamin D is a hormone. It plays an important role in calcium absorp-

tion, bone health, muscle performance, balance and falls. Milk, egg, fish oils, liver are good sources of vitamin D. Sun exposure is the best natural source of vit D but sometimes it may not be sufficient even in a country like India due to a number of reasons.

Interestingly, tea is not that bad for the bones! Colas are detrimental to bone health due to their acid load and caffeine content. Children who drink colas at the cost of milk and juice can become deficient in calcium and will have a poor skeleton.

Physical Activity: Physical activity helps in making bones and muscles strong. With strong bones and muscles the risk of falls and fractures is minimised.

DIAGNOSIS

The best way to diagnose osteoporosis is to measure bone density. Bone mineral density (BMD) test is safe and painless. DEXA or dual energy X ray absorptiometry is the method for measuring BMD. The results of BMD are expressed as T scores. A T-score

of less than -2.5 indicates osteoporosis.

DRUGS

Bisphosphonates (alendronate, risedronate, zoledronic acid etc) are the most widely used drugs, other drugs like SERMs (selective estrogen receptor modulator) and calcitonin hormone are less widely used. Parathyroid hormone or PTH is an extremely useful anabolic agent in the management of osteoporosis for enhancing new bone formation.

Endocrinologist can diagnose and treat osteoporosis. Osteoporosis remains an ignored health problem due to lack of awareness amongst the public as well as medical professionals. Immediate measures are required to prevent osteoporosis and thereby osteoporotic fractures in order to prevent its dreaded social, financial and health implications.

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