

## Osteoporosis

What is osteoporosis?

Osteoporosis is the thinning of bone tissue and loss of bone density over time. In osteoporosis the bone mineral density (BMD) is reduced, bone microarchitecture is deteriorating, and the amount and variety of proteins in bone is altered. Osteoporosis occurs when there is an imbalance between new bone formation and old bone resorption. Two essential minerals for normal bone formation are calcium and phosphate. After menopause sets in, oestrogen levels fall, and this leads to osteoporosis. Decreased dietary intake of calcium lack of weight bearing exercise, also contribute to the setting in of osteoporosis.

What are the symptoms of osteoporosis?

Osteoporosis is a silent disease. It may not cause any symptoms till there are minute fractures called fragility fractures, which commonly occur in vertebra, rib, wrist, and hip. Multiple vertebral fractures lead to a stooped posture, loss of height, and chronic pain with resultant reduction in mobility in the elderly. If there is loss of more than 1.5 inches then it means already there are micro-fractures in the spine. This hump is because of weak extensor muscles of the back along with very small fractures of the upper backbone which go unnoticed most of the time and are not diagnosed in more than one-third cases. This interferes with the quality of women's life by causing chronic backache, decreased chest space resulting in respiratory problems and decreased abdominal space leading to poor digestion.

How can one prevent osteoporosis?

Doing weight bearing exercises for about half an hour per day after the age of 35 is a good way of keeping osteoporosis away. Taking calcium rich food like milk or milk products, green leafy vegetables, and legumes, can also prevent osteoporosis. Calcium excretion is enhanced with intake of tea or coffee and one should cut down on their consumption.

How is it possible to know if one's bones are weak?

Answer: Weakening of bones caused by osteoporosis is a silent disease. One need not wait till one gets physical symptoms to know if the bones are weak. Periodic testing of the bones with special tests like DEXA or ultrasound of the heel bone can detect if the bones are beginning to get holes in them. This will warrant the use of medications, a little more than the ones used for prevention of bone pains.

I am 42 years old. I get low back ache when I try to work for long periods of time. How can I get rid of this problem?

Low back in the 40 plus woman could be due to lumbar strain. A lumbar strain is a stretch injury to the ligaments, tendons, and/or muscles of the low back. The stretching incident results in microscopic tears

of varying degrees in these tissues. The condition is characterized by localized discomfort in the low back area with onset after an event that mechanically stressed the lumbar tissues. The treatment of lumbar strain consists of resting the back (to avoid reinjury), medications to relieve pain and muscle spasm, local heat applications, massage, and eventual (after the acute episode resolves) reconditioning exercises to strengthen the low back and abdominal muscles. Resting the back should not go on for too long, as this can also be bad for your back.

Other causes of back ache could be bony projections hitting the spinal nerves or degenerative conditions of the bones or joints of the back. Correct diagnosis can be evolved with investigations.

Conditions affecting the uterus or ovaries can also rarely cause backache, and this should be ruled out, but in majority of cases, back ache is caused by abnormalities caused in the back itself. If the source of the pain lies in the reproductive organs, other problems often occur as well, including a sensation of pressure on the bladder, urinary urgency, and pain during urination, defecation or sexual intercourse

I had undergone hysterectomy for fibroid uterus . The doctor did not remove my ovaries. However, now I get severe pain in my knees . Is it related to hysterectomy or menopause?

Answer: Hysterectomy or menopause cannot cause pain in the knees. Pain in the knees could be caused due to inflammation in the kneejoint, injury to muscles or ligaments around the knees, or even degeneration of the bones near the knee joints, called osteoarthritis. None of these conditions are caused by menopause. It is a misconception to think that hysterectomy can lead to many aches and pains.

It is commonly known that after menopause, bones become weak. This is because, the hormone oestrogen is not there to hold the mineral calcium in the bones, and this leads to the bones becoming porous. However, this phenomenon is most commonly seen in the hips, back and wrists.

. I have undergone hysterectomy with removal of both ovaries. I am 40 years old. Should I take any suppliments to prevent backache? I have heard that menopause leads to weakening of bones.

Answer: (Written in consensus with opinions taken from Dr.Maninder Ahuja, Dr.Atul Munshi, Dr.Meeta Singh, Dr.Mandakini Parihar, Dr.Sonia Malik and Dr.Ambuja, all senior members of Indian Menopause society.)

Your ovaries still had a few ova in them which would have protected your bones for some more time, besides many other functions. Since your disease needed removal of this protection, it would be good for you to take hormone replacement therapy till you are 45- 50 years of age. This will also prevent weakening of bones. Life style changes should be made , as written in the answer to the previous question.

Q2. I have undergone hysterectomy and my ovaries are intact. Should I take treatments like calcium supplements or some other drugs ?

If the ovaries have not been removed, they will continue to produce hormones if you are at an age when they still function. They will stop functioning after some time when the number of ova in the ovaries get depleted with age. Till such a time, there is no need to take supplements, just because one has undergone hysterectomy. You must remember to find time to walk for at least 20 minutes a day, avoid easily digestible sugars, take adequate amount of vegetables and fruits, and make sure you take at least a glass of milk or curd or buttermilk, so you have some amount of dietary calcium. After the age of 50, oestrogen will stop protecting the bone, so it will be good if you can take calcium tablets regularly, as the body's need for calcium increases, (1200-1500mg/day is the requirement after 50 years) and this much calcium cannot be provided by the average Indian diet, which gives only about 600-800 mg of calcium per day.

Q3. I have undergone hysterectomy with removal of both ovaries. I am 40 years old. Should I take any supplements to prevent backache? I have heard that menopause leads to weakening of bones.

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