

World Osteoporosis Day 2009 - Don't wait for the bones to break

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By Eveline Gan

Start young, and stub out, to prevent your bones from crumbling

LIKE a thief in the night, the disease creeps up on you. A silent killer, osteoporosis — or brittle bones, in layman speak — has no early warning signs.

When it finally shows up, said Professor Shamal Das De, a senior consultant at the National University Hospital's (NUH) University Orthopaedic, Hand and Reconstructive Microsurgery Cluster, it is often all too late. By then, you would most probably have broken a bone or two.

More worrying is a fractured hip or spine, which could have serious consequences, added Prof Das De, who is also the head of the adult reconstructive surgery division at NUH.

He said studies showed that out of four elderly people who sustained a hip fracture from falls, one may possibly die, one will become wheelchair bound and one will become bedridden.

In Singapore, osteoporotic hip fractures are on the rise. According to the Health Promotion Board (HPB), hip fractures in women aged 50 and above have seen a five-fold increase from 75 cases to 402 cases per 100,000 population over the past 30 years. Among men aged 50 and above, the increase was 1.5 times over the same period.

Start young

Although most people associate the crumbling bone condition with older adults, Prof Das De said it is never too early to start building up your bones.

"Most people reach peak bone mass — when one's bone density is at its highest — between the age of 20 and 30. After that, it's a downward slide," he said.

That's why, added Prof Das De, it is important to build a "healthy bone bank" from young. And maintain it after you attain peak bone mass, so as to lower your risk for osteoporosis at an older age.

According to Ms Grace Koh, a nutritionist at the HPB youth health division, a combination of a balanced diet, including adequate calcium-rich foods and vitamin D, and regular weightbearing exercises is needed to build healthy bones.

Examples of weight-bearing exercises include brisk walking, jogging, rope skipping, dancing, and ball games.

Ms Koh recommended children aged seven to nine to take 700mg of calcium daily and 2.5mcg of vitamin D.

Teenagers will need 1,000mg of calcium daily and 2.5mcg of vitamin D. Calcium-rich foods include milk, yoghurt, cheese, sardines with bones and vegetables such as kai lan, broccoli and spinach.

"Vitamin D can be obtained by eating vitamin D-fortified foods or from exposure to the sun, as our skin can produce vitamin D under sunlight," said Ms Koh.

Don't puff away your bone bank

While it is rather well-known that risk factors include genes, a sedentary lifestyle and an inadequate intake of calcium and vitamin D, not many people are aware that smoking can also be bad for your bones, said Prof Das De (see box for other risk factors).

He added that teenage smokers may have trouble building up a healthy bone bank during their growing-up years — setting themselves up for early osteoporosis.

The 2006 Student's Health Survey, conducted by the HPB on 3,844 secondary school students, found that the median age at which young smokers picked up smoking was 12 years old.

"Nicotine has harmful effects on osteoblasts, which are bonebuilding cells. If you smoke, you also lose bone faster than an average person does," explained Prof Das De.

Smoking also disrupts oestrogen metabolism in women. The female hormone is important in healthy bone-building.

"Women smokers may also go through accelerated menopause, during which they experience a dip in oestrogen and a higher risk of osteoporosis."

Did You Know?

Consuming too much caffeine, sodium and alcohol isn't good for your bones, said Prof Shamal Das De, a senior consultant at the NUH University Orthopaedic, Hand and Reconstructive Microsurgery Cluster. Alcohol has the same harmful effect as smoking — it interferes with bone-building cells — while caffeine and sodium increase urinary secretion of calcium.