Scientist: Osteoporosis can be prevented with red clover

This could be the end of oestrogen treatment for post-menopausal women suffering from osteoporosis. Instead, a shot of concentrated fermented red clover (Trifolium pratense) might prevent the breakdown of bones.

These are the conclusions of two new studies, published in the American Journal of Clinical Nutrition and PLOS One.

“The treatment is groundbreaking, as we can now treat osteoporosis without the use of dangerous oestrogens, which introduce a significantly increased risk of cancer and other side effects,” says Associate Professor Per Bendix Jeppesen from the Department of Clinical Medicine at Aarhus University, Denmark, and lead scientist of both of the new studies.

Especially good for women in developing countries

Fermented red clover can be a good medium to prevent osteoporosis if it is also cheap and does not have too many side effects, says clinical professor Niklas Rye Jørgensen, from the Department of Clinical Biochemistry, Rigshospitalet, Denmark.

“It could help to prevent osteoporosis around the world, but especially in less developed countries, where access to medicine can be limited. In developing countries it could be ideal to use a natural product, which is considerably cheaper to produce than conventional medicine,” says Jørgensen, who was not involved in either of the new studies.

But more studies are needed to reveal any side effects from consuming fermented red clover, he says.

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Red clover halts osteoporosis

Jeppesen and colleagues tested treatment with fermented red clover on 78 post-menopausal women with early stage osteoporosis.

The women were split into two groups: One received treatment with 60 millilitres of fermented red clover extract, while the other received a placebo.

After 12 months, the scientists scanned the women’s hips and backs to measure their bone density. The placebo group had lost around five per cent of their bone mass, while the women who took fermented red
clover maintained their bone density.

In other words, osteoporosis and bone wasting stopped.

“The women who took red clover were down to a bone mass loss typical of their age group. Those who didn’t receive the treatment lost three times as much. The red clover had a really good effect,” says Jeppesen.

*Read More: Physical activity makes osteoporosis sufferers more confident*[6]

**Available to buy already**

Red clover extract is already used as an alternative therapy, and pre-and post-menopausal women can buy the extract to prevent osteoporosis.

Whether it has the same benefit for men is unknown.

“We initially focused on women in the years after menopause since they are the most vulnerable. We have no evidence that there is the same effect in men, but we don’t rule out conducting similar research for them,” says Jeppesen.

**Red Clover contains oestrogen-like substances**

The beneficial effects of red clover come from a substance known as plant oestrogen, which has some of the same affects as ordinary oestrogen.

However, plant oestrogen binds to different receptors in the body’s cells and therefore has a slightly different effect.

“We’ve also found positive effects from red clover on the symptoms of menopause, for example, by reducing the occurrence and severity of hot flushes,” says Jeppesen.

*Read More: Milk is a poor preventer of osteoporosis*[7]

**Fermentation makes red clover more potent**

The review published in the American Journal of Clinical Nutrition is a summary of five previous studies, which indicate that the positive effect only occurs with the ingestion of fermented red clover, which has been treated with lactic acid bacteria or something similar.

Sugar molecules in the plant oestrogen prevent it from breaching the intestinal wall. But the lactic acid bacteria remove these sugar molecules, allowing the oestrogen to enter the blood stream.

“The lactic acid bacteria make plant oestrogen more potent and active. At the same time they are generally healthy for the gut since they improve digestion,” says Jeppesen.

Eating red clover could also help women look younger as oestrogen has an impact on the body’s fat deposits.

“It’s really exciting as it could be ground breaking, if red clover has some positive effects, which you otherwise would get with hormone treatments and a range of side effects,” says Jeppesen.

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*Read more in the Danish version of this story on Videnskab.dk* [8]
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'Combined Red Clover isoflavones and probiotics potently reduce menopausal vasomotor symptoms', Plos One (2017), doi: 10.1371/journal.pone.0176590

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