

# Fermented red clover extract stops menopausal hot flushes and symptoms

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The vast majority of women in the menopause are familiar with the status of Red Clover as an herbal medicine that soothes hot flush symptoms and hormonal fluctuations. This holds true, new research shows, if the red clover is taken in a fermented form. Fermented Red Clover extract is demonstrated to decrease significantly both the number and severity of daily hot flushes.

The study also found that the extract prevents the normally accelerated menopausal bone loss affecting one in three women over the age of 50 (e.g. results showed treatment blunted bone loss in the spine completely). These findings are very promising as the benefits take place without any of the side effects of traditionally proscribed hormone therapies that increase the risk of cancers and cardiovascular diseases.

The above is the most important information from the scientific article "Combined Red Clover isoflavones and probiotics potentially reduce menopausal vasomotor symptoms", that researchers at the Dept. of Endocrinology and Internal Medicine under the Dept. Clinical Medicine at Aarhus University/ Aarhus University Hospital

have published in the journal *PLOS One*.

The study lead Professor Per Bendix Jeppesen has previously presented partial unpublished data to the media. These findings have rapidly been misreported to mean "Red Clover works", which as Per Bendix Jeppesen and his colleague Ph.D. Max Norman Tandrup Lambert explain, "is an oversimplification that is very close to being incorrect".

"It is the [fermentation process](#) of the Red Clover extract that makes the difference, as the lactic acid fermentation increases the bioavailability of the bioactive estrogen-like compounds (known as isoflavones or phytoestrogens) that Red Clover has in abundance," explains Max Norman Tandrup Lambert.

"The challenge with isoflavones is that they can be difficult to digest as they naturally occur in the plant bound to sugar molecules which prevent absorption. Hence, a large proportion of the isoflavones that are consumed (e.g. as a pill or capsule) can pass through the intestine without entering circulation. This problem is bypassed when the Red Clover extract undergoes a fermentation process. To be technical the process separates the sugar molecules from the isoflavones, thereby increasing bioavailability," explains Max Norman Tandrup Lambert.

Max and Per Bendix Jeppesen are aware that the research findings inadvertently provide an invaluable seal of approval to an ecological farmer and business owner Michael Mohr Jensen, who has patented the production process of the fermented Red Clover extract. Michael Mohr Jensen sells the product from his private company "Herrens Mark" on Fyn. Presumably, the goal from the researchers perspective is to promote research that can help women in the menopause that also has a commercial side.

"That characterization does not apply to me," says Per Bendix Jeppesen. "For me, when I can see that research has a realistic use practically I get extra curious. The fact that the research we have contributed has direct practical application is a great positive, it doesn't happen enough even with all the universities talking about becoming more business orientated and the necessity of collaboration with businesses," says Per Bendix Jeppesen.

Interestingly, it was Michael Mohr Jensen who contacted Per Bendix Jeppesen to ask if he and other researchers from the Dept. of Endocrinology and Internal Medicine would investigate his hypothesis regarding fermented Red Clover extract as a healthier alternative to traditional estrogen therapy proscribed by doctors. In the ensuing collaboration it was Per Bendix Jeppesen and Max Norman Tandrup Lambert that advised the farmer in fine-tuning his Red Clover extract to improve the gastro-intestinal uptake of the active isoflavone compounds.

The fermentation development was a success and the results are now tested in Max Norman Tandrup Lambert's Ph.D. project - a study that recruited 130 women with menopause symptoms, of which 60 were selected based on criteria of at least five severe hot flushes per day and blood tests (including FSH, that indicates the "stage" of menopause).

"The women were separated into two groups of 30, so 30 drank 150ml Red Clover extract per day for 12 weeks, whilst the other 30 drank a masked placebo product. After 12 weeks we tested again and were speechless about the data. There was a much greater effect than we had hoped for." Says Max Norman Tandrup Lambert.

Per Bendix Jeppesen also emphasizes that the research project has avoided relying only on "self reports", which can be a considerable source of error in investigations into whether a treatment works. For example in this study the women's' hot flush symptoms were measured using a so called 'skin conductor', a device that is applied to the underside of the wrist that can determine the number hot flush events and their severity

objectively based on sweat secretion. Similarly, the effect of the Red Clover extract on bone health has been tested via so-called DXA scans of the spine and hips.

All measurements are taken in the same way before and after 12 weeks of treatment; this enhances the credibility of the findings, as menopause symptoms are particularly difficult to measure.

**More information:** Max Norman Tandrup Lambert et al, Combined Red Clover isoflavones and probiotics potentially reduce menopausal vasomotor symptoms, *PLOS ONE* (2017). [DOI: 10.1371/journal.pone.0176590](https://doi.org/10.1371/journal.pone.0176590)

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