

# Lingonberry juice may lower elevated blood pressure

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An experimental study found that long-term consumption of lingonberry juice lowers high blood pressure and improves the function of blood vessels.

At some point in their lives, many people develop elevated blood pressure, even hypertension and functional disturbances in blood vessels related to low-grade inflammation. In addition to drug therapies, nutrition has a key role in the management of these disorders.

Epidemiological studies have shown that polyphenol-rich food reduces the risk of cardiovascular diseases. Lingonberry, bilberry, cranberry and blackcurrant are excellent sources of polyphenols.

In her doctoral thesis, Anne Kivimäki, MSc (Food Science) investigated the cardiovascular effects of cold-pressed lingonberry juice, [cranberry juice](#) and blackcurrant juice as drinking fluid for 8-10 weeks on genetically hypertensive rats (SHR).

Diluted lingonberry juice significantly lowered [high blood pressure](#) while juice that contained more polyphenols improved impaired blood vessel function to the level of healthy vessels. The juice did not prevent the age-related elevation of blood pressure typical to the hypertensive animal strain.

Lingonberry juice prevented the expression of genes associated with low-grade inflammation in the aorta. The effect of other berry juices was less marked.

Underlying the effect is probably the reduction of low-grade inflammation as well as mechanisms related to the renin-angiotensin system, a central regulator of blood pressure, and the availability of nitric oxide, a local endothelial vasodilating factor.

"These experimental findings need evidence from comparative clinical studies on healthy individuals with slightly elevated blood pressure who, at this point, have been given nutritional and lifestyle guidance instead of drug therapy. Lingonberry juice is no substitute for medication, but it is

a good dietary supplement," Kivimäki says.

Kivimäki's [doctoral thesis](#), titled "Lingonberry juice, [blood pressure](#), vascular function and inflammatory markers in experimental hypertension," was examined and accepted for Ph.D. degree at the University of Helsinki on 13 December 2019. The thesis can be accessed through the E-thesis service.

**More information:** Lingonberry juice, blood pressure, vascular function and inflammatory markers in experimental hypertension. [urn.fi/URN:ISBN:978-951-51-5631-0](https://urn.fi/URN:ISBN:978-951-51-5631-0)

The thesis can be accessed through the E-thesis service. [helda.helsinki.fi/handle/10138 ... ?locale-attribute=en](https://helda.helsinki.fi/handle/10138...?locale-attribute=en)

Provided by University of Helsinki

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