

# Beetroot juice helps elderly people lower blood pressure by changing oral bacteria

Beetroot juice can change the bacteria in the mouths of older adults, potentially helping to lower blood pressure, a new study suggests.

A new study shows that beetroot juice can change the oral microbiome of older adults, potentially helping to lower blood pressure. The findings highlight the role of dietary nitrates as a potential tool for healthy aging.

## Nitrates and their effects in the body

Nitrates are important compounds found in vegetables and are consumed through the diet. In a study, older adults who drank a concentrated beetroot juice shot twice a day for two weeks had significant reductions in blood pressure. However, this effect was not seen in younger people.

The researchers believe that the improvement in blood pressure in the older group was related to changes in the oral microbiome. Specifically, beetroot juice inhibited some harmful bacteria, restoring a healthy balance in the mouth. When harmful bacteria dominate, the body becomes less efficient at converting nitrates from food into nitric oxide – an important molecule that keeps blood vessels flexible and helps regulate blood pressure.

Professor Anni Vanhatalo from the University of Exeter (UK), said:

*We all know that a diet rich in nitrates has many health benefits. As we age, our bodies produce less nitric oxide and our blood pressure often rises, which can lead to cardiovascular complications such as heart attacks and strokes. Increasing your intake of nitrate-rich vegetables can have long-term benefits. The good news is that if you don't like beets, you can still choose other nitrate-rich vegetables such as spinach, arugula, fennel, celery, or kale.*



## Differences between age groups

The study involved 39 young adults (under 30 years old) and 36 older adults (60–70 years old). Both groups underwent two phases: drinking nitrate-rich beetroot juice and drinking a nitrate-free placebo, each lasting 2 weeks with a 'washout' period in between.

The results showed that both groups had changes in their oral microbiota, but the effects were markedly different. In the older group, *Prevotella* (harmful) bacteria decreased, while *Neisseria* (beneficial) bacteria increased. At the same time, their average blood pressure – which was higher than in the younger group – also decreased significantly after drinking the nitrate-rich beetroot juice, but not when given the placebo.

Professor Andy Jones, University of Exeter, commented:

This study suggests that nitrate-rich foods may modulate the oral microbiome in a beneficial way, reduce inflammation, and support blood pressure reduction in older adults. This is an important basis for further research on a larger scale, while also considering gender and lifestyle factors in the body's response to dietary nitrate.

The findings demonstrate how bioscience can help us better understand the links between diet, the microbiome, and healthy aging. By shedding light on how nitrate affects oral bacteria and blood pressure, the study opens up new avenues for improving vascular health through nutrition.

You finished reading the article "**Beetroot juice helps elderly people lower blood pressure by changing oral bacteria**" edited by the [TipsMake](#) team. We hope this article has provided you with many useful tech tips and tricks. You can search for similar articles on tips and guides. Thank you for reading and for following us regularly.