

Short-term probiotics regimen may help treat gout, kidney disease

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Gout in X-ray of left foot. Credit: Hellerhoff/Wikipedia.

New research suggests that an individualized probiotic therapy regimen may improve symptoms of gout, gout-related kidney disease and other signs of metabolic syndrome. The study will be presented today at the American Physiological Society (APS) Aldosterone and ENaC in Health and Disease: The Kidney and Beyond Conference in Estes Park, Colo.

Gout is a form of arthritis caused by a buildup of [uric acid](#) crystals around the joints. The body produces uric acid as it breaks down purines—a compound found in many foods. Uric acid levels in the blood rise (hyperuricemia) with gout, and hardened accumulations of the crystals (tophi) may also form under the skin around affected joints. Studies have linked gout with [chronic inflammation](#)

and obesity, two conditions that contribute to [metabolic syndrome](#). Metabolic syndrome is a group of factors that increase the risk of diabetes, heart disease and stroke.

"Gout is a dangerous and underdiagnosed disease. However, the definition of metabolic syndrome does not include gout, [although it is] a severe and common metabolic disorder leading to [kidney failure](#)," said Rostyslav Bubnov, Ph.D., of the Zabotny Institute of Microbiology and Virology, National Academy of Sciences of Ukraine, and first author of the study. Bubnov's research team studied the effects of [probiotic](#) therapy on adults with obesity, gout and gout-related kidney disease. Probiotics are live bacteria and yeasts that replenish "good" bacteria in the digestive tract. Yogurt, fermented foods and certain dietary supplements contain probiotics. Past research suggests that probiotics decrease inflammation in the body and improve poor sugar and uric acid metabolism that contribute to the development of gout, Bubnov explained.

The type of probiotics prescribed was personalized to each volunteer based on his or her symptoms. The researchers administered the standard minimum recommended dosage for probiotics (100 million colony-forming units). After 10 days of probiotic therapy, the volunteers' health improved. They experienced:

- lower blood pressure
- weight loss
- reduced abdominal fat and waist circumference
- decreased lesion size and [scar tissue](#) on the kidneys
- decreased tophi size
- normal uric acid and creatinine levels in the blood

"Short-term individualized probiotic therapy is effective to treat signs of [metabolic syndrome] and

hyperuricemia and can successfully restore function and structure of [the] damaged kidney in gout," the researchers wrote. People with gout may be able to achieve the same results by eating yogurt or taking an over-the-counter probiotic supplement, Bubnov explained, but the effectiveness is likely to be higher with a personalized approach.

Rostyslav Bubnov, Ph.D., of the Zabolotny Institute of Microbiology and Virology, National Academy of Sciences of Ukraine, will present the poster "Probiotics effectively restore the function and structure of damaged [kidney](#) in [gout](#)" on Thursday, October 3, at the Stanley Hotel in Estes Park, Colo.

More information: The APS Aldosterone and ENaC in Health and Disease: The Kidney and Beyond Conference will be held October 2–6 in Estes Park, Colo.

Provided by American Physiological Society

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