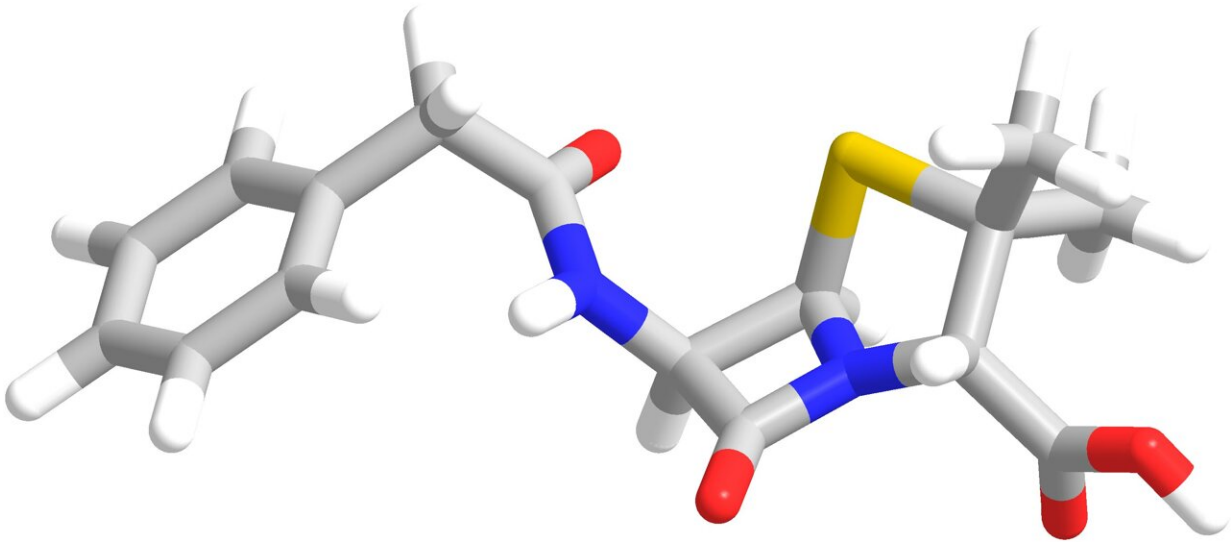


# Vulvovaginal symptoms common during penicillin course, finds research

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Chemical structure of Penicillin G. The sulfur and nitrogen of the five-membered thiazolidine ring are shown in yellow and blue respectively. The image shows that the thiazolidine ring and fused four-membered  $\beta$ -lactam are not in the same plane. Credit: Public Domain

Markedly often, women who take penicillin for strep throat suffer from vulvovaginal symptoms, and in both sexes, diarrhea is also common. On a relatively short course of penicillin, fewer people incur these side effects and there is no reduction in the intended result, a University of Gothenburg thesis shows.

Penicillin V, phenoxymethylpenicillin, is Sweden's best-selling antibiotic, under such brand names as Kåvepenin and Tikacillin. The most common diagnosis for [penicillin](#) treatment is [strep throat](#) caused by group A streptococcus bacteria.

The current treatment recommendation for strep throat is a ten-day course of penicillin V treatment. Strep throat symptoms generally remits spontaneously within a week and the purpose of treatment is to relieve the patient's symptoms.

The present thesis demonstrates that the clinical effect of a five-day course of penicillin V in adults is not inferior to that of the recommended ten-day treatment. It also shows that ten days' penicillin V treatment results in a higher proportion of patients with side effects than the shorter course.

## **Important for individual patients**

One in three patients treated with penicillin for ten days, compared with one in four treated for five days, developed diarrhea. The database comprised a total of 422 patients at 17 Swedish community health care centers in four regions: Kronoberg, Skåne, Sörmland, and Västra Götaland.

In the group of women who received ten days' treatment, one in four (25 percent) reported genital (vulvovaginal) discomfort, mainly in the form of increased discharge and itching. In the group of women treated for five days, the corresponding proportion was 15 percent.

The author of the thesis is Karin Rystedt, Ph.D. in [community medicine](#) and [public health](#) at Sahlgrenska Academy, University of Gothenburg, and specialist in [general practice](#) at Närhälsan Hentorp health center in Skövde.

"The high incidence of side effects was unknown before, but this knowledge is important for patients who have the option of either accepting or rejecting treatment. They can then weigh the pros and cons of taking penicillin and its [side-effects](#), against refraining and recovering from strep throat about a day later. This applies, not least, to women with earlier experience of vulvovaginal candidiasis."

## Increase in resistant gut bacteria

Ecological effects of penicillin V on patients' gut bacteria were also investigated. This was done by comparing stool cultures before and after treatment. Penicillin V was found to bring about a significant increase in intestinal bacteria with resistance to  $\beta$ -lactam (beta-lactam) antibiotics, which include penicillin V.

"It may seem odd that this is something new: After all, we've been using penicillin for nearly 80 years. But the findings do indicate that penicillin V should be used with caution and only when the benefit to the patient outweighs the risks," Rystedt says.

In the substudy comparing varying durations of penicillin courses, either 1,000 milligrams was administered thrice daily for ten days or 800 mg was given four times a day for five days. The latter variant is no national standard but is already being applied in some locations in Sweden.

**More information:** Thesis: [gupea.ub.gu.se/handle/2077/75183](https://gupea.ub.gu.se/handle/2077/75183)

Provided by University of Gothenburg

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