

# New tick-borne disease discovered in Gothenburg

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In July 2009 a 77-year-old man from western Sweden was out kayaking when he went down with acute diarrhea, fever and temporary [loss of consciousness](#). He was taken to hospital where it was found that he was also suffering with [deep vein thrombosis](#) (DVT). Following treatment with antibiotics, he was discharged some days later with an [anticoagulant](#) to thin his blood. However, the man – who had an impaired immune system – went down with a fever again.

## Brand new infection

Over the following months the 77-year-old was admitted as an emergency case on several occasions, but despite repeated attempts to find a microbe, and repeated doses of antibiotics, the fever returned. Finally the patient's blood underwent special analysis to look for bacterial DNA – and that produced results. The findings matched a bacterium in an online gene bank and the results were a sensation: the man had contracted a brand new [infection](#) in humans which had never been described in the world before.

## Never before seen in Sweden

Researchers at the University of Gothenburg's Sahlgrenska Academy have discovered a brand new tick-borne infection. Since the discovery, eight cases have been described around the world, three of them in the Gothenburg area, Sweden.

The man's blood contained DNA that derived with 100% certainty from the bacterium *Neoehrlichia mikurensis*. This bacterium was identified for the first time in Japan in 2004 in rats and ticks but had never before been seen in Sweden in ticks, rodents or humans.

## Research published

Christine Wennerås, a doctor and researcher at the Department of Infectious Diseases and the Department of Haematology and Coagulation at the University of Gothenburg's Sahlgrenska Academy, has been studying the case since it first came to light. Last year she was able, for the first time, to describe the newly discovered disease in a scientific article published in the *Journal of Clinical Microbiology*. "Since our discovery the bacterium has been reported in eight cases around the world, three of them in Gothenburg," says Wennerås.

## Causes DVT

All three of the Gothenburg cases involved patients with an impaired immune system, all of whom became ill during the summer months when ticks are most active.

"The nasty thing about this infection is that it causes DVT, at least in people with an impaired [immune system](#)," says Wennerås. "This can be life-threatening. Fortunately, the infection can be treated successfully with [antibiotics](#)."

## Spreads from mammals

"If the newly discovered [bacterium](#) is similar to those we already know, it has presumably spread from wild mammals to people via ticks, and it is unlikely that it can be passed on from person to person."

The mikurensis in the bacterium's name comes from the Japanese island of Mikura, where it was first discovered.

Provided by University of Gothenburg

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