

Peptic ulcer bacterium alters the body's defense system

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Helicobacter pylori survives in the body by manipulating important immune system cells. This is shown in a thesis from the Sahlgrenska Academy at the University of Gothenburg, Sweden. The discovery may lead to new treatments against the common peptic ulcer bacterium.

About half of the world's population carries [Helicobacter pylori](#), mainly in the stomach. Most infected individuals never experience any symptoms, but around 10% get peptic ulcers and around 1% develop stomach cancer. 'Carriers were often infected as children and if not treated with [antibiotics](#), the [bacterium](#) remains in the body for life. The immune system alone is unable to eliminate the bacterium, and now we understand better why', says biologist Bert Kindlund, the author of the thesis.

The study shows that a type of cells in the immune system called regulatory T cells down-regulate the body's defence against *Helicobacter pylori* and thereby enable the bacterium to develop a chronic infection. 'If we could control the regulatory T cells, we could strengthen the immune system and help the body eliminate the bacterium. This could be a new treatment strategy against *Helicobacter pylori*', Kindlund continues.

In addition, the bacterium makes the [immune system](#) increase the number of regulatory T cells in the lining of the stomach. This also occurs with stomach cancer. 'An important question is where the increased number of regulatory T cells in the stomach lining come from.

Knowing the answer to this question could help us develop a treatment for [stomach cancer](#). What we have found so far is that the regulatory T cells are actively recruited from the bloodstream into the tumour, and once there they start multiplying faster', says Kindlund.

Source: University of Gothenburg ([news](#) : [web](#))

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