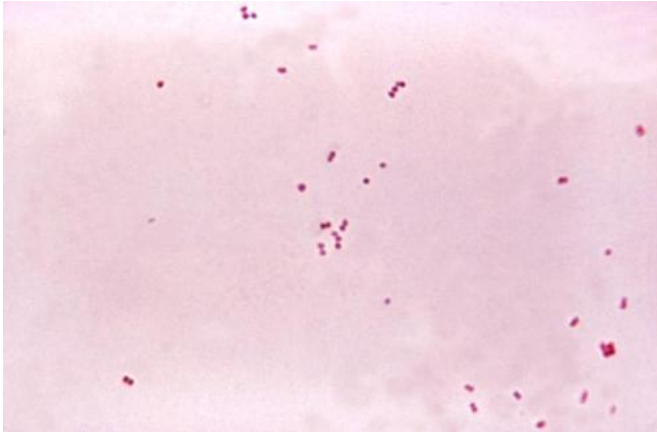


# Vaccines can cut the spread of meningitis by nearly 40 percent

18 August 2014



Gram stain of meningococci from a culture showing Gram negative (pink) bacteria, often in pairs. Credit: public domain

Investigators at the University of Southampton have discovered that two new vaccines can prevent the transmission of meningitis bacteria from person to person.

The vaccines do this by reducing 'carriage' of the responsible [bacteria](#) in the nose and throats of the population.

Meningitis is a devastating condition and the Southampton team believe this discovery will change the way new vaccines are made in the future.

Robert Read, Professor of Infectious Diseases at the University of Southampton, who led the study, says: "The standard practice is to vaccinate with the aim of inducing high levels of antibodies in the blood to protect against the disease, but we know that these antibodies can disappear over the course of a few months.

"This study is telling us that the vaccines also have

an effect on carriage in the throat and explains why they can be so effective across the population."

The study, published in *The Lancet*, took place over 10 centres across the UK and tested the effectiveness of two meningitis vaccines – MenACWY-CRM and 4CMenB – on participants aged 18 to 24 years old.

Participants were either given two doses of a control [vaccine](#), two doses of the 4CMenB vaccine or one dose of MenACWY-CRM and then a placebo.

MenACWY-CRM was shown to reduce carriage rates by 39 per cent while the 4CMenB vaccine, which was recently approved by the Joint Committee on Vaccination and Immunisation (JCVI) in March, reduced carriage rates by between 20 and 30 per cent.

Meningitis is an infection of the meninges - the membrane that surrounds the brain and spinal cord. Meningococcal bacteria are common and carried harmlessly in the nose or throat by about one in 10 people and are passed on through close contact. Anyone can get meningitis, but babies and young children are most vulnerable.

Professor Read adds: "This is a significant piece of work in helping more and more people be protected from meningitis. We have shown that vaccines modify the way the bacteria are carried, so even when the antibodies are no longer present in the blood, the carriage in the throat is still prevented, and so is onward transmission of the infection to others. This could provide a degree of herd protection against [meningitis](#) if implemented in a campaign in which high transmission occurs, for example in teenagers and young adults."

Provided by University of Southampton

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