

Inhibition of adhesion of *Neisseria meningitidis* to host cells by *Lactobacillus* strains

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The human body is colonized with a vast array of microorganisms predominantly bacteria. These microorganisms can be beneficial or harmful to the host and normally, a balance exists between these microorganisms. But occasionally, factors like antibiotics can disturb the balance and may lead to disease development. The use of live, beneficial microorganisms called probiotics to treat infectious disease and restore microbial disturbances are widely studied at present. Lactobacilli are among the beneficial organisms in our body. These organisms inhabit in the gastrointestinal, vaginal and oral tract and are commonly found in probiotic products. They inhibit a wide range of harmful organisms by utilizing different mechanisms. Some of the mechanisms are competition for nutrients and production of substances that can kill disease causing organisms.

Neisseria meningitidis is a human specific bacterium that normally colonize the nasopharynx of 10% of human population. Sometimes the bacterium causes severe diseases called meningitis and septicemia. The exact mechanism of disease development is largely unknown however, disturbance of microbial flora has been suggested as a factor.

In this study we investigated the effect of certain *Lactobacillus* strains on *N. meningitidis* adherence to host cells and we found that the adherence of *N. meningitidis* was not reduced by the *Lactobacillus* strains tested in our study.