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## Seaweed toothpaste 'to stop tooth decay'

**By Michelle Roberts**

Health editor, BBC News online

**Adding enzymes from seaweed microbes to toothpaste and mouthwash could provide better protection against tooth decay, a team of UK scientists have said.**

Researchers at Newcastle University had been studying *Bacillus licheniformis* to see if it could clean ships' hulls.

But the scientists now believe it could protect the areas between teeth where plaque can gather despite brushing.

Their lab tests suggest the microbe's enzyme cuts through plaque, stripping it of bacteria that cause tooth decay.

Dr Nick Jakubovics, of the university's school of dental sciences, said: "Plaque on your teeth is made up of bacteria which join together to colonise an area in a bid to push out any potential competitors.

"Traditional toothpastes work by scrubbing off the plaque containing the bacteria - but that's not always effective - which is why people who religiously clean their teeth can still develop cavities.

"We found this enzyme can remove some of these undesirable bacteria from plaque."

Plaque is made up of lots of different decaying bacteria.

When bacterial cells die, the DNA inside them leaks out and makes a biofilm that sticks to the teeth.

Instead of removing the plaque entirely, Dr Jakubovics believes the treatment could strip away the harmful bacteria, like *Streptococcus mutans*, that cause tooth decay.

"Ultimately we hope to harness this power into a paste, mouthwash or denture-cleaning solution."

He said more studies are needed to show the technique works and is safe before any products could be brought to market.

He is presenting the latest findings to a meeting of the Society for Applied Microbiology, the organisation that is funding the research along with the Newcastle Healthcare Charity.

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