

Friendly bacteria in chewing gum that bites back

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A chewing gum containing good bacteria that can destroy the bad bacteria that cause tooth decay could be in the shops soon, reports Marina Murphy in *C&I*. The gum is one of several products being developed by German chemical company BASF using the bacteria *lactobacillus*, which is normally found in live yoghurt.

BASF discovered a new strain of *lactobacillus* called *L. anti-caries*, which binds to *streptococcus mutans*, the bacteria responsible for tooth decay. *S. mutans* sticks to the surface of teeth, where it produces an aggressive acid that breaks down the enamel. The friendly bugs in the gum will make the *S. mutans* clump together, preventing them from becoming attached to the tooth surface. Tests reveal that the chewing gum can reduce the amount of bacteria in the mouth fifty times.

Stefan Marcinowski, executive director of research at BASF said that a *lactobacillus* product is due to hit the supermarkets in 2007, but would not confirm whether it is the chewing gum. Marcinowski says that the chewing gum 'has been tested on large numbers of people and demonstrated the ability to significantly reduce bacterial levels.' A new range of toothpastes and mouthwashes using *L. anti-caries* are also being developed.

Chewing gums containing the artificial sweetener xylitol, which has antimicrobial properties, have also been shown to suppress the bacteria that fight tooth decay.

Other potential uses of *lactobacillus* include the prevention of body odour. BASF is looking into producing a deodorant based on *L. aladoris*, which can inhibit odour-producing bacteria in the armpit. Similarly, tests have shown another strain, *L. alaodoris* can reduce odour formation in feet.

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