

# Breakthrough toothpaste ingredient hardens your teeth while you sleep

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A new toothpaste ingredient which puts back the lost minerals from tooth enamel and helps prevent decay and treat sensitivity while you sleep is available online and from specialist dental distributors now. It is expected to be available through high street stores by the end of the year.

The new BioMinF toothpaste ingredient provides a new tooth repair technology which will bring relief to the millions of adults and children around the world who are prone to [tooth decay](#) and sensitivity.

Dental decay is the most prevalent disease worldwide and the majority of adults will also experience [tooth sensitivity](#) at some stage during their lives. Decay is the single biggest reason for children being admitted into hospital with between 60-90 percent of school children being affected.

Tooth decay and sensitivity is estimated to affect 13.5million people in the UK alone.

Toothpastes containing BioMinF are able to slowly release calcium, phosphate and fluoride ions over an 8-12 hour timeframe to form fluorapatite mineral to rebuild, strengthen and protect [tooth structure](#).

The slow release of fluoride has been identified to be particularly beneficial in prevention of tooth decay.

"Using remineralising toothpaste makes teeth far more resistant to attack from acidic soft drinks like fruit juices and sodas. It is also much more effective than conventional toothpastes where the active ingredients, such as soluble fluoride, are washed away and become ineffective less than two hours after brushing," said Professor Robert Hill, Chair of Dental Physical Sciences at Queen Mary, University of London, who led the team which developed BioMin and won the 2013 Armourers and Brasiers Venture Prize.

"This breakthrough innovation could significantly reduce [dental decay](#) and also tooth sensitivity problems which are often experienced by people eating or drinking something cold," said Professor Hill.

"The technology behind BioMin is not however exclusively designed for toothpastes," added Professor Hill. "It can also be incorporated in other professionally applied dental products such as cleaning and polishing pastes, varnishes and remineralising filling materials."

Professor Hill has co-founded, BioMin Technologies, which aims to commercialise the development. The company will be led by chief executive Richard Whatley who has 30 years international management experience within the dental industry working for market leading companies such as Dentsply and KaVo.

"We are very excited by the prospects of developing the patented technology which has been licensed from Queen Mary University of London and Imperial College," said CEO Richard Whatley. "We are in the process of establishing licencing agreements with toothpaste and dental materials manufacturers around the world."

"A key element of our business model includes business partners also becoming investor stakeholders in the company thus reducing the need for traditional third party financing from venture capitalists. Our aim is for the BioMin brand to become synonymous for the treatment of tooth sensitivity in the eyes of both the dental profession and the general public."

Dr David Gillam, with expertise in the management of dentine hypersensitivity and a consultant and co-founder of BioMin said, "Tooth sensitivity is caused by open tubules in the teeth allowing access to the nerve receptors which may affect the quality of life of individuals particularly when eating and drinking hot and cold food and drink. BioMin containing toothpastes are effective by sealing the tubules with acid resistant fluorapatite which act as a barrier to hot and cold being transmitted inside the tooth."

A fluoride free version of BioMin is also being developed for individuals who do not want or need fluoride toothpaste.

**More information:** BioMinF is available from dental practices and distributors now or via <http://www.biomin.co.uk> at £4.99 for 75ml tube.

Provided by Queen Mary, University of London

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