

## New technology aims to repair the after-effects of gum disease

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Advances in tissue engineering are offering the promise of being able to restore lost bone and gum tissue following periodontal disease.

About a third of the population are affected by chronic inflammatory [gum disease](#) which can result in loss of the bone and other tissues that support our teeth.

Professor Saso Ivanovski, Listerine Chair in Periodontology at Griffith's School of Dentistry and Oral Health, said even when the infection or inflammation was brought under control, people can be left with an unsightly appearance and poor function.

The colloquial expression 'long in the tooth' is often used to describe people and things of a significant age, however the unsightly effects of severe gum disease and gum retraction leading to wobbly teeth are not confined to the elderly.

"Smoking, uncontrolled diabetes, stress and [genetic susceptibility](#) are some of the risk factors for gum disease, which affects people of all ages," he said.

Advanced disease affects about 10 per cent of the population.

Over recent years, Professor Ivanovski's research at the Griffith Institute for Health and Medical Research has been focussed on growing layers of cells such as [stem cells](#) and gingival (gum) [fibroblasts](#) for restoring

damaged smiles.

"Previous work was involved in looking at the growth factors and optimal cell types for regenerating destroyed tissue."

"Now we are using new technology to harvest sheets of these [cell cultures](#) and transfer them safely to the surface of the tooth root," he said.

Laboratory studies indicate that the cells can be successfully grafted with periodontal repair taking about six months.

Professor Ivanovski said the technique had already been shown to be useful in other applications such as harvesting cells for skin grafts and other injured tissues.

Provided by Research Australia

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