

Successful pilot trial of needle-free dental anaesthesia in New Zealand

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It could reduce or eliminate anxiety due to needle phobia



Researchers are literally taking the pain out of visits to the dentist after the successful creation and pilot trial of a needle-free device for dental anaesthesia for teeth extractions.

A collaboration between the University of Otago, University of Auckland, and Auckland University of Technology in New Zealand, the device differs from other needle-free dental jet injectors in that it is driven by a silent motor and is specifically designed for dental work.

Eight patients who all needed removal of top teeth as part of their treatment plan were included in the trial. All participants received both the traditional needle and the needle-free injection device.

The needle-free anaesthesia was the preferred technique by all of the participants at all stages, and six of the eight reported a pain-free extraction with the needle-free delivery. In two cases further anaesthetic was required by the traditional needle technique.

Professor Paul Brunton, who undertook the study, published in the *Journal of Dentistry*, while at the University of Otago Faculty of Dentistry, says fear of needles is a significant barrier to people going to the dentist.

While the results of this study are encouraging, a larger clinical trial is the next step to validate the technique and to investigate whether it can be used for other dental treatments that require local anaesthesia.