

Dentist develops new filling for root canal treatments

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In a recently published article in *PLOS ONE*, findings from a pilot study outlined the potential effectiveness of a new therapeutic gel filling for root canals that releases nitric oxide and antibiotics into the treated tooth

canal, instead of the standard blood clotting that is typically used to fill the empty canal post-procedure.

Kyounga Cheon, DMD, M.S., assistant professor in the University of Alabama at Birmingham School of Dentistry and corresponding author of the study, found that the nanomatrix gel filling can help regenerate and heal the site better than the commonly used clotted blood to fill the [canal](#). The new [nitric oxide](#) filling releases antibacterial properties that aid [pulp](#) regeneration and the [antibiotics](#) needed to treat the site simultaneously.

"Root canals are common dental procedures in which infected pulp tissue is removed from the tooth, and having a bioactive therapeutic filling that can help treat and heal the pulp tissue would be of huge benefit to both the dentist and the patient," Cheon said. "We're hopeful that the combination of antibiotics and nitric oxide will help change the way root canals are treated moving forward."

Future studies will be needed to determine how effective the gel filling is with a larger sample size and how to best integrate into endodontic practice.

More information: Chan-Yang Moon et al. Effects of the nitric oxide releasing biomimetic nanomatrix gel on pulp-dentin regeneration: Pilot study, *PLOS ONE* (2018). [DOI: 10.1371/journal.pone.0205534](https://doi.org/10.1371/journal.pone.0205534)

Provided by University of Alabama at Birmingham

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