

# Wash your mouth out with silver

March 8 2012

---

Yeasts which cause hard-to-treat mouth infections are killed using silver nanoparticles in the laboratory, scientists have found. These yeast infections, caused by *Candida albicans* and *Candida glabrata* target the young, old and immuno-compromised. Professor Mariana Henriques, University of Minho, and her colleagues hope to test silver nanoparticles in mouthwash and dentures as a potential preventative measure against these infections.

Professor Henriques and her team, who published their research in the Society for Applied Microbiology's journal [Letters in Applied Microbiology](#) today, looked at the use of different sizes of silver nanoparticles to determine their anti-fungal properties against [Candida albicans](#) and *Candida glabrata*. These two yeasts cause infections including oral thrush and dental stomatitis, a painful infection affecting around seven out of ten denture wearers<sup>1</sup>. Infections like these are particularly difficult to treat because the microorganisms involved form biofilms<sup>2</sup>.

The scientists used artificial [biofilms](#) in conditions which mimic those of saliva as closely as possible. They then added different sizes and concentrations of silver nanoparticles and found that different sizes of nanoparticles were equally effective at killing the yeasts. Due to the diversity of the sizes of nanoparticles demonstrating anti-fungal properties the researchers hope this will enable the nanoparticles to be used in many different applications.

Some researchers have expressed concerns around the safety of

nanoparticle use but the authors stress this research is at an early stage and extensive safety trials will be carried out before any product reaches the market.

Professor Henriques comments: With the emergence of *Candida* infections which are frequently resistant to the traditional antifungal therapies, there is an increasing need for alternative approaches. So, silver nanoparticles appear to be a new potential strategy to combat these infections. As the nanoparticles are relatively stable in liquid medium they could be developed into a mouthwash solution in the near future.

Moving forward Professor Henriques hopes to integrate [silver nanoparticles](#) into dentures which could prevent infections from taking hold.

Provided by Wiley

Citation: Wash your mouth out with silver (2012, March 8) retrieved 5 May 2024 from <https://phys.org/news/2012-03-mouth-silver.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.