

PRESS RELEASE
ODON STUDY- CoEHAR

Smoking spoils dental whiteness: the ODON study

Compared to non-smokers, smokers' teeth are significantly less white. Nevertheless, the appearance of the teeth improves after stopping smoking.

CATANIA, 10 March 2022 - The notion of improvement in dental whiteness may become a much more compelling reason to quit smoking, especially for those smokers who perceive the appearance of their teeth (owing to tooth discolouration and "tar"/tobacco stains) as a major problem.

LINK: <https://link.springer.com/article/10.1007/s10266-022-00692-x>

A group of Italian researchers carried out a new study on these questions under the coordination of Riccardo Polosa, Professor of Medicine and Founder of CoEHAR at the University of Catania, and Giovanni Zucchelli, professor of Periodontology University of Bologna.

ODON is the first study of its kind to examine and compare the differences in the color of teeth in a group of smokers and non-smokers.

The Italian researchers have shown that the teeth of smokers are significantly less white than those of non-smokers, according to a study published in the well-known scientific journal *Odontology*. Additionally, stopping smoking improves the whiteness of the teeth.

In general, teeth are evaluated by eye, visually comparing shades based on predefined shade scales. This is a subjective and imprecise method. **Digital spectrophotometry measurement of dental shade has been used to objectively compare the shade indices of the white of the teeth between smokers, ex-smokers and non-smokers in the research study "Repeatability of dental shade by digital spectrophotometry in current, former, and never smokers".**

"We are proud of the results of our research showing that smokers' teeth are significantly less white than those of non-smokers. Moreover, the index of dental whiteness of former smokers is intermediate between that of smokers and that of never smokers" - explains Giovanni Zucchelli, professor of Periodontology University of Bologna.

Smoking causes dental discoloration that is not permanent and can be reversed by quitting.

According to the study, digital spectrophotometry could also be advantageous for other evaluations since it can accurately measure the alterations in the shades of white of the teeth.

For instance, how do the smiles of those who switch from conventional cigarettes to smokeless products differ? Switching to tar-free nicotine delivery technologies (such as e-cigarettes or heated tobacco products) it is possible to improve oral health and dental whiteness of smokers.

In order to address these questions, an international study is currently being conducted by CoEHAR researchers to assess the impact of e-cigarettes and heated tobacco products on the oral health and dental aesthetic of more than 600 people.

In terms of public health, these studies may have a tremendous impact, according to Riccardo Polosa, Professor of Medicine and Founder of CoEHAR at the University of Catania. People who feel that bad breath or their teeth appearance are a major problem, can be massively influenced by aesthetic considerations to stop smoking.

THE STUDY

Research from CoEHAR has measured the whiteness of teeth in current smokers, former smokers, and never smokers in partnership with experts from the Universities of Catania and Bologna.

After the first visit, the researchers verified the measurements of the whiteness of the teeth also at seven and thirty days afterward to give greater credibility to the findings.

Using the findings of this study, the authors are now planning to conduct a larger international study that will evaluate the whiteness of teeth in smokers switching to alternative nicotine delivery technologies, such as e-cigarettes and heated tobacco.

Center of Excellence for the acceleration of Harm Reduction

CoEHAR is a University research centre that includes the existing “Centro per la Prevenzione e la Cura del tabagismo (CPCT)”, as well as the clinical setting of a local CRO and a selected network of cell and molecular biology as well as microbiology laboratories. CoEHAR mission is to accelerate efforts to study and reduce health impacts and deaths from smoking locally nationally and globally through use of approved pharmacological approaches as well as innovative technology. CoEHAR also acts as a coordinating centre at a global level for scientific research, development of tech innovation, consolidation of existing research centers (particularly in LMIC), training and education, networking, and advocacy activities. 80 academics from the University of Catania and other external experts constitute the Center of Excellence for the acceleration of HARM Reduction (CoEHAR)