

Snus dangers - and how to help



New research shows that the easiest way to help and encourage patients to stop using snus is underutilized. Only about 1 in 10 dentists and 4 out of 10 dental hygienists, in a recent study, were familiar with the minimal intervention method. This despite the fact that the method has shown considerable effect.

Snus, a moist tobacco product, has grown in popularity over recent years. It is especially prevalent among young people in Norway, Sweden and Finland. Many perceive it as a safe alternative to smoking. It is however, not without adverse effects on health.

Adverse health impact

Several studies have shown snus to cause changes in the oral cavity. This includes gum recession and changes in the oral mucosa, often causing red or white areas.

In 2014, a report from the Norwegian Institute of Public Health concluded that snus also has serious adverse effect on the user's over-all health. Among the dangers presented was an increased risk of certain forms of cancer, stillbirth, and increased mortality after myocardial infarction or stroke.

Three easy steps to stop use of tobacco

The minimal intervention method consists of three steps:

1. Ask the patient about their tobacco use.
2. Ask about their experience with the use. Are they experiencing any ill effects?
3. Ask if they would like to quit. If they do, make an offer of support.

The offer of support may include information about the help their personal physician can offer. If they are worried about craving snus or gaining weight, there are prescription drugs that can help during treatment.

The health professional can also have a motivational chat, or refer the patient to any of the several online support systems available.



Read more:

Tanner T., et al., 2019, "Prevention of snus use: Attitudes and activities in the Public Dental Service in the south eastern part of Norway?" <https://doi.org/10.1002/cre2.1371>

Snus has become the nicotine source of choice for many in the Nordic countries.

In Norway, we also have the app "Slutta" (Quit) that is especially designed to help people stop smoking or using snus.

New tooth wear simulation device

NIOM's new mechanical masticator performs wear simulation of oral conditions. It mimics attrition in acidic environments, on a variety of different materials: human teeth and dental materials such as resin composite, glass ionomer and porcelain.

- To simplify, we call it the tooth wear machine, NIOM researcher Aida Mulic says.

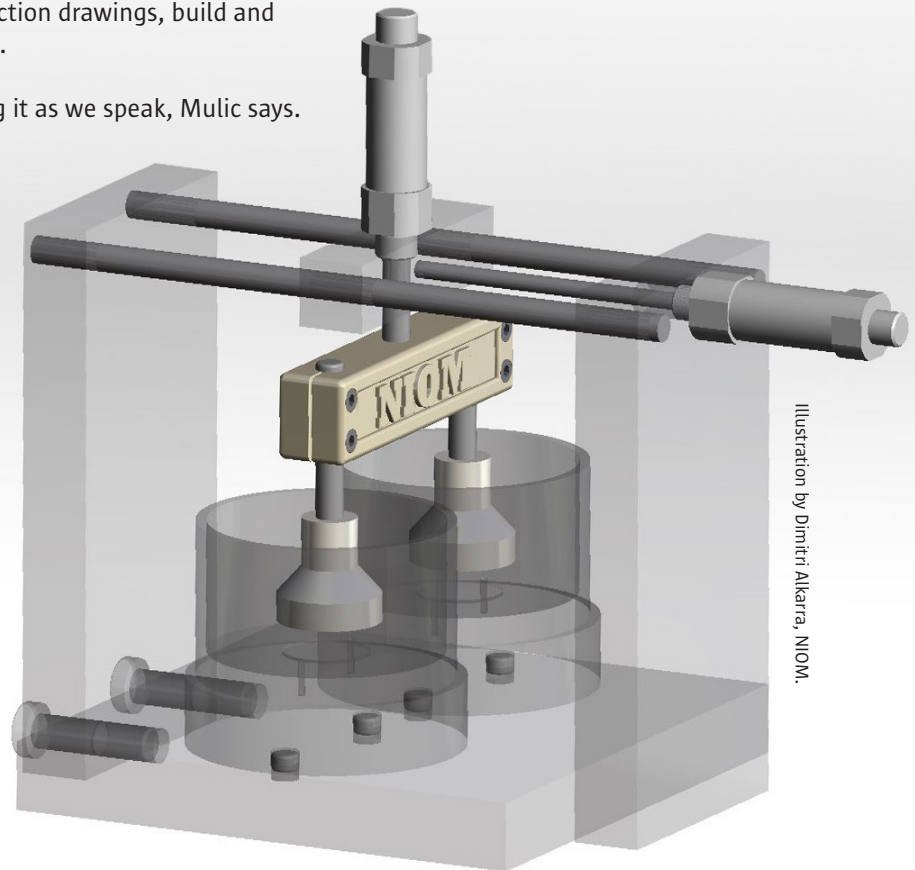
To produce attrition, the machine simulates a bite with a downwards force typical of an average human, with an impact of about 20 Newton. It then increases the force to 70 Newton as the teeth, or dental material specimens, glide against each other horizontally, mimicking human chewing patterns.

- We can do this with the specimens submerged in acidic liquids to simulate erosive wear, or in artificial saliva, which would be a more clinically relevant situation, Mulic says.

NIOM design

The machine is designed at NIOM. Mulic and her research colleagues, Ellen Bruzell and Ida Refsholt Stenhagen, determine the features needed to improve wear test methodology. Engineers Erik Kleven and Dimitri Alkara then make the construction drawings, build and modify the device.

- We're fine-tuning it as we speak, Mulic says.



How it all connects

The machine allows researchers to mount specimens of different materials, including teeth, in the moving or fixed holders. This makes it possible to observe the effects of material combinations.

- By combining simulated tooth wear with other methodologies, such as abrasion that mimics tooth brushing, we can investigate how attrition, erosion and abrasion interact. With the new machine, NIOM has the methods to simulate an oral environment.

We can see the whole picture, Mulic says.

Researchers at NIOM hope to gain new insight into combined tooth wear influences under various conditions, and its influence on dental material characteristics.

The machine is being designed and built at NIOM.

The device is designed with the intention to simulate tooth wear.