

- Virus

COVID'S ATTACK ON THE SENSES

New research urges Thais who experience a complete loss of taste and smell to be screened for the virus

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The bottom line: Covid-19 patients can experience loss of smell and taste. Although many studies have been carried out in various countries regarding this significant Covid-related symptom, Dr Dunyaporn Trachootham — a dentist — and her team of researchers recently released Thailand's own study on the association between taste and loss of smell in Covid-19 cases. The study was published last month in *The International Journal Of Infectious Diseases* under the International Society for Infectious Diseases.



Titled “Simultaneously Complete But Not Partial Taste And Smell Losses Were Associated With SARS-CoV-2 Infection”, the research was carried out by a team of six researchers including Dr Dunyaporn — Dr Supeda Thongyen, Dr Wannarat Pongpirul and Dr Wisit Prasithsirikul from the Bamrasnaradura Infectious Diseases Institute; Dr Aroonwan Lam-Ubol from

the Department of Oral Surgery and Oral Medicine, Srinakharinwirot University's Faculty of Dentistry; and Nattida Chotechuang from the Department of Food Technology, the Faculty of Science under Chulalongkorn University.

A lecturer at Mahidol University's Institute of Nutrition, Dr Dunyaporn said the reason Thailand requires its own research is due to poor taste sensitivity among Thais.

"In my previous study, we found that Thais had worse taste sensitivity and perception than the Japanese," said Dr Dunyaporn, referring to her research titled "Differences In Taste Perception And Spicy Preference: A Thai-Japanese Cross-Cultural Study" published in 2017 in *Chemical Senses*.

In the study, which tested 168 adults, the perception of five tastes — sweet, salty, sour, bitter and umami (pleasant savoury taste) — was measured. On a scale of 10 where a low score meant more sensitivity, the Japanese test subjects scored an average of 2 while their Thai counterparts scored 4 for sweet, salty, sour and bitter, and 5 for umami.

The conclusion from Dr Dunyaporn's previous research led her to believe that Thais have different taste perception from those from other parts of the world. With Covid19 hitting hard, she realised that this issue was worth exploring especially given how the infectious disease affects the olfactory and gustatory senses.

With the primary objective to investigate the association between taste and smell loss and Covid-19 infections among Thais, the new research studied 366 Thai subjects — 122 of which were Covid-19 positive. The study approach was called the case-control method in which research was carried out on actual Covid-19 patients instead of just sending questionnaires.

"Various studies [on this topic] in other countries sent online forms or questionnaires for people to answer. One of the drawbacks of this method is the fact that it's hard to verify who the participants really are," said Dr Dunyaporn.

"A collaborative effort with the Bamrasnaradura Infectious Diseases Institute, the study collected data directly from patients waiting for their Covid-19 test results at the institute. They were interviewed about symptoms and whether they experienced taste and/or smell loss. They were also asked to answer a questionnaire developed by a team from Mahidol University in regards to their taste preference."

After analysing the data, the team found that partial taste and smell loss were detected in both Covid-19 positive and negative patients while a complete loss was only seen in Covid19 positive subjects.

"The complete loss of taste and smell especially among generally healthy people can be used as an indicator of Covid-19 infection," Dr Dunyaporn said. "Amid the pandemic, healthy people who suddenly experience a complete loss of taste and smell should be screened for the novel coronavirus."

However, partial loss of taste and smell are not associated with Covid-19 because these symptoms can be the result of other diseases such as influenza. Besides, complete loss of

taste and smell can be good predictors of coronavirus infection alongside other symptoms (even better than fever given that it can signify other illnesses or even cancer).

According to Dr Dunyaporn, a comparative literature review was later conducted and it revealed shocking data — only around 11-18% of Asian patients (Chinese, Korean and Japanese) with Covid-19 experienced taste and smell loss while 32% of Thai Covid-19 patients experienced these symptoms.

Dr Dunyaporn's study also revealed an unexpected byproduct. By comparing taste sensitivities in those who came in for testing, asymptomatic cases were also found to be associated with Covid-19 infection.

“Asymptomatic Covid-19 can be a blindspot in this pandemic because it can lead to lightning-fast spread,” the researcher commented.

Despite the credibility of the study's case-control method, Dr Dunyaporn admitted that the research had certain limitations. Participating subjects interviewed while waiting for their test results were in different stages of the disease. Some had earlier screenings while others had been infected for many days.

“Data [from this study] might underestimate the reality,” she conceded. “There may be more patients with taste and smell loss but at the time of the survey, the symptoms may not have developed.”

Looking ahead, Dr Dunyaporn strongly hopes that more studies are carried out to further examine how taste and smell loss can bring about other significant health-related impacts so that treatment or preventative measures can be implemented properly.

“It was found that patients who experience taste and smell loss also fell prey to appetite loss. Poor appetite then affects nutritional health which can result in immune deficiency and this can potentially lead to more infections.

“All these factors are interrelated. After all, the mouth is the doorway to the body's overall health.”

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