

The New Zealand Herald

Your nose knows when you're lying - research

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Your nose heats up when you're lying, a phenomenon dubbed the "Pinocchio effect". Photo / Thinkstock

Your nose gives away when you're lying - not by growing like Pinocchio's, but by increasing in temperature, according to a new study.

Spanish researchers used thermographic cameras to measure the changes in participants' body temperature during different emotions.

Emilio Gomez Milan and Elvira Salazar Lopez, from the University of Granada's Department, found that when a mental effort is made (performing difficult tasks, being interrogated on a specific event or lying) facial temperature changes.

When participants told a fib, researchers found the temperature around the nose and in the orbital muscle in the inner corner of the eye rose.

They dubbed the phenomenon the "Pinocchio effect", after the fictional character whose nose grew whenever he didn't tell the truth.

When we lie, a brain element called "insula" is activated. The insula is a component of the brain reward system, and only activates when we experience real feelings.

"The insula is involved in the detection and regulation of body temperature. Therefore, there is a strong negative correlation between insula activity and temperature increase: the more active the insule (the greater the feeling) the lower the temperature change, and vice-versa," the researchers said.

When people concentrate, facial temperature drops, while anxiety makes people's facial temperature go up.

The study also found sexual excitement could be identified in men and women using thermography with temperature increasing in the chest and genitals during arousal.

The researchers also looked at the thermal footprint of aerobic exercise and different dance.

"When a person is dancing flamenco the temperature in their buttocks drops and increases in their forearms. That is the thermal footprint of flamenco, and each dance modality has a specific thermal footprint," Prof Salazar says.

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