

The smell of death can trigger fight or flight in humans

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Image: Wikipedia.

New research from a team led by a psychologist at the University of Kent suggests that humans, like other species, can perceive certain scents as threatening.

Dr Arnaud Wisman, of the University's School of Psychology, found that putrescine, the chemical produced by decaying tissue of dead bodies, can produce a fight-or-flight response in humans.

In four different experiments, people were exposed consciously and non-consciously to putrescine.

The results, published in the journal *Frontiers in Psychology*, show that

putrescine can serve as a (non-conscious) signal that initiates threat management responses. The researchers found that even brief exposure to putrescine increases vigilance, followed by the readiness to either escape (flight), or engage in aggressive readiness (fight) when escape is not possible.

These are the first results to show that a scent emanating from a specific chemical compound (putrescine) can be processed as a threat signal. So far, nearly all the evidence for threat chemosignals has come from those that are transmitted by body sweat.

The researchers also believe their study as being among the first to show that a specific [chemical](#) compound can cause overt behaviour change in humans.

One of the outcomes of isolating putrescine in threat management processes is that it may help in determining which sensory and brain pathways are involved in chemosensory [threat](#) detection and processing.

More information: The smell of death: evidence that putrescine elicits threat management mechanisms, was carried out by Dr Wisman and Dr Ilan Shrira, of the Department of Behavioral Sciences, Arkansas Tech University, USA. It was published in the online journal *Frontiers in Psychology*: journal.frontiersin.org/article/10.3389/fpsyg.2015.01274/full#h10

Provided by University of Kent

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