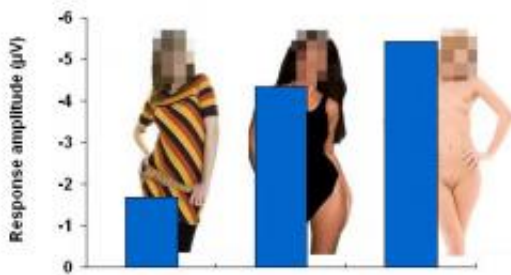


Nudity tunes up the brain

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Amplitude of early visual brain responses ("N170" response) to different types of pictures showing human bodies. The bars represent how much stronger the responses evoked by body pictures were in comparison to control pictures showing cars.

Researchers at the University of Tampere and the Aalto University, Finland, have shown that the perception of nude bodies is boosted at an early stage of visual processing.

Most people like to look at pictures of nude or scantily clad human bodies. Looking at nude bodies is sexually arousing, and a nude [human body](#) is a classic subject in art. Advertising, too, has harnessed half-clothed models to evoke positive images about the products advertised. Brain imaging studies have localized areas in the brain which are specialized in detecting human bodies in the environment, but so far it has been unknown whether the brain processes nude and clothed bodies in different ways.

Researchers at the University of Tampere and the Aalto University, Finland, have now shown that the perception of nude bodies is boosted at an early stage of visual processing.

In the study, participants were shown pictures of men and women in which the models wore either normal everyday clothes or swimsuits, or were nude. At the same time, visual brain responses were recorded from the participants' electrical brain activity. This method allows researchers to investigate the early stages of [visual information](#) processing.

The results showed that, in less than 0.2 seconds, the brain processes pictures of nude bodies more efficiently than pictures of clothed bodies. In fact, the less clothing the models in the pictures were wearing, the more enhanced was the information processing: the brain responses were the strongest when the participants looked at pictures of nude bodies, the second strongest to bodies in swimsuits, and the weakest to fully clothed bodies. Male participants' brain responses were stronger to nude female than to nude male bodies, whereas the female participants' brain responses were not affected by the sex of the bodies.

The results show that the [brain](#) boosts the processing of sexually arousing signals. In addition to the [brain responses](#), the participants' self-evaluations and measurements reflecting the activation of the autonomic nervous system were in line with expectations, showing that nude pictures were more arousing than the other types of pictures. Such fast processing of sexual signals may play a role in reproduction, and it ensures efficient [perception](#) of potential mating partners in the environment.

More information: Hietanen JK, Nummenmaa L, 2011 The Naked Truth: The Face and Body Sensitive N170 Response Is Enhanced for Nude Bodies. PLoS ONE 6(11): e24408.
[doi:10.1371/journal.pone.0024408](https://doi.org/10.1371/journal.pone.0024408)

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