

TALK

ATTENTIONAL AND PHYSIOLOGICAL RESPONSE TO DISGUST- ELICITING STIMULI

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ABSTRACT

Over the course of evolution, humans have developed complex cognitive, physiological, and behavioral responses to cope with various types of threats. For stimuli representing imminent physical danger, such responses might include prioritized attention towards the threat, intense fear evoked by the stimulus, and activation of sympathetic nervous system in preparation for “fight or flight”. Conversely, responses to threats such as contamination or pathogens are mediated through the emotion of disgust and activation of the behavioral immune system. In our study, we focused on several categories of disgusting stimuli, including spoiled food, parasites and other disgusting animals, symptoms of airborne diseases, and environmental pollution, and examined how they affected participants’ attentional and physiological response. In an eye-tracking experiment, the stimuli were used as task-irrelevant distractors during a visual search task, and their distracting properties were compared with pictures of leaves. The physiological measurement focused on changes in skin-conductance after exposure to pictures of disgusting and control (leaf) stimuli. Additionally, participants ranked the stimuli according to elicited disgust. Preliminary results show that participants exhibit higher skin conductance and are more distracted (longer searching time) by stimuli that are ranked as highly disgusting. However, there is a significant difference between the stimuli categories. While most pictures of spoiled food and parasites affect participants’ attention and skin conductance, only a few specific pictures representing airborne diseases and environmental pollution differ significantly from the leaf control stimuli. This suggests limited transferability of adaptive responses to potentially poisonous substances to modern threats such as toxic waste.