The effect of fasting ghrelin level on attentional bias to palatable food cues

Mooah Lee, B.E.[a], Jang-Han Lee, Ph.D.[b],

Department of Psychology, Chung-Ang University

[a]leemooah@gmail.com, [b]clipsy@cau.ac.kr

The appetite-stimulating hormone, ghrelin involves not only energy homeostasis but also reward-based eating behaviors. This study aims to investigate if level of fasting ghrelin influences hedonic craving which is driven by external highly palatable food-cues when not physically hungry. A total of 55 female participants with normal range of BMI were divided into two groups according to ghrelin level: high ghrelin (HG) and low ghrelin (LG) groups. Participants performed a fasting blood draw to compare ghrelin levels and consumed standard breakfast. And then, they performed free-viewing task to record eye-movements toward food cues with high (e.g. pizza, hamburger) and low palatability (e.g. vegetables). The results showed that there were differences between two groups in visual attentional pattern to food cues depending on palatability of food. The HG group showed biased attention toward highly than lowly palatable food cues. Whereas at the LG group, there were no differences in visual attentional pattern to food cues whether the food had high or low palatability. The results suggest that high level of fasting ghrelin might promote selective attention to highly palatable foods even when not hungry. Thus, a role of ghrelin in reward-based eating behavior potentially related to differential attentional processing depending on hedonic aspects of foods.

Image

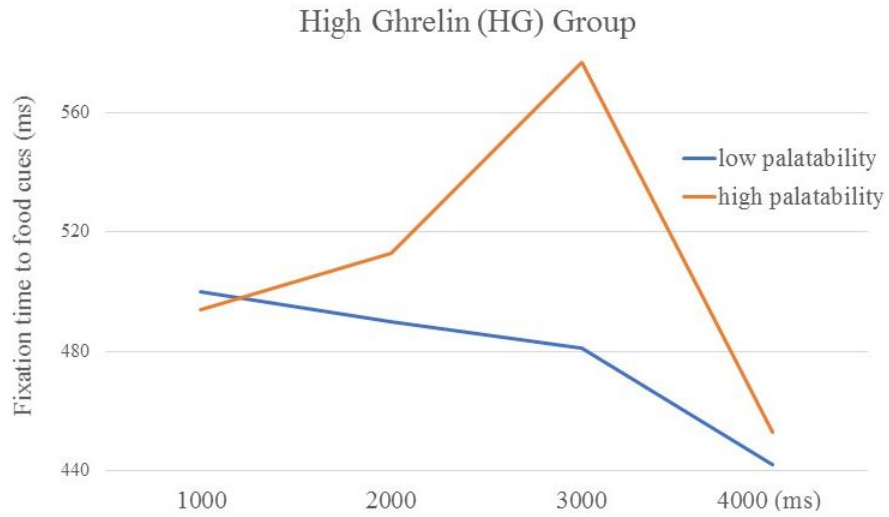


Figure 1. Attentional pattern to food cues in HG group

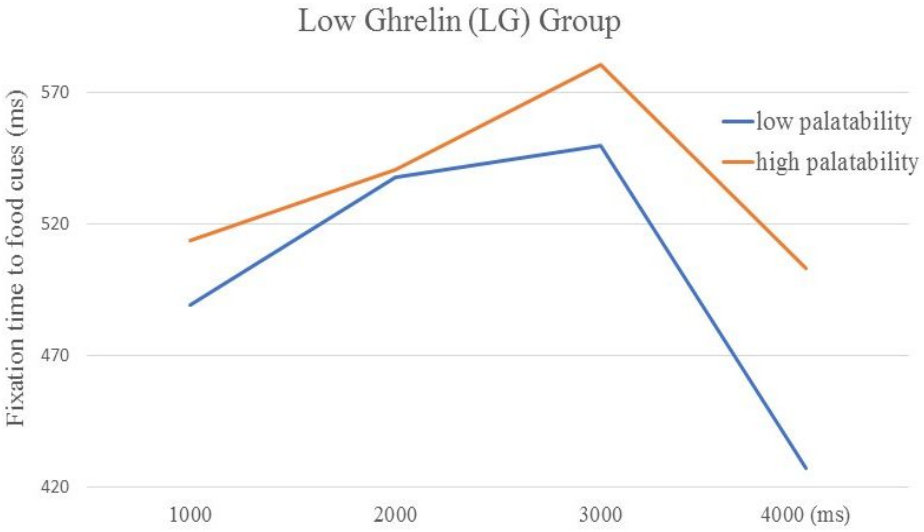


Figure 2. Attentional pattern to food cues in LG group

Recent Publications

Kim, S., & Lee, J. H. (2016). Time course of attentional bias for health-related information in individuals with health anxiety. *Journal of health psychology*, *21*(8), 1527-1535.

Choi, J. W., Kim, K., & Lee, J. H. (2016). The influence of attention toward facial expressions on size perception. *Psychological research*, *80*(1), 69-75.

Kim, D. H., & Lee, J. H. (2016). A Preliminary study on the Biased Attention and Interpretation in the Recognition of Face-body Compound of the Individuals with Social Anxiety. *Frontiers in psychology*, *7*.

Lee, S., & Lee, J. H. (2015). The effect of automatic attentional bias modification on alcohol ambivalence. *Addictive behaviors*, *46*, 58-64.

Kim, M., Cho, S., & Lee, J. H. (2016). The effects of long-term ketamine treatment on cognitive function in complex regional pain syndrome: A preliminary study. *Pain Medicine*, *17*(8), 1447-1451.

Biography

Jang-Han Lee is a professor of Clinical Psychology at Chung-Ang University. He was selected as an Distinguished Scholar of Chung-Ang University and received a Lifetime Achievement Award in the fields of cyberpsychology. His central theoretical and research interest is multi-dimensional approach to understand characteristics of psychopathology. His work largely uses methods derived from experimental psychology and cognitive neuroscience to investigate vulnerability to cognitive and emotional disorders. His ongoing research projects are studying addiction, eating disorder, and forensic psychology.

Email: clipsy@cau.ac.kr
Phone Number: 82-10-5062-5751
Track Name: Psychopharmacology (Track 2)
Type of Presentation: Poster