Researchers develop technology to cease unhealthy food cravings

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Researchers analysed the cognitive approach toward improving healthy food choices in 60 men and women, who were overweight or obese, in Melbourne for one week using an iPhone app called Tilt Task that was specifically created by the researchers for this study.

A simple tilt of a smartphone could be the key to improving healthy food choices, reducing weight and delivering new treatment options for chronic obesity, new research by Monash University shows.

This new study, led by Dr Naomi Kakoschke from the Monash Institute of Cognitive and Clinical Neurosciences (MICCN), showed that simple Approach-Avoidance Training (AAT) using engaging technology reduced the yearning for unhealthy food, contributing to weight loss.

The World Health Organisation indicates that people who are overweight or obese – which is defined by having a body mass index (BMI) in excess of 25 – is a global health concern with rates more than doubling over the past 30 years.

Previous research shows that traditional treatments, such as restrictive diets, deliver limited success as obesity is partly driven by ingrained cognitive biases towards high-calorie, indulgent foods.

 "Our study has important clinical implications. Given that the temptation of unhealthy food is too great for many people, the finding that AAT significantly boosted the selection of healthy food options in individuals with excess weight demonstrates its potential clinical efficacy as an obesity treatment," said Kakoschke.

"Administering AAT alongside traditional treatments may become an important piece of the puzzle in developing effective obesity interventions, especially when it comes to mindful approaches to food selection," she said.

Researchers analysed the cognitive approach toward improving healthy food choices in 60 men and women, who were overweight or obese, in Melbourne for one week using an iPhone app called Tilt Task that was specifically created by the researchers for this study.

Participants were shown different food pictures and were instructed to tilt their phone towards or away from themselves based on the orientation of the image (portrait or landscape). The image size increased when participants tilted the phone towards themselves (simulating approach) and decreased when tilted away (simulating avoidance).

Contingencies of the task were manipulated to train a positive approach towards healthy food (image tilt: towards 90 per cent; away 10 per cent) and avoidance of unhealthy food (image tilt: 10 per cent towards; 90 per cent away).

Results showed a significant drop in the approach responses toward unhealthy food and a marked shift towards healthier alternatives.

Modest weight losses were also recorded during this period, indicating that AAT can be powerful new approach to augment weight loss when used in conjunction with other weight loss interventions.

Kakoschke said the app was specifically designed for participants to "push away" unhealthy food which trained their minds to adopt the same approach in reality.

Similar cognitive training programs using emerging technology have been developed and trialled to help problem drinkers tackle their alcohol dependence.