Our relationship with food: What drives us to eat and new insights into eating disorders

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A growing body of evidence shows the impact of diet on brain function, and identifies patterns of brain activity associated with eating disorders such as binge eating and purging. The findings were presented at Neuroscience 2013, the annual meeting of the Society for Neuroscience and the world's largest source of emerging news about brain science and health.

Millions of people worldwide suffer from eating disorders such as anorexia, bulimia, and binge eating. With increased risk for psychiatric and chronic diseases, today's studies are valuable in helping generate new strategies to treat disorders from obesity to anorexia.

Today's new findings show that:

- Targeted magnetic stimulation of the brain reduces the symptoms of severe eating disorders, including bingeing and purging. These findings may represent a new treatment tool for patients with eating disorders (Jonathan Downar, MD, PhD, abstract 540.01, see attached summary).
- Rats that are more naturally impulsive tend to consume more calories on a binge. Findings suggest that this may be due to an imbalance in the brain's serotonin system (Noelle Anastasio, PhD, abstract 547.13, see attached summary).

Other recent findings discussed show that:

- Consuming a diet of red meat and processed foods is linked to a decline in verybal memory in the elderly after just 36 months (Samantha Gardener, see attached summary).
- Consuming cannabis can influence body weight ofoffspring for generations (Yasmin Hurd, PhD, presentation 685.05, see attached speaker summary).
- Eating a sweet, high-fat meal sets off a series of events that includes the release of insulin and suppression of dopamine, leading to less interest in food-related cues in the environment (Stephanie Borgland, PhD, presentation 685.06, see attached speaker summary).

"As scientists uncover the impacts of diet on brain function, the adage 'You are what you eat,' takes on new meaning," said press conference moderator Fernando Gomez-Pinilla, PhD, of the University of California, Los Angeles, an expert in the impact of the environment on brain health. "We cannot separate the nutritional benefits of food for the body from that of the mind. What we put into the body also shapes the brain, for better or for worse."

Provided by Society for Neuroscience

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