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Relationships with food and how they can branch into disordered eating

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Summary by Samantha Brooks

Dr. Samantha Brooks is a Reader of Cognitive Neuroscience in the School of Psychology, Faculty of Health, Liverpool John Moores University, UK, and a Chartered member of the British Psychological Society. Her research specialises in the neural mechanisms of impulse control in various psychiatric conditions (e.g. addiction, eating disorders).

Eating disorders are diagnosed in 1-10% of people worldwide and include formal diagnoses of anorexia nervosa (extreme attempts to restrict food intake), bulimia nervosa (intermittent binge eating and restriction) and binge eating disorder (lack of food intake restriction). In 2022 the Royal College of Psychiatrists reported that eating disorder admission rates in the UK continue to rise to a current high of 84%, which is alarming as NHS services are overcrowded, understaffed and financially at breaking point post-Covid.

Dr Brooks informed us about formal diagnoses of eating disorders, including anorexia and bulimia nervosa, and binge eating disorder. She showed us how cases of eating disorders are rising globally, especially for high income countries, and especially after the global pandemic, which increased the perception of uncertainty, an exacerbating factor for anorexia in particular.

Samantha continued to show that certain factors, including perfectionism, rigid thinking styles and attention to detail, and lack of global, bigger-picture thinking were risk signs for the development of eating disorders, which is more prevalent during adolescence and in females - although the incidence of eating disorders in males is on the rise.

Samantha continued by reminding us that our relationship with food doesn't necessarily have to become a formally-diagnosed eating disorder. However, certain cognitive relationships with food can determine our behaviour towards eating, especially during times of stress.

For example, people deemed 'cognitive eaters' are those who use external cues to remember to eat, such as the time on a clock, or seeing others' eating. Whereas those deemed 'hedonic eaters' are less influenced by external cues, but are driven by internal cues to eat, such as pleasure, negative emotions, etc. Under times of cognitive stress (e.g. overwork, tiredness, worries about life events etc), cognitive eaters may 'forget' to eat, and eat less, because their prefrontal goal-oriented brain processes will be engaged in attending to the cognitive stress, rather than using their cognitions to remember to eat.

Conversely, during these times, hedonic eaters will no longer use their prefrontal systems to suppress appetite processes, because these brain systems are engaged in dealing with stress. As a result, in such times of stress, hedonic eaters may eat more and gain weight.

During the talk, neuroinflammatory processes were also touched upon, in terms of inflammatory processes that cross the blood-brain-barrier to influence the structure and function of brain areas - over time - so that disordered eating may ensue.

The talk ended by describing some of the solutions to improving our cognitive-emotional relationship with food, including strengthening neural processes with cognitive training, reading etc., improving our sleep patterns, determining our pattern (whether it is cognitive or hedonic) to have better anticipatory control when stress might be imminent, and also spending more time engaged in exercise and in nature to strengthen our neural processes.

The take home message was that we may not be able to easily alter our temperamental responses to food, but we can improve our conscious awareness of how we relate to food and eating, to gain more control over our behaviour, especially during stressful periods in life.
