The Integrated Neurobiology of Food Intake, Addiction and Stress

Results in Brief

The behaviour behind eating addiction

Rising obesity, addiction and stress levels are a major public health concern. An EU initiative that investigated the neurobiology of stress, addiction and eating behaviour provided fresh insight.

HEALTH

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The EU-funded NEUROFAST (The integrated neurobiology of food intake, addiction and stress) project set out to exploit data from a broad range of studies on humans and rodents to explore the interrelationships between diet-related diseases, diet, stress and substance abuse.

There is little evidence supporting the idea that any particular food, additive or ingredient results in addiction-like behaviour similar to that observed for substance abuse.

Although still in its infancy as a research domain, more attention is being focussed on 'food addiction' in an effort by experts to explain certain behaviours that cause obesity. Project partners examined the appropriateness of the term 'food addiction'. Using existing diagnostic and neurobiological concepts of substance-related and non-substance-related addictive disorders, and showing the similarities and differences between addiction and overeating, they reached consensus on 'eating

addiction' to emphasise the behavioural addiction to eating. The term is therefore best described as a behavioural eating disorder where some individuals exhibit addiction-like behaviour involving excessive food intake.

Findings based on a group of adolescent psychiatric patients reveal that eating addiction is not necessarily associated with obesity. Though lacking strong evidence, neurobiological research conducted by the NEUROFAST team shows that foods can impact behaviours that drive food intake and dietary choice in ways that encourage obesity.

Addiction to specific macronutrients in humans has not been substantiated. Researchers found evidence that the brain can detect dietary macronutrients, with immediate effects on eating behaviour.

Epidemiological studies identified risk factors for the onset of substance use and eating disorders, and revealed that such factors vary greatly with age, gender, sample and individual diagnoses. Workplace research showed that individuals respond differently to the same stressful situation with respect to their dietary habits and body weight.

NEUROFAST shifted the focus from the food to the behaviour in order to better understand environments that help or contribute to obesity. It has important implications for future behavioural eating disorder treatment and prevention strategies.

Keywords

Eating addiction, obesity, food intake, stress, food addiction

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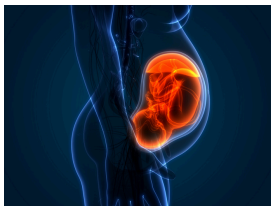

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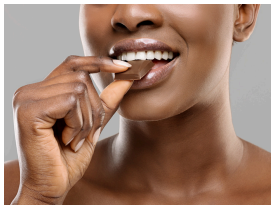

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