

This press release is in support of a presentation by Professor Suzanne Dickson on Monday 7 October at the 26th ECNP Congress in Barcelona, Spain.

Food addiction a step closer to formal diagnostic status – or not?

Excessive overeating as seen in some obese individuals reflects addictive-like behaviour raising the question of whether the condition should be formally entered into future editions of the DSM as a diagnosis.

BARCELONA, SPAIN (7 October 2013) – Food addiction is not yet recognised as a mental disorder but certain obese individuals clearly display addictive-like behaviour towards food. To achieve a formal diagnostic status, ‘food addiction’ requires a stronger evidence base to support the claim that certain ingredients have addictive properties identical to addictive drugs of abuse. This topic is up for debate in the session, ‘Binge eating obesity is a food addiction’.

This year’s fifth edition of the DSM (Diagnostic and Statistical Manual of Mental Disorders) recognises ‘binge eating disorder’ (BED) as distinct from Anorexia nervosa and Bulimia nervosa, but it remains debatable whether BED is underpinned by an addiction disorder and should be prevented and treated like other addictive disorders.

The new category ‘Substance related and addictive disorders’ in DSM-5 combines the DSM-IV categories of substance abuse and substance dependence into a single disorder measured on a continuum from mild to severe. Importantly, the term ‘dependence’ is not used anymore in DSM-5, because most people link dependence with addiction when, in fact, dependence can be a normal body response to a substance.

Speaking at the 26th ECNP Congress Professor Suzanne Dickson, neuroscientist from the Institute of Neuroscience and Physiology, Sahlgrenska Academy at the University of Gothenburg, Sweden, said, “the introduction of ‘addictive disorders’ allows classification of behavioural addiction for the first time, for example with pathological gambling, but this does not apply to food addiction. Although there might be neurobiological and clinical overlaps between ‘addictive-like’ overeating and substance related and addictive disorders, a major difference is that is that food consumption, unlike alcohol, cocaine, or gambling or internet gaming behaviours, is necessary for survival.”

“A subgroup of obese patients indeed show ‘addictive-like’ properties with regard to overeating, such as loss of control,” continued Professor Dickson, “but this does not automatically mean they are addicted.”

According to some studies, at least 10-15% of obese individuals suffer from BED. However, BED also occurs in people that are normal weight. The term ‘food addiction’ has been coined by the popular press and by many sufferers as a reasonable explanation for their predicament. Studies exploring the brains of obese patients that score highly for food addiction on the Yale Food Addiction Scale show that certain areas known to be involved in reward and addiction have an altered response to both images of appetising foods and even to the taste of food.

However, more evidence is needed to support inclusion of food addiction as a diagnostic category. Professor Dickson said: "This evidence itself is insufficient to support the idea that food addiction is a mental disorder. We do not have a clinical syndrome of food addiction so far, and it is very important to establish the validity of a condition before putting it forward for inclusion in the DSM."

She pointed out that the trend to recognise behaviours as addictions is a major step forward and will help avoid stigmatising people that exhibit these behaviours. "This development is critical because behavioural obsessions that are not pathological can potentially be medicalised, and thus receive a formal diagnosis, in which they reflect an excessive, but non-pathologic, engagement. However, it will be important to avoid over-diagnosing disorders, reflecting the inflationary trend in the lay public to label various behaviours as 'addiction'."

Adding his opinion to the debate about the status of food addiction as a diagnosis, psychiatrist, Dr Hisham Ziauddeen, from the Wellcome Trust-MRC Institute of Metabolic Science, Addenbrooke's Hospital, Cambridge, questions the model of food addiction, in the session entitled, 'Binge eating obesity is a food addiction'.

"While the idea of food addiction is intuitively very appealing, there is actually little evidence so far to suggest that it actually exists in humans," said Dr Ziauddeen. "It is a very important idea to explore, but it is essential that we have sufficient research to conclusively support it before we hurry to recognise it as a genuine condition and start thinking of ways to tackle and treat it."

He noted that the best evidence for food addiction at present comes from animal models but there are important caveats to be borne in mind when looking at the animal evidence. Further, the evidence for differences in brain responses to images of food in lean and obese individuals is very inconsistent and does not currently support the idea of food addiction.

Addressing the broader concerns of how a formal diagnosis of 'food addiction' might present challenging issues for health care policy, Dr Ashley Gearheardt, Assistant Professor of Clinical Psychology, University of Michigan, US, discussed which regulatory steps would be suitable and practical.

"The idea that certain foods might be able to trigger an addictive process in vulnerable individuals is a hotly debated topic. If 'food addiction' exists, it may alter the way we think about the role of the brain in obesity, which might open up development of novel pharmaceutical treatments. Policy successes and failures from the addiction field might also guide approaches to this worldwide public health crisis."

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About ECNP

The European College of Neuropsychopharmacology (ECNP) is an independent scientific association dedicated to translating advances in the understanding of brain function and human behaviour into better treatments and enhanced public health. ECNP organises a wide range of scientific and educational activities, programmes and events across Europe, promoting exchange of high-quality experimental and clinical research and fostering young scientists and clinicians in the field. The annual ECNP Congress attracts around 4,000-7,000 scientists and clinicians from across the world to discuss the latest advances in brain research in Europe's largest meeting on brain science.

Disclaimer: Information contained in this press release was provided by the abstracts authors and reflects the content of the studies. It does not necessarily express ECNP's point of view.

Additional information

NeuroFAST

The EC-funded project, NeuroFAST, coordinated by Professor Suzanne L Dickson, held a meeting to form a consensus opinion on the term "Food addiction" (see <http://www.neurofast.gu.se/consensus/>). The essential components of this discussion, led by Professor Johannes Hebebrand were as follows:

1. Current evidence does not allow us to conclude that a single food substance via a single specific neurobiological mechanism (e.g. specific brain receptors or specific neuronal pathways) can account for the fact that people overeat and develop obesity.
2. In humans, there is no evidence that a specific food, food ingredient or food additive causes a substance based type of addiction (the only currently known exception is caffeine which via specific mechanisms can potentially be addictive). Within this context we specifically point out that we do not consider alcoholic beverages as food, despite the fact that one gram of ethanol has an energy density of 7 kcal.
3. Addictive (over)eating is clearly distinct from substance use disorders that cause addiction via specific mechanisms (e.g. nicotine, cocaine, cannabinoids, opioids, etc.).

4. An addiction-like eating behaviour may, in rare instances, be caused by mutations in single genes which entail an elevated feeling of hunger and reduced satiety.

Undoubtedly many people eat more than is healthy. This can (but does not have to) result in obesity and potentially other more or less serious medical conditions such as cardiovascular disorders and type 2 diabetes mellitus. In our opinion, a subgroup of such individuals conceivably may overeat as a consequence of an addiction-like eating behaviour. This implies that, as in drug addiction, these subjects crave food, will spend a substantial part of the day thinking of, purchasing, preparing and eating food despite knowledge that this is unhealthy and potentially also despite manifestation of medical consequences of overeating. We hypothesise that a wide range of physiological and psychological issues or problems may underlie the development of an addiction-like eating behaviour. Thus, a genetic or acquired propensity to overeat may be activated, if an individual experiences prolonged stress, anxiety, depressed mood and boredom.

The neurobiology of food reward

The ingestion of food can have a rewarding effect, particularly if we are hungry or develop an appetite for a given food. In neurobiological terms, this rewarding feeling of pleasure results from complex neuronal signalling processes, which are generated upon seeing, smelling, and tasting food. The food texture can also generate pleasure via specific sensors located in the mouth. Finally, ingestion of food entails signalling processes that initiate in the mouth, larynx, oesophagus, stomach and small and large intestines. With respect to the rewarding property of foods, there is overlap with neuronal pathways involved in substance use disorders – for example, both foods and natural rewards activation of dopamine neurons located in the ventral striatum, which is especially important for cravings and food-motivated behaviours. However, this overlap in itself does not validate the concept of food addiction. Human brain imaging studies suggest that these (and other reward-linked pathways) may show differing activity between obese and lean individuals. Indeed, there are indications that these pathways may be especially important for driving food intake in patients suffering from binge eating disorder.

Finally, it should be pointed out that food addiction cannot be diagnosed according to any set of criteria which have gained general medical or psychological recognition. Based on current knowledge, the term food addiction appears inappropriate. We suggest that the term addiction-like eating behaviour or addictive eating is better suited to describe a phenomenon encompassing symptoms which overlap with the criteria used to define substance use disorders. It may be worthwhile to consider addiction-like eating behaviour as an explanation for overeating in a subgroup of individuals with obesity. However, this subgroup by no means accounts for a large proportion of individuals with obesity. Future research is required in humans and animal models to improve our knowledge of mechanisms involved in the development of an addiction-like eating behaviour and to assess its relevance for obesity.

Binge eating disorder recognized as a mental disorder

Unlike food addiction, the term “binge eating disorder” was approved for inclusion in DSM-5 as its own category of eating disorder. Binge eating is distinct from simple over-eating – it is much less common, far more severe, and is associated with significant physical and psychological problems. It can be defined as recurring episodes of eating significantly more food in a short period of time than most people would eat under similar circumstances, with episodes marked by feelings of lack of control. Someone with binge eating disorder may eat too quickly, even when he or she is not hungry. The person may have feelings of guilt, embarrassment, or disgust and may binge eat alone to hide the behaviour. This disorder is associated with marked distress and occurs, on average, at least once a week over three months. (source: <http://www.dsm5.org/Documents/Eating%20Disorders%20Fact%20Sheet.pdf>)

What causes binge eating disorder?

It is not yet known which some individuals develop binge eating disorder. Dietary restraint has been shown to play a role and so those with a propensity to gain weight, that continually try to lose weight through dietary means. Food restriction sends signals to the brain indicating a starvation state, that leads to increased food-motivated behaviours as well as a reduced metabolism, and hence, dietary failure often accompanied by binge-like eating.