

Brain biomarkers could provide the ammunition to fight eating disorders

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During Eating Disorder Awareness Week, Dr Ciara McCabe, neuroscientist at the University of Reading, says we need more understanding of the neurobiology of these disorders if we are to develop new, effective treatments.

"Eating disorders are devastating conditions. Anorexia kills more people than any other mental health condition - up to 20% of those suffering from the condition die from it. Figures from the National Institute of Health and Clinical Excellence suggest that 1.6 million people in the UK are affected by an eating disorder, of which around 11% are male.

"So we should welcome Deputy Prime Minister Nick Clegg's recent pledge of an extra £150m to help children with [eating disorders](#). These funds will be used 'to invest in preventative therapy to cut the need for hospital treatment'.

"Good news. But a note of caution - disorders such as [anorexia](#) are still a long way off from being treated effectively. There are no drugs that specifically target anorexia and not all psychological treatments work long-term - relapses, sadly, are very common.

"What is holding us back? The [neurobiology](#) of these disorders still elude us. Why do one group of people have no control over what they eat and another have complete control? We simply don't know.

"Understanding these mechanisms is crucial for developing more

effective and novel treatments - this is what the Deputy Prime Minister should be aiming for.

"Here at Reading we are trying to make progress in this area. Our research is revealing how the brain's response to rewards such as food, might provide clues to understanding the mechanisms underlying eating disorders.

"Early studies have shown that those who have anorexia nervosa have differences in how they respond to food, in both the brain's reward centres and areas involved in control. This offers exciting possibilities for detecting biological markers of eating disorders.

"In our follow-up research we found that those who suffered from anorexia nervosa in the past have differences in how their brain responds to pleasant chocolate taste - this despite having no subjective difference in wanting or liking of the food compared to never ill controls. So could these differences be trait markers, something in the brain that could be used to further our understanding of why people develop anorexia nervosa?

"Our current project is combining our brain reward knowledge with previous studies which suggest a link between family members. Preliminary results suggest the brains' of sisters of [anorexia nervosa](#) patients respond to food tastes and pictures differently than people with no family history of anorexia, despite having never experienced the disorder themselves.

"These results help us find neural markers that can be detected before illness onset. However longitudinal studies need to be done to investigate if the differences we see in the brain can predict illness development.

"Understanding how the brain responds to food, and how this might be

related to eating disorder pathology, could pave the way for the development of new, life-changing eating disorder treatments."

Provided by University of Reading

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