

# Effects of Deep Brain Stimulation in Anorexia Nervosa

Ela Mitro<sup>1</sup>, Besmira Zenelaj<sup>1</sup>, Valmira Kodra<sup>1</sup>, Dorina Sanxhaku<sup>1</sup>, Valbona Alikaj<sup>2,3</sup>

<sup>1</sup>Child and Adolescent Psychiatric Service, University Hospital center “Mother Teresa” Tirana, Albania

<sup>2</sup>Child and Adolescent Psychiatric Unit, University Hospital Center “Mother Teresa” Tirana, Albania

<sup>3</sup>Department of Neuroscience, University of Medical Sciences, Tirana, Albania

## Email address:

elamitro07@gmail.com (E. Mitro)

## Abstract:

**Background:** Anorexia nervosa is characterized by a chronic course that is refractory to treatment in many patients and has one of the highest mortality rates of any psychiatric disorder. In this context, there is an urgent need to develop safe therapies approaches. Deep brain stimulation (DBS) has been applied to circuit-based neuropsychiatric diseases, such as Anorexia nervosa, Parkinson’s disease and major depression, with promising results.

**Aims:** To assess the safety of DBS to modulate the activity of limbic circuits and to examine how this might affect the clinical features of anorexia nervosa.

**Method:** Review of existing literature and research on the topic.

**Results and Discussion:** Deep brain stimulation (DBS) of the subcallosal cingulate in patients with highly treatment-resistant anorexia nervosa can significantly improve mood, anxiety, affective regulation, and body weight.

**Conclusion:** According to different studies, deep brain stimulation might alter the brain circuits that drive anorexia nervosa symptoms and help improve patients’ mental and physical health. While our results show some early promise, more research will be needed. Findings emphasize the need for continued research into novel neuromodulation strategies for anorexia nervosa, and for psychiatric disorders more broadly.

## Keywords

Anorexia, Brain Stimulation, Child