

## JOINT EVENT

10<sup>th</sup> International Conference on **Childhood Obesity and Nutrition**  
&  
2<sup>nd</sup> International Conference on **Metabolic and Bariatric Surgery**

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**Neuromindfulness: An opportunity to recover neurocognitive deficits in childhood obesity; correspondences between dysfunctions and neurocognitive recovery of the default network****Rosa Calvo Sagardoy and M Victoria Paz Domingo**  
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**Statement of the Problem:** Childhood obesity rates have risen dramatically over the past few decades and accordingly, scientific research and healthcare professionals are increasing their interest about this global problem. Obesity has been linked to poorer neurocognitive functioning in adults, much less is known about this relationship in children and adolescents.

**Aim:** The purpose of this study is to describe how neuromindfulness works through default network as a possibility not only to recover neurocognitive deficits but facilitate an eating based on internal cues in people who suffer from obesity.

**Methodology & Theoretical Orientation:** This is a descriptive qualitative research in which recent scientific literature toward neuromindfulness networks and obesity was reviewed.

**Findings:** Obesity is associated to dysfunctional connectivity within brain regions linked to interoception (insula), emotional memory (middle temporal gyrus) and cognitive control (dorsolateral prefrontal cortex). The global brain connectivity in obese patients is consistently decreased in the prefrontal cortex, insula, amygdala and caudate nucleus, and increased in brain regions belonging to the dorsal attention network. People who practice mindfulness show cortical thickness increased in insula and amygdala-prefrontal cortex integration. The default mode network has been implicated in awareness and it improves with mindfulness and overlap with some brain structures affected in obesity.

**Conclusion & Significance:** There is a correspondence between default mode network and brain regions affected in obese patients. Mindfulness techniques could be a possibility not only to help obesity adult patients but would prevent these deficits if obese children practice meditation. Neuromindfulness represent a promising approach to obese children given that the recovery of these neurocognitive deficits could facilitate the development of an eating based on internal cues of hunger and satiety which regulate body weight naturally.

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