Growing evidence suggests that ICBs are significantly more prevalent in patients with eating disorders, including severe obesity. While such difficulties may have significant implications for the affected individual (e.g., maintaining maladaptive eating behaviours, and leading to a reduced capacity to take advantage of external resources such as educational opportunities and treatment options), the issue has not been comprehensively investigated. One major hurdle has been the clear lack of instruments to measure and characterize ICBs. We have now developed a testing battery that is able to index inter-individual variations to ICBs. The role of the PhD candidate will be to apply this battery of tests to investigate the neural and psychological bases of these ICBs in patients with obesity about to undergo intervention (either surgical or other). The findings are likely to have translational implications in helping to identify optimal patients for intervention, for psychological interventions targeting self-control, and to set more realistic goals in therapies. This knowledge will also be used to create more homogenous cohorts of obese individuals with “pure” impulsive or compulsive or “mixed” behavioural problems and facilitate the study of its fundamental neurobiology (via fMRI and genetic studies), as well as have implications for diagnosis and treatment (e.g., the discovery of crossover pharmacotherapies). Specifically, the PhD candidate will address the following questions:

**General objectives**

- Do obese patients about to undergo intervention have problems with impulsivity and compulsivity (using state [neurocognitive] and trait [temperament/personality] measures)?
- How common are ICBs such as excessive internet usage, gambling, substance abuse in obese individuals undergoing intervention? Is there a shared vulnerability?
- Does intervention lead to changes in impulsivity, compulsivity or ICBs?
- Can we prospectively predict which individuals: (i) will respond best (or worst) to; and (ii) be most (or least) compliant with intervention at 12-24 month follow-up using brain imaging, cognitive and affective neuroscience techniques?

Applicants must hold an APA or similar award.

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