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Functional brain responses in the maintenance of energy balance

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1. The brain responds immediately and strongly to the ingestion of glucose, where other commonly consumed sugars and sweeteners elicit smaller to very little effects. *this thesis*
2. While food characteristics such as temperature and flavor can influence the functional brain responses, energy content appears to be the most important determining factor. *this thesis*
3. Even when ingested in the context of the other macronutrients, the type of sugar or sweetener remains an important determinant of functional brain responses. *this thesis*
4. Hypothalamic and whole brain activity can be affected by central insulin signaling, current weight and metabolic status. *this thesis*
5. Energy intake and expenditure are controlled by complex, redundant, and distributed neural systems that reflect the fundamental biological importance of adequate nutrient supply and energy balance for the maintenance of health. *Modified Berthoud & Morrison. Annu Rev Psychol 2008*
6. Controlling feeding behavior is like using the accelerator in a car. The more neurons are excited, the stronger the desire to eat, the more nutritional signals circulate in the blood which in turn activate increasing numbers of neurons. *Modified from Aponte, Atasoy & Sternson. Nature Neurosci 2011*
7. The reward system plays a pivotal role in the drive towards high caloric palatable food and cue-induced feeding and can therefore not be overlooked when investigating feeding behavior. *Modified from Meye & Adan. Trends Pharmacol Sci 2014*
8. Neuroscience research stands ideally poised to influence treatment for obesity and eating disorders by offering a better understanding of how neural circuits operate to determine food-related choices. *Modified from Ferrario et al. J Neurosci 2016*
9. Mens sana in corpore sano. *Satire X, Juvenalis. 127 A.D.* Een gezond lichaam is een voorwaarde voor een gezonde functie van het brein, maar een gezonde brein functie is ook een voorwaarde voor het behoud van een gezond lichaam.
10. Work expands so as to fill the time available for its completion. *Parkinson's law, Cyril Nothcote Parkinson, 1955.* Deadlines bepalen wanneer het werk af is.
11. Ge wit ut noit nie. *Brabants gezegde.* Je kunt iets nooit met volledige zekerheid weten.