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Sommario/riassunto

Obesity is a major worldwide health problem, reached epidemic proportions that affects both developed and developing countries. Obesity increases the risk for a wide metabolic conditions including type 2 diabetes. Additionally, a relationship between obesity, diabetes and cognitive function, as well as risk of dementias have come to attention. The link between these pathologies is the activation of the inflammatory process. Obesity is considered as a chronic low grade inflammatory disease that affects numerous tissues including the brain. The consumption of large amounts of dietary fats, particularly saturated fatty acids can impair hypothalamic neuronal metabolism and circuitries that control whole-body energy homeostasis, consequently leading to obesity. Homeostatic control of brain metabolism is essential for neuronal activity. Neuroendocrine signals play a major role in the regulation of brain metabolism and also peripheral energy balance. Brain inflammation is a major cause for brain metabolic dysfunction and it is known to impair the control of whole-body energy homeostasis and also brain activity in several metabolic and neurodegenerative disorders. Metabolic diseases, inflammation, and brain diseases are likely linked, however a clear mechanistic understanding has remained elusive. This Research Topic collects articles on the neurometabolic changes in the brain induced by inflammatory processes associated with obesity and chronic metabolic