250 words and 1400 max characters (including spaces)

The dorsomedial hypothalamus(DMH) regulates appetite and stress hormone production. Little is known about how the relationship between stress and appetite affects DMH neurons. Since DMH neurons stimulate appetite, and appetite is suppressed during an acute stressor, we hypothesized that acute stress would inhibit neuronal communication and excitability in the DMH. We used patch clamp electrophysiology to record from living DMH neurons of female rats who experienced a single 30-minute stress. We measured evoked current amplitude and action potential(AP) parameters before and after a high frequency stimulation(HFS), to examine long lasting changes. Acute stress decreased evoked current amplitudes, AP amplitude, and AP frequency after HFS. An endocannabinoid-CB1 receptor blocker(µM AM251) showed no change in these parameters after HFS, suggesting the involvement of the endocannabinoid system. As the global food system becomes increasingly saturated with processed and ultra-processed foods, obesity grows in parallel, with NB having one of the highest obesity levels in Canada. The mechanisms that respond to stress have not adapted to our high stress society and landscape of highly palatable foods. Women are particularly vulnerable to disordered eating behaviours when stressed, for which the neurophysiological basis is unclear. Yet, female research subjects remain underrepresented.