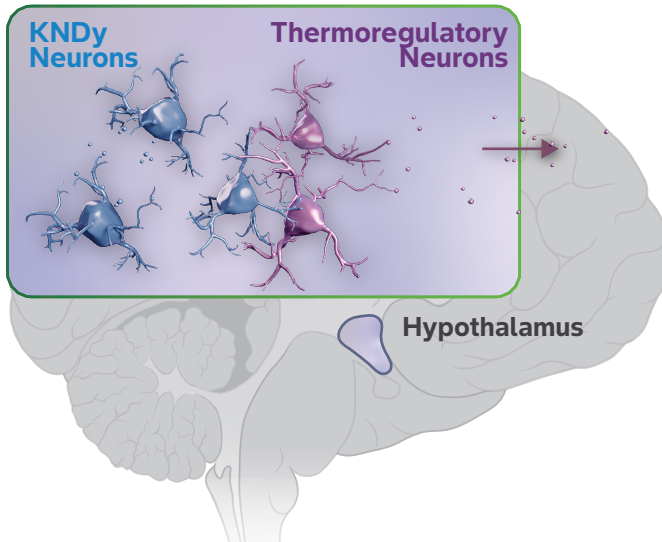


Neuroendocrine Changes of Menopause

Reproductive Years

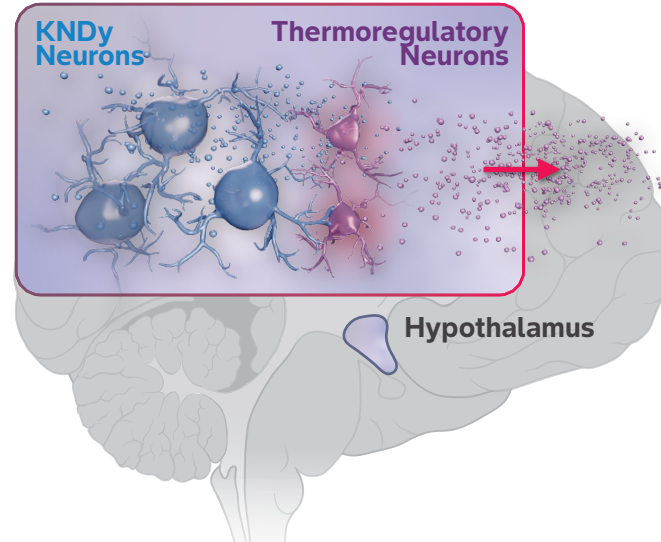


Appropriate heat dissipation (flushing, sweating) to maintain body temperature

Estrogen-sensitive **KNDy neurons*** communicate with adjacent **thermoregulatory neurons** to maintain body temperature homeostasis.

As skin receptors sense increased body temperature, **thermoregulatory neurons** trigger cooling mechanisms such as sweating, flushing and cold-seeking behavior to maintain body temperature.

Menopause



Exaggerated heat dissipation (flushing, sweating) in response to minor increases in body temperature, known as VMS

During menopause, in response to declining estrogen, **KNDy neurons become enlarged and hyperactive.**

It is thought that KNDy neuron hyperactivity mediates **VMS, an exaggerated cooling response (flushing, sweating, cold-seeking behavior) that occurs in response to mild increases in temperature.**

KNDy neuron hyperactivity may also enhance flushing by dilating peripheral vessels.



Watch this video to learn more about KNDy neurons and the neuroendocrine changes of menopause



Victor Navarro, PhD

Associate Professor, Harvard Medical School and Brigham and Women's Hospital

Victor Navarro, PhD, has published numerous peer-reviewed research articles on the neuronal mechanisms that control reproductive function. His work has been focused on the KNDy neuron signaling neuropeptides (Kisspeptin, Neurokinin B, Substance P, and Dynorphin), their role in reproduction, and more recently their potential involvement in VMS (Vasomotor Symptoms).

In these videos, Dr. Navarro explains how KNDy neurons play a role in the Hypothalamic Pituitary Ovarian (HPO) axis during the reproductive years and how these neurons are thought to be mediating VMS during menopause.



What is a KNDy Neuron?



How might KNDy neurons play a role in VMS of menopause?

