

Chapter 10: Reproductive Behavior

Sexual Development

Hormonal Control of Sexual Behavior

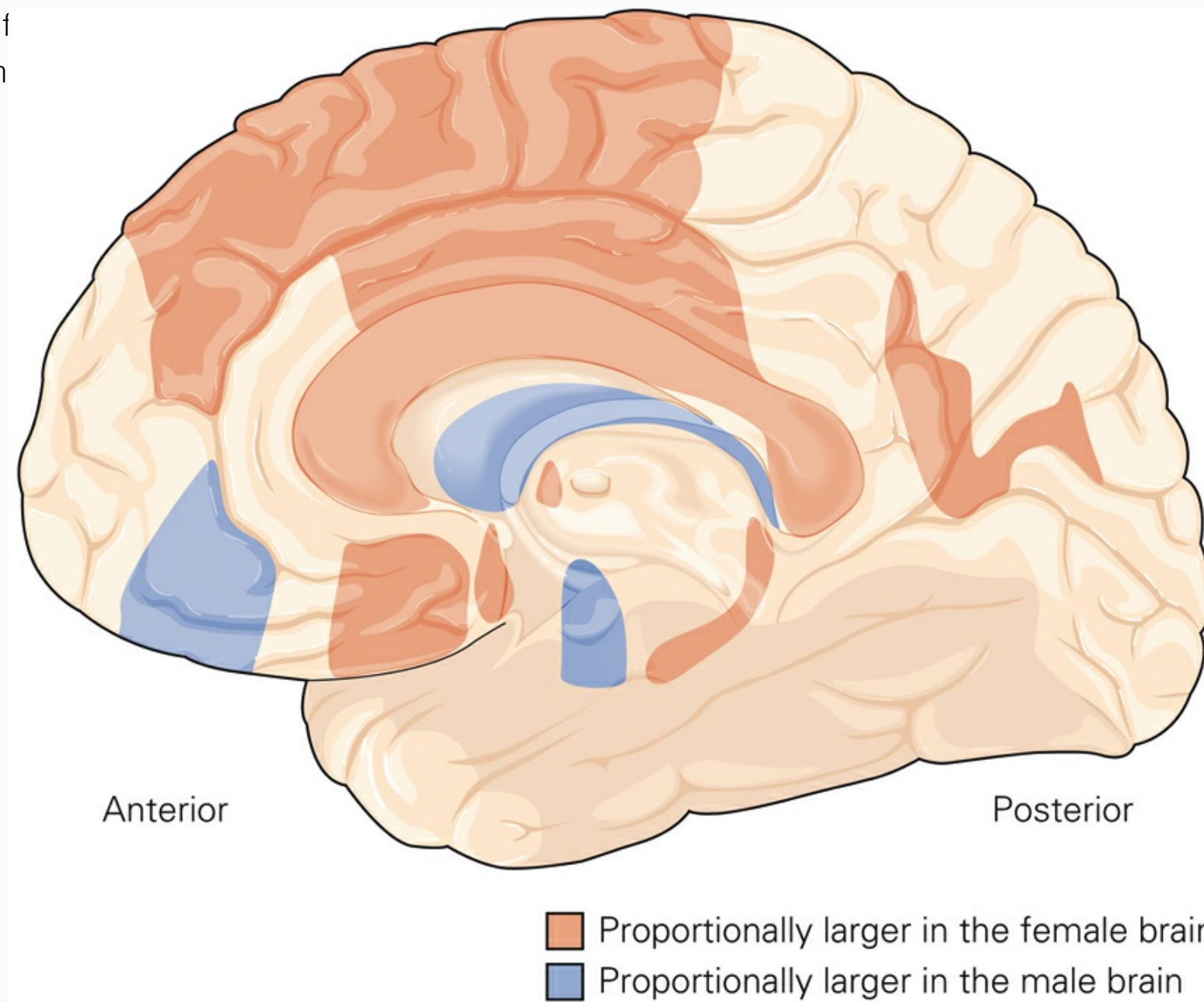
Neural Control of Sexual Behavior

Pair Bonding and Parental Behavior

Neural Control of Sexual Behavior

Sex Differences in Brain Structures.

- sex differences in behaviors may arise from
- includes contributions of genetic and hormonal experience

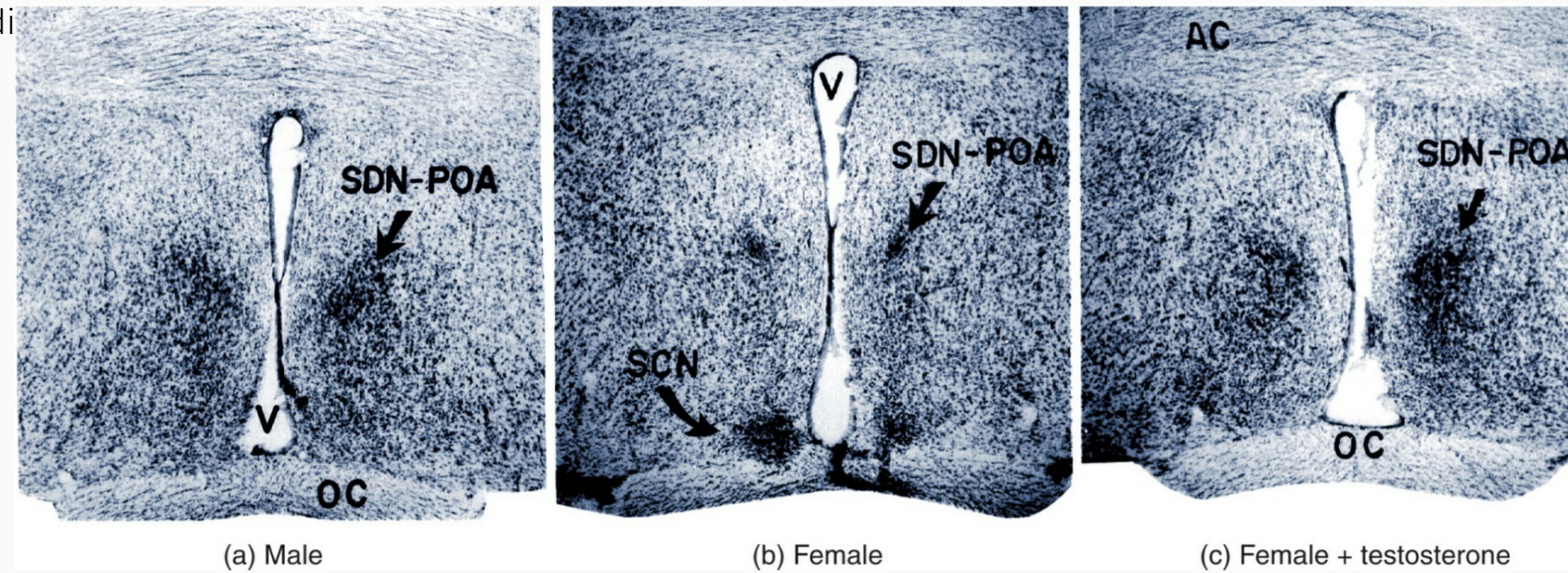


women. The volume of each region was normalized to the size of the cerebrum for both sexes. Sex differences were significant in many regions, including several cortical areas that likely mediate cognitive functions. (Modified, with permission, from Cahill 2006.)

Neural Control of Sexual Behavior

Sexually Dimorphic CNS Structures.

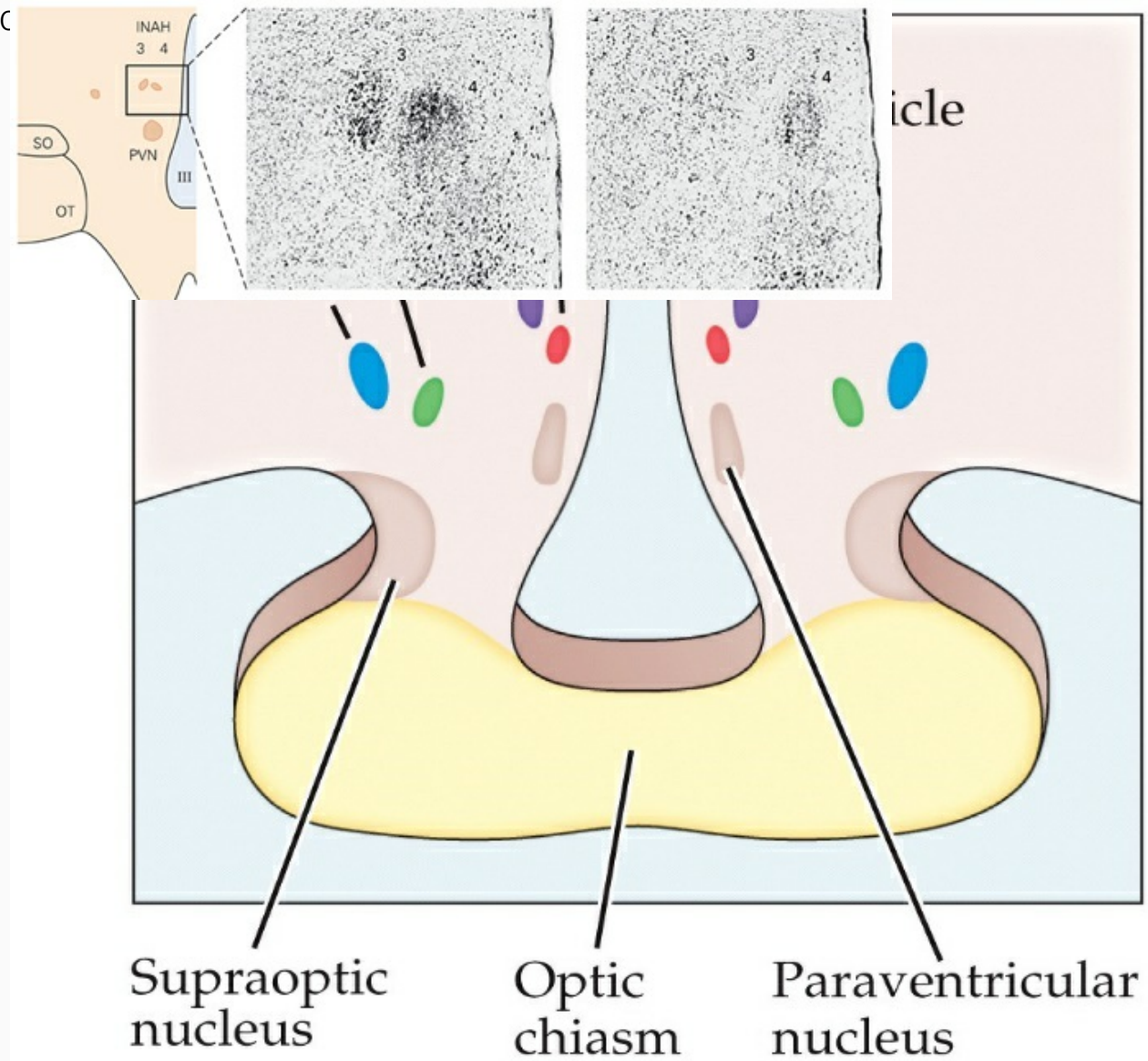
- sexually dimorphic nucleus of the medi



Neural Control of Sexual Behavior

Sexually Dimorphic CNS Structures.

- Interstitial Nucleus of the Anterior Hypo

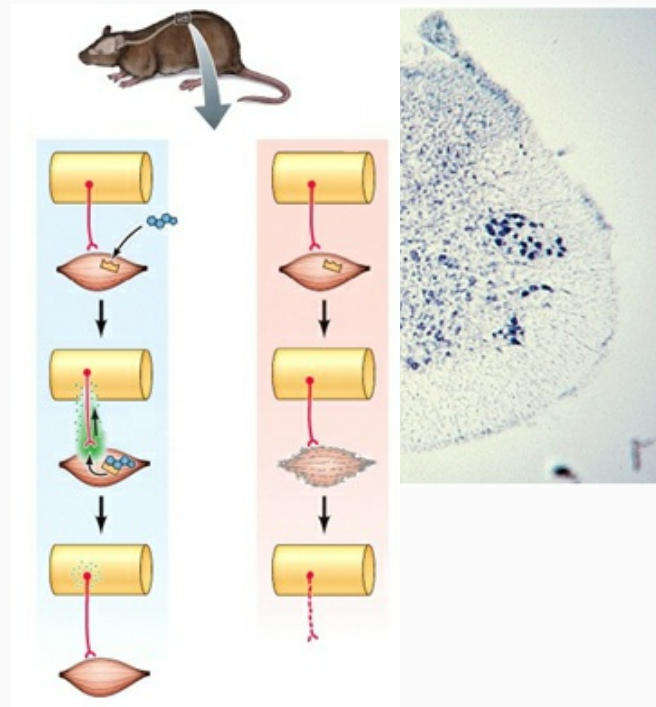


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Neural Control of Sexual Behavior

Sexually Dimorphic CNS Structures.

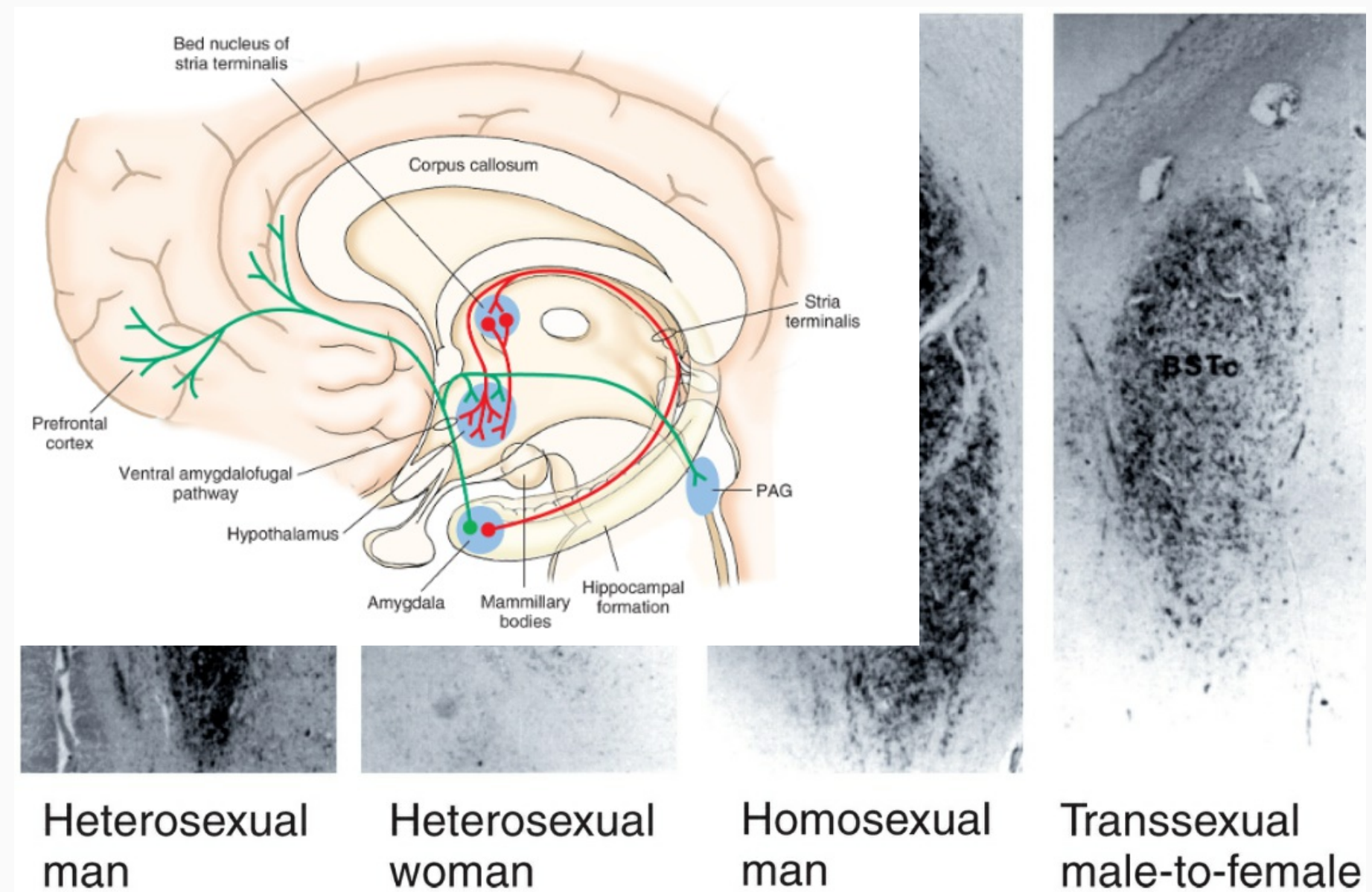
- spinal nucleus of the bulbocavernosus



Neural Control of Sexual Behavior

Sexually Dimorphic CNS Structures.

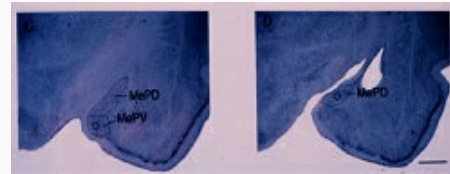
- bed nucleus of stria terminalis

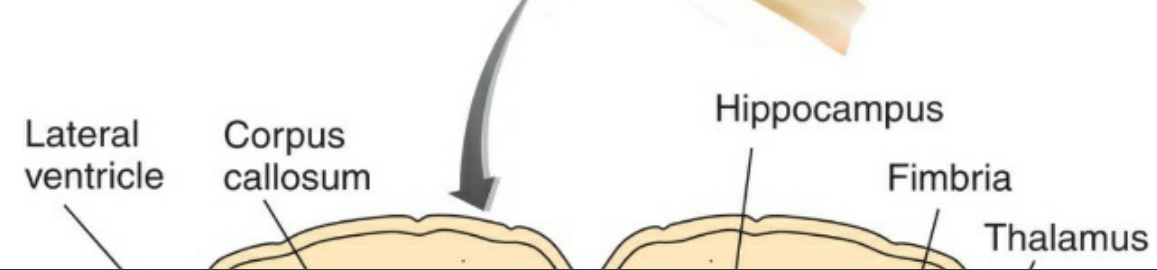


Neural Control of Sexual Behavior

Sexually Dimorphic CNS Structures.

- medial amygdala





Neural Control of Sexual Behavior

Sexual Behavior in the Adult Male Rat.

- overall testosterone level is important i
- castration of adult male rat eliminates :

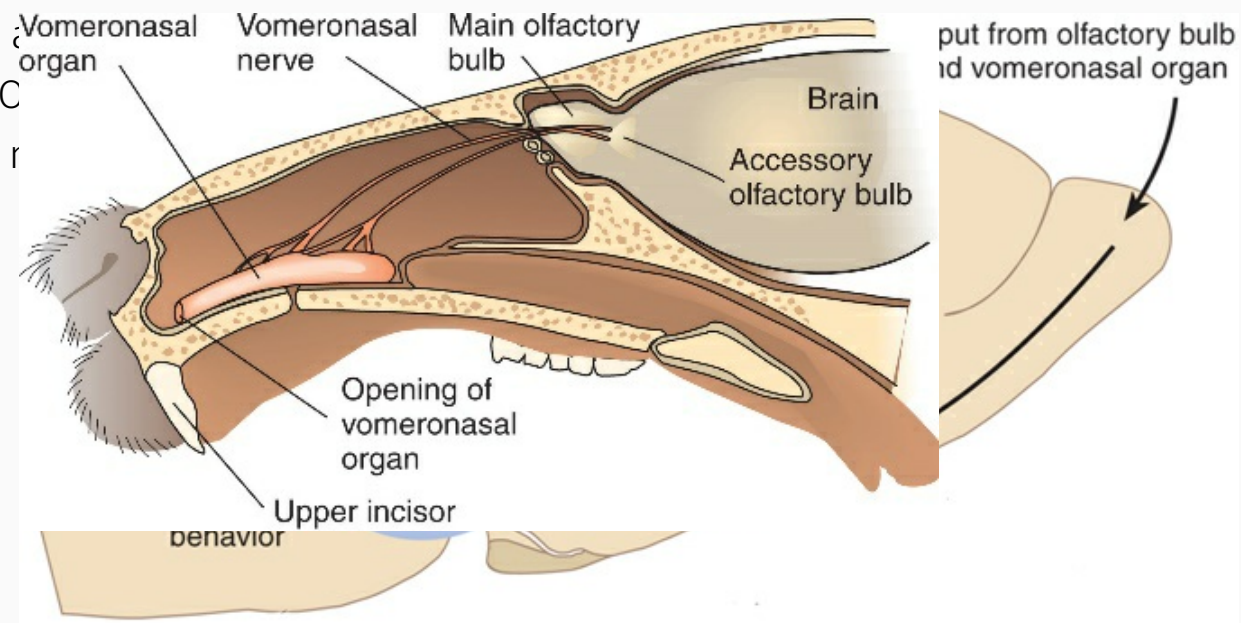


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Neural Control of Sexual Behavior

Sexual Behavior in the Adult Male Rat.

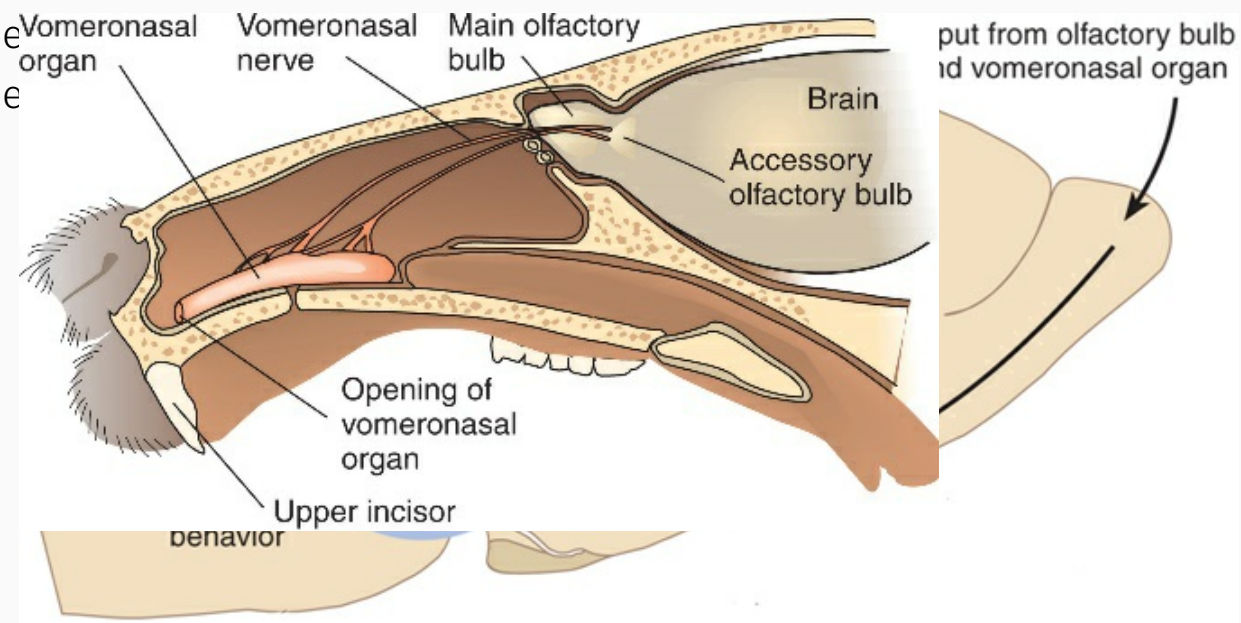
- olfactory bulb and vomeronasal organ
- MeA and genitals (via CTF) activate MPC
- MPOA regulates descending control of r



Neural Control of Sexual Behavior

Sexual Behavior in the Adult Male Rat.

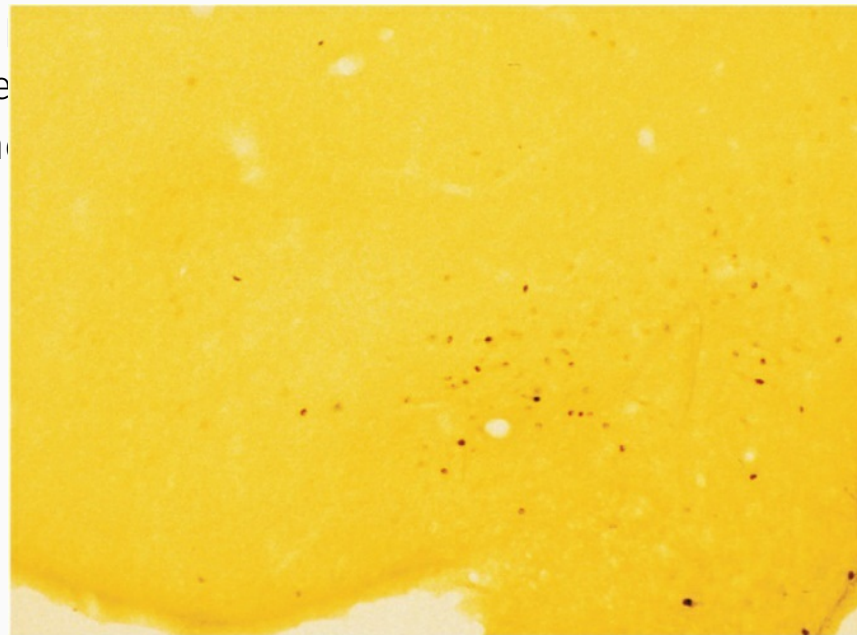
- injection of testosterone into MPOA, MeA, or
- destruction of the MPOA, MeA, or connection



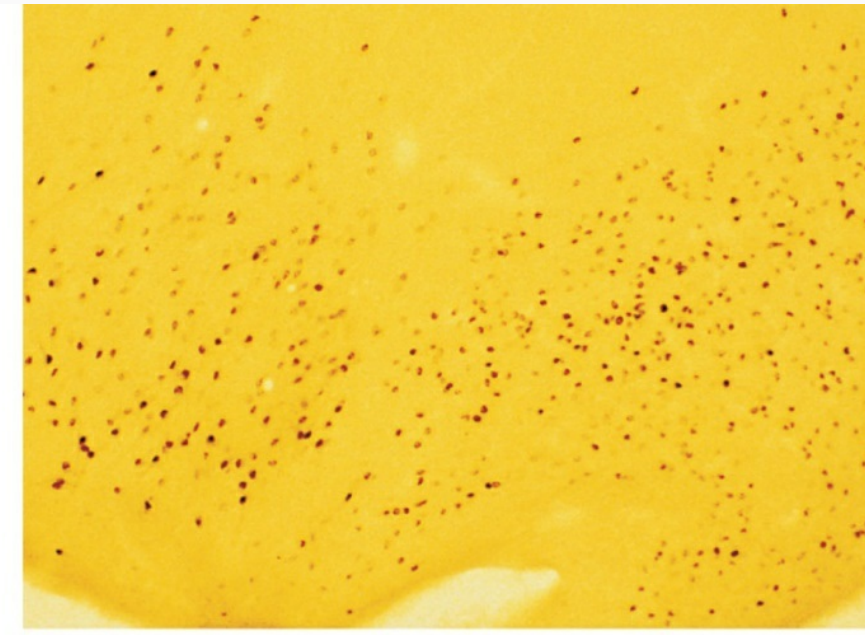
Neural Control of Sexual Behavior

Sexual Behavior in the Adult Female Rat.

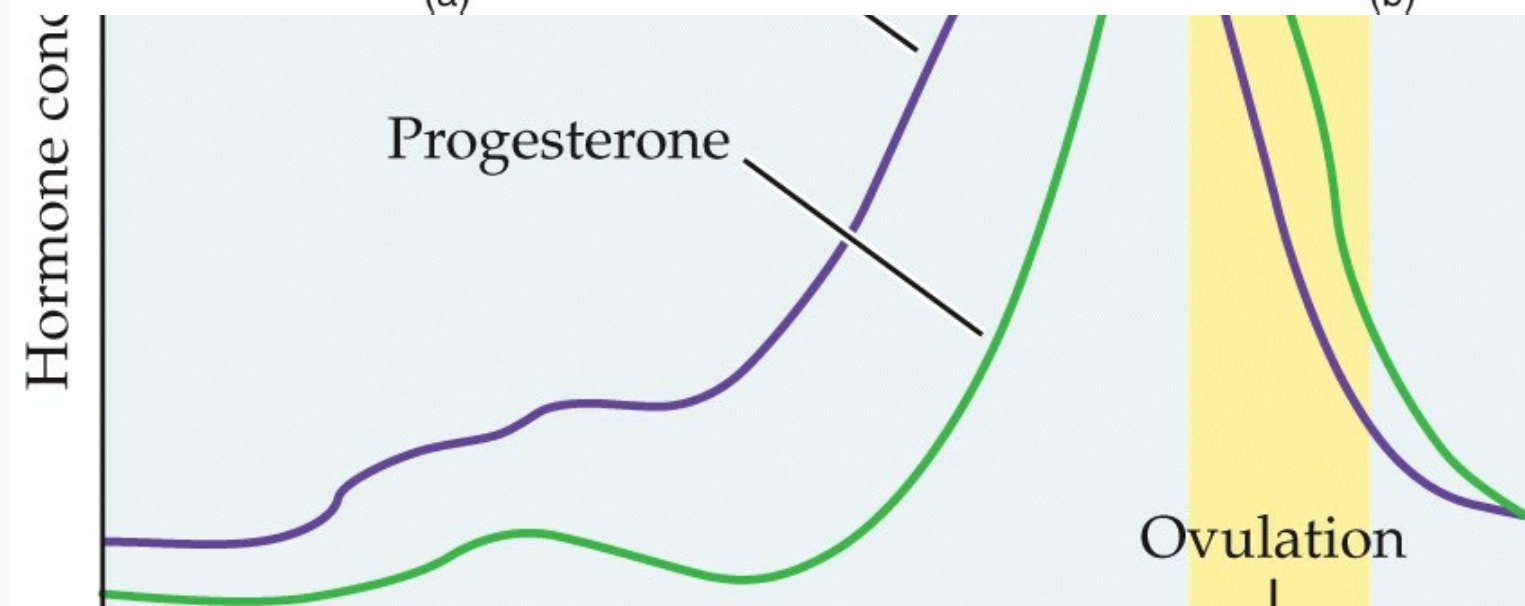
- surge of estradiol followed by surge of
- ovariectomy in female rat eliminates se
- estradiol + progesterone injection prim



(a)



(b)



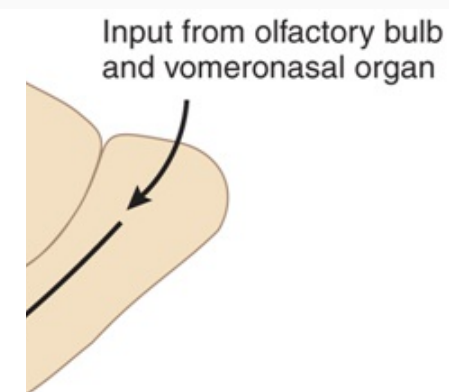
Neural Control of Sexual Behavior

Sexual Behavior in the Adult Female Rat.

- olfactory bulb and vomeronasal organ
- MeA and input from genitals activate VM
- VMH regulates descending control of lo



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Neural Control of Sexual Behavior

Sexual Behavior in the Adult Female Rat.

- sequential injection of estradiol and progestin
- destruction of the VMH reduces/eliminates



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