

The Prepubertal Hiatus in Gonadotropin Secretion in the Male Rhesus Monkey (*Macaca mulatta*) Does Not Appear to Involve Endogenous Opioid Peptide Restraint of Hypothalamic Gonadotropin-Releasing Hormone Release

In higher primates, gonadotropin secretion is elevated in early infancy and again in puberty, but between these times there is a period extending from 6 to 30 months in Rhesus monkeys in which pulsatile gonadotropin-releasing hormone (GnRH) release essentially ceases. Since it has been demonstrated that GnRH neurons of prepubertal monkeys receive innervation from endogenous opioid peptide (EOP) neurons, experiments were done to determine if the restraint of the GnRH secretion was due to EOP secretion.

The EOP antagonist, naloxone, was given to a number of castrated monkeys in 3 doses: as a bolus, as a

continuous infusion, and as an intermittent infusion. Prior to the naloxone, the monkeys had 3 weeks of intermittent GnRH infusion so that the pituitary was appropriately primed to respond. However, the naloxone did not cause any increase in blood luteinizing hormone (LH) although a GnRH injection immediately after the experiment always produced high responses. Thus, the mechanism of the childhood GnRH restraint does not involve EOPs. The authors add that unpublished experiments in female monkeys show the same effect.

Medhamurthy R, Gay VL, Plant TM. *Endocrinology* 1990;126:1036-1042.

Editor's Comment: *This characteristically well-designed experiment has a very clear cut result that has been already adumbrated in the human by Mauras, Veldhuis and Rogol (J Clin Endocrinol Metab 1986;62:1256-1263). The mechanism of the GnRH restraint—enormously important from an evolutionary point of view—remains entirely unknown.*

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