

# Anatomy: oxytocin

Life



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Anatomy Report: OXYTOCIN Name: Yeqin Yan Period: first period Oxytocin

Oxytocin: from the Greek “oxy”, meaning “quick,” and tokos, meaning “childbirth”. History: Oxytocin was discovered in 1909 when Sir Henry H. Dale found that an extract from the human posterior pituitary gland contracted the uterus of a pregnant cat.

Definition: a hypothalamic hormone stored in the posterior pituitary, which has uterine-contracting and milk-releasing actions; it may also be prepared synthetically or obtained from the posterior pituitary of domestic animals; used to induce active labor, increase the force of contractions in labor, contract uterine muscle after delivery of the placenta, control postpartum hemorrhage, and stimulate milk ejection. Peripheral (hormonal) actions: 1. Letdown reflex 2. Uterine contraction 3. Social behavior and wound healing 4.

Modulation of hypothalamic-pituitary-adrenal axis activity 5. Autism 6. Increasing trust and reducing fear 7. Affecting generosity by increasing empathy during perspective taking 8. Affecting Cognitive function Actions within the brain: 1. a Function: 1. Stimulates contractions of the smooth muscle tissue in the wall of the uterus during childbirth. 2. Oxytocin stimulates uterine contraction. 3. Contract the vagina during orgasm.

Synthesis: In the hypothalamus, oxytocin is made in magnocellular neurosecretory cells of the supraoptic and paraventricular nuclei. Storage:

It is stored in Herring bodies at the axon terminals in the posterior pituitary.

Release: It is then released into the blood from the posterior lobe (neurohypophysis) of the pituitary gland. Where can we find it: Outside the brain, oxytocin-containing cells have been identified in several diverse

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tissues, including the corpus luteum, the interstitial cells of Leydig, the retina, the adrenal medulla, the placenta, the thymus and the pancreas.

Drug forms: Synthetic oxytocin is sold as proprietary medication under the trade names Pitocin and Syntocinon, and as generic oxytocin.