

## **P-1456 - NEUROBIOLOGIC CORRELATES BETWEEN SEXUAL ACTIVITY AND WOMEN'S MOOD**

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**Introduction:** Vagino-cervical stimulation and orgasm may influence mood since sexual intercourse and orgasm physiologically stimulate the vagal nerve and increase the secretion of oxytocin.

**Objective:** To explain physiopathologic correlations between sexual intercourse and orgasm from one part and women's mood from another part.

**Methods:** A review of the literature published via MedLine is done without any restrictions, using the terms "vagino-cervical stimulation" or "orgasm" in association with "affect" or "mood" or "stress".

**Results:** Vagal nerve bypasses the spinal cord in its course to the brain and constitute the afferent pathway stimulating orgasm. Vagal nerve stimulation is an adjunctive long-term treatment of chronic or recurrent depression. Epilepsy patients who have received vagal nerve stimulation have shown improvement in depressive symptoms. Vagal nerve stimulation may activate the release of oxytocin, noradrenalin and serotonin via the stimulation of the tractus solitarius. Vagino-cervical stimulation releases oxytocin into plasma via the Ferguson reflex. Oxytocin's origin is predominantly in neurons of the paraventricular nucleus of the hypothalamus that project axons into the posterior pituitary, where they release oxytocin into the systemic circulation in response to vagino-cervical stimulation and orgasm. Studies of brain imaging indicate increased activation at women's orgasm in the paraventricular nucleus of the hypothalamus, periaqueductal gray of the midbrain, hippocampus, and the cerebellum. There has been at least one clinical trial showing that daily intranasal oxytocin led to improvements in depressive symptoms and reactivity to stressful life events.

**Conclusion:** Orgasm and vagino-cervical stimulation affects mood level in women.