

Reproduction

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Balanced hormonal activity is not only crucial for maintaining pregnancy but also affects labor and post-labor changes in the maternal body. The hormone-oxytocin plays a very important role during parturition and lactation. The role played by the hormone during birth is still controversial. Mammalian studies suggest that “ neurohypophysical oxytocin plays a role in the expulsive phase” (Blanks & Thornton, 2003) and also initiates parturition.

All throughout pregnancy, progesterone plays an important role in sustaining it; however at the end of pregnancy, maternal estrogen rises simultaneously along with progesterone level. Estrogen induces oxytocin receptors in the uterine musculature while progesterone softens the cervix. Signals from the moving fetus signals greater secretion of oxytocin which initiates a positive feedback by increasing uterine contractions (Despopoulos & Silbernagl, 2003, p 303). Thus oxytocin causes rhythmic contractions of the strong uterine muscles and helping in easy birth of the birth and prevents chances of post-partum hemorrhage (Odent, 1998).

Milk production after the birth of the child is initiated by another hormone called prolactin. Post-parturition, estrogen and progesterone levels fall; because of this the inhibitory action of these hormones on prolactin is removed. Prolactin then induces secretion of milk in the glands. Though oxytocin has no direct role in milk production it plays an important role in the release of milk or the reflex of “ milk let-down” (Mackenna & Callander, 1997). The infant’s suckling acts as the stimulus which initiates release of oxytocin from the pituitary (Campbell & Reece, 2009, p 986). Oxytocin then induces contraction of the muscles of the mammary glands to initiate the

flow of milk from the glands to the nipples under the control of prolactin.

Hence, it has also been named milk ejection hormone.

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