

Molecules of Love

Written by Marianne Littlejohn

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cohesion, mutual affection and cooperation. What are the ingredients needed in the physiology of our bodily makeup? How do we ensure that these ingredients are available to each of us? Oxytocin is released by the hypothalamus and pituitary gland in the brain, but without oxytocin receptors in the body, it has a hard time spreading its effects around.

Apparently oxytocin receptor cells exist not only in the uterus, cervix and breasts, but also in the brain, the heart, the gut and the placenta, as well as the inner layer of the amniotic sac surrounding a baby. Scientists at the Max Planck Institute for Medical Research have just discovered that there are nerve connections in the brain that transport oxytocin from one part of the brain to another. The inference is that we are wired to release and transport oxytocin. The question is, what are the behaviors that will trigger the inception of optimal neuron requirements for oxytocin in preborn and newborn infants? It is known that the brain has the capacity to create and grow in leaps and bounds during particular sensitive periods of development. Parents with high concentrations of oxytocin in their bodies display more loving and playful attention toward their children.

Women need oxytocin receptors in the uterus in order to labor and give birth effectively. Oxytocin receptor density varies among women. The reasons for this are unknown, but it is possible that women with a history of early childhood trauma are unable to make sufficient receptor cells due to increased levels of cortisol or catecholamines in their system. Survivors of childhood abuse also show a decrease in the size of the hippocampus, the part of the brain involved in emotional responsivity. If oxytocin is such an important mediator of social behavior, then why do we routinely disturb a mother and father's first contact with their baby?

Conception, pregnancy, birth, the newborn period and early childhood seem to be the most critical periods of human development. The behaviors known to stimulate oxytocin release are touch, eye contact, skin-to-skin contact, movement and dance, laughter, food, play, kindness, empathy, pleasure and togetherness. If these situations create oxytocin receptivity, we should empower and educate women and men everywhere to teach young people about pre-conception, pregnancy, childbirth and parenting, and set up support systems that encourage nonviolence and non-separation in maternity care and parenting.

The institutionalization of human beings at the most critical periods in their lives may well be a dire mistake in terms of our capacity to love each other and to care for our environment; it may ultimately put our survival on Earth at risk. It also appears that we have the capacity to increase our adaptivity as a species and our capacity for loving, social bonds by increasing the chances for optimal oxytocin concentrations in our bodies and brains. Obstetricians, pediatricians, neuroscientists, psychiatrists, psychologists, midwives, doulas and caregivers all need to

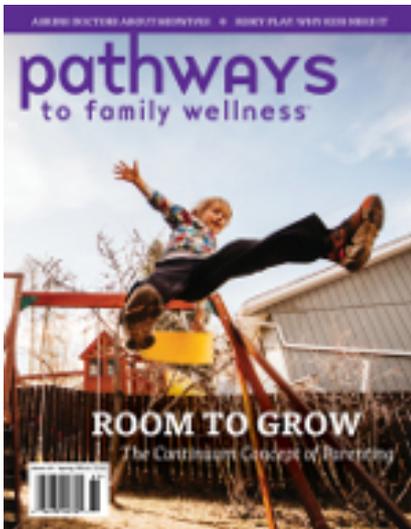
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collaborate on creating a paradigm of love and utilizing our inbuilt molecules of love to the fullest possible degree. To do this we will need to humanize maternity care, increase the number of practicing midwives and doulas, and facilitate interdisciplinary collaboration.

It is a public health imperative, and it is possible.



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