

was as if I were in a trance. I would just find myself going to her and holding on to the relationship and yet I didn't even really like her. I would get such a rush when I had sex with her. I didn't want to give her up. Her love was my drug. One therapist told me, 'If you could just have enough sex with her, you could get her out of your system.' This went on for seven years! I ended up engaged and almost married to her! In the long run the only thing that cut the cord was to stop having sex with her — extreme circumstances and intense withdrawal. Even after I broke it off numerous times, I would find myself going back for more. After a final breakup I remained vulnerable, never knowing if I could withstand her. I feared the day I would run into her again. Nearly five years later I came upon some revolutionary research on love types and brain chemistry. Dr. Fisher's work enabled me to finally reach a resolution and gave me the strength to resist that temptation. It saved my life."

The Chemistry of Love

Modern courtship has gone “from the front porch to the back seat,” from courting to going steady to dating to hooking up. Two people get together to mess around, to make out, and to have sex with no strings attached. Casual sex, careless love, and “friends with benefits” are becoming more and more the norm. Let's have sex first and maybe get to know each other — or not — later. Sex as fun, sex as recreation, is all fine if you're into it, even though it can lead to sex as consumption and addiction. The invisible vulnerability is that physical sex generates passionate attachment chemicals in the body, and you can end up feeling strongly bonded to someone you barely know, someone with whom you have not taken the time to find out how emotionally (or intellectually, socially, or spiritually) compatible you are. You may find yourself “joined at the hip” to someone who makes your life miserable, either by clinging to you or breaking up with you and leaving you chemically (and emotionally) bereft. This can be confusing, not to say devastating, especially for a young soul just getting to know itself.

Modern research in the fields of the biochemistry and neurophysiology of love, pioneered by Dr. Helen Fisher, a biological anthropologist, gives an

illuminating perspective on the power and paradoxes of human sexuality. The biological purpose (not the spiritual, pleasurable, or ecstatic purpose) behind all sexual activity is the reproduction of the species. The intelligence within life has created powerful instinctual drives and irresistible neurological pleasures in the body to ensure that this purpose is fulfilled.

Dr. Fisher proposed that there are three core brain systems governing sexual attraction, mating, and consequent reproduction. These three neurological pathways govern respectively lust, attraction, and attachment. Lust is the sex drive, sexual heat, libido, the craving for simple sexual gratification. Attraction is romantic love, falling in love, the urge to merge, with all of the emotional intensity involved. Attachment is settling into the comfort and stability of a long term relationship. These roughly correspond to anthropologist Desmond Morris's stages of courtship: mating, pair bonding, and parenting. All three stages together insure that conception and birth take place and that the parents stay together long enough to raise the child, ensuring the survival of the species.

The underlying neurological paradox is that while these three brain systems are separate and independent (although related) neurological pathways, they evolved together and are connected. These three activities can and do operate either simultaneously and/or independently of each other, often at the same time. One person is biologically capable of being stabilized in marriage (attached) to one person while being totally in love with (attracted to) another person while at the same time having sex (lust) with whoever is available at the moment — and/or experiencing all three love activities with the same person.

Lust is driven by the levels of androgens and estrogens, male and female hormones, in the bloodstream. Different individuals have differing levels of these sex hormones, resulting in varied levels of sex drives, according to constitution and age. Popular wisdom has it that women peak at 40, men at 18, a meaningful generality perhaps, but one that cannot be applied to specific persons. Eventually the levels of sex hormones decline with age. Estrogen levels increase in men and testosterone levels increase in women after midlife. Lust by itself is easily, if temporarily, gratified by sexual release, and can be relatively impersonal, playing out in anonymous sex and one-night stands.

Lust drives us to experience a variety of partners. At the same time lust brings us into close contact with other human beings. Lust is often the gateway to a deeper attraction.

Passionate romantic love is characterized by intense feelings, high energy levels, sleeplessness, loss of appetite, focused attention, obsessive thinking, and intense craving for the object of this love. The heart is racing, giddy, awake, and alive. There are profound mood swings, ranging from euphoria and ecstasy to depression and hopelessness. These are due to the chemicals the brain is releasing: dopamine, norepinephrine, and phenylethylamine. Functional magnetic resonance imaging of lovers looking at the image of their beloved showed increased blood flow to areas of the brain with high concentrations of receptors for dopamine, which produces pleasure, euphoria, and craving for more, stimulating a biological drive to attach to one other person. Norepinephrine stimulates adrenaline production, which causes elevated heart activity, heightened awareness, sleeplessness, and hyperactivity. Phenylethylamine, which is similar in structure to amphetamines, produces a feeling of ecstasy. In addition, some researchers have found lower levels of serotonin in people in love, as are found in people with obsessive-compulsive disorders, explaining why people in love tend to obsess about their love object.

Then when people have sex, oxytocin is released in both sexes during orgasm. Oxytocin is the pleasurable “cuddling chemical” which produces bonding between sex partners. The more orgasmic the sex, the greater the bonding. The body also produces vasopressin, a hormone associated with long-term bonding and monogamy. In addition, endorphins, the body’s natural opiates, are involved in the longevity of love, as they have pain-killing and pleasure-giving properties.

The intensity of passionate love fades after two or three years. It is believed that the ascendancy of the bonding chemicals (oxytocin and vasopressin) interfere with the neural pathways for the passion chemicals (dopamine, norepinephrine, and phenylethylamine). The obsessive attraction to, craving for, and idealization of the other begin to subside (emotionally as well as chemically) and the calm, peace, and stability of a long-term relationship comes forth. Attachment grows as passion fades. Long-term attachment