- *Genital sensation or orgasm*: usually one would expect loss of genital sensation and orgasm, although some people learn to transfer erotic feelings form other parts of their bodies that retain sensation.
- *Erotic mental and physical feelings*: despite a complete SCI (regardless of spinal level involved), these are not ruled out; people may learn to experience sexual arousal from non-genital areas such as ear lobes or the back of the neck. Whilst this experience will undoubtedly differ from those before the injury, it can nevertheless be fulfilling: it may be less intense and more diffuse. The main point is the ability to regard sexual activity as something of greater impact than using a single position, with the aim of orgasm. The journey itself becomes the endpoint, rather than journey's end as before.
- *Erection to touch (reflex):* injuries above T10 are likely to result in uncontrolled reflex erections, which occur in response to touching the penis. The reflex does not require information to reach the brain, as it takes part at a spinal level. These erections may be troublesome if they occur at inconvenient or embarrassing times: such as during catheterisation. The erection may not be reliable enough for sexual activity and an enhancement may be necessary.
- *Mental erection:* an injury below T10 will not permit reflex erections but mental stimulation such as sexual thoughts or fantasising may lead to some enlargement of the penis. Seminal fluid (semen) may be emitted, after which the erection tends to subside. Usually some form of erection enhancement is needed. Some people may be surprised to find they experience a sort of orgasm whilst dreaming: ?wet dreams' may occur.
- *Ejaculation:* although this is a complex physiological event, it is common for men with any type of spinal injury (complete or incomplete) to experience some difficulty with ejaculation. This may involve problems such as ejaculation going backward into the bladder instead of being emitted through the penis. This may impact on fertility.
- *Vaginal lubrication:* effects vary: some women may have less lubrication, whereas others who have no genital sensation and no response to mental (psychogenic) arousal, may still become physiologically aroused, with appropriately increased levels of vaginal secretion. (this is due to reflex action). Lubrication may vary with the menstrual cycle.
- *Vaginal stimulation*: a study in New Jersey, published in 1997([1]) looked at the effects of vaginal and cervical (cervix of the uterus) stimulation in people with complete SCI. As had been previously reported, despite total loss of sensitivity in internal organs, including genital organs, both men and women report orgasms. Women may also report menstrual discomfort. The study found that the self-stimulation resulted in elevated pain thresholds in women with complete SCI. The authors postulated that sensory information from the genitals may enter the spinal cord at a much higher level than previously thought. Even quadriplegic women may perceive sensations related to sexual excitement
- Female paraplegics with complete SCI above T10 can perceive sensations which accompany sexual arousal. Women who have no sensation in the genital area may still experience orgasm in response to clitoral stimulation.
- In women with incomplete spinal injury, if sensation to pinprick at level T11-L2 is

preserved, psychogenic arousal remains possible.

- Women with cervical (neck) lesions rate the importance of sexual activity as less than that before injury.
- Lower spinal injury: urinary leakage, spasticity (muscle tone increased, stiff muscles and/or spasms) and positioning problems were the most significant medical problems. ([2])
- Orgasm imagery: as in men, women with completely absent sensation in the genito-pelvic area may experience ?orgasm imagery' in dreams.([3])

It follows that in conditions such as arachnoiditis, when there is in effect a partial nerve injury and (perhaps patchy) loss of sensation, that there may well be some retained potential for sexual activity and enjoyment.

A study in 1996 ([4]) found that "Psychosocial rather than physical factors were important for a satisfying sex life and relationship" in paraplegics and the same can well be said of people with conditions such as arachnoiditis and MS.

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[1] Komisaruk BR, Gerdes CA, Whipple B *Arch Neurol* 1997;54:1513-1520 ?Complete' Spinal Cord Injury Does not Block Perceptual Responses to Genital Self-stimulation in Women.

[2] Westgren N, Hutling C, Levi R, Seiger A, Westgren M, *Acta Obstet Gynecol Scand* 1997 Nov; 76 (10): 977-83 Sexuality in women with traumatic spinal injury.

[3] Money J *Arch Gen Psychiatry* 1960;3:373-382 Phantom orgasm in the dreams of paraplegic men and women.

[4] Kreuter M, Sullivan M, Siosteen A, *Arch Phys Med Rehabil* 1996 Jun; 77(6) :541-8 Sexual adjustment and quality of relationship in spinal paraplegia: a controlled study.