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**MALE ORGASM**

***Male orgasm*** is a complex system involving multiple hormones, organs, and nerve pathways.

The hormone testosterone, produced in the testicles, plays a central role by enhancing the sexual desire that leads to arousal, erection and ultimately orgasm. By contrast, low testosterone not only decreases a man’s energy and mood, it makes him less responsive to sexual stimuli, both physical and mental. Men often only requires physical stimulation to achieve arousal, while women typically need physical and mental stimulation to achieve the same. In men the climax of the sexual response come on faster and are shorter than women. The man orgasm will last 5 to 10 seconds. Women will last 10 to 15 seconds on average, although some have reported orgasms that last as long as a minute (a virtual impossibility for men).

The male ejaculate, semen is comprised of sperm cells and seminal fluid, the latter of which contains phosphorylcholine (an enzyme that aids in fertility) and fructose (which provides fuel for sperm). The average volume of semen expelled by a healthy man is around a teaspoon.

***Four phases of the male orgasm***

The route to ejaculation in men is actually delineated by four distinct phases, of which orgasm is the third. While the duration and intensity of these phases can vary, the experience will proceed in a strictly specific way.

**AROUSAL**

Arousal is the stage in which physical, sensory and emotional cues prompt the brain to release a neurotransmitter known as acetylcholine. This in turn triggers the release of nitric oxide into the arteries of the penis, causing them to expand and rapidly fil with blood. The resulting erection is generally accompanied by changes in respiration, increased overall muscle tension and the retraction of the scrotal sac.

**PLATEAU**

Plateau is the phase immediately preceding orgasm in which the voluntary thrusts of the body, specifically the pelvis, suddenly become involuntary, increasing both in intensity and speed. It is at this stage that the heart rate increases to between 150 and 175 beats per minute, accompanied by a marked rise in blood pressure and body temperature. Traces of seminal fluid (pre-cum) may leak from the urethra. The release of pre-ejaculatory fluid is more than just incidental it alters the pH of the urethra so that the sperm has a better chance of survival. The plateau phase lasts between 30seconds and two minutes.

**ORGASM**

The orgasm phase is divided into two parts. The first known as emission, is the stage where ejaculation is inevitable. This is immediately followed by the second stage, ejaculation, in which strong contractions of the penile muscle, anus and perineal muscle help propel the semen from the body. During the orgasm the reward centre of the brain (specifically the cerebellum, amygdala, nucleus accumbens and ventral tegmental area) is flooded with neurochemicals, inciting the intense emotional response associated with an orgasm. At the same time, the ***lateral orbitofrontal cortex*** located behind the left eyes shuts down entirely. This is the part of the brain that plays a central role in the judgement and self-control. The effect explains why people often describe an orgasm as a state where “nothing else matters”.

**RESOLUTION AND REFRACTION**

***RESOLUTION*** is the phase following orgasm where the penis starts to lose its erection. This is often accompanied by feelings of extreme relaxation or even drowsiness.

***REFRACTION*** also known as the refractory period, is the stage following climax when a man is unable to achieve another erection even with stimulation. In younger men, the refractory period may be a short as 15minutes. In older men, it may last as long as an entire day.

**MALE MULTIPLE ORGASM**

Multi- orgasmic is a term used to describe the ability to have more than one orgasm within the span of minutes or seconds. The orgasm may not involve actual ejaculate but must include the physiological and emotional components of ejaculation.

The multi-orgasmic state can be classified in one of two ways:

***Condensed*** in which two to four individual and defined orgasms occur within a few seconds to two minutes.

***Sporadic*** in which refraction is delayed and multiple orgasm can be achieved within the span of several minutes.

There are several factors commonly noted in multi-orgasmic men. These include the use of psychoactive drugs, having multiple partners, having novel sex partners, and the use of sex toys to enhance tactile stimulation.

**MALE INFERTILITY**

***Male infertility*** refers to a males inability to cause pregnancy in a fertile female. In human it accounts for 40-50% of infertility. It affects approximately 7% of all men. Male infertility is commonly due to deficiencies in the semen and semen quality is used as a surrogate measure of male fecundity.

Male infertility is any health issue in a man that lowers the chances of his female partner getting pregnant.

***Under normal conditions*** the mans body makes tiny cells called sperm. During sex, ejaculation normally delivers the sperm into the woman’s body.

The male reproductive system makes, stores and transport sperm. Chemicals in your body called hormones control this. Sperm and male sex hormones(testosterone) are made in 2 testicles. The testicles are in the scrotum, a sac of skin below the penis. When the sperm leave the testicles, they go into a tube behind each testicle. This tube is called the epididymis just before ejaculation, the sperm go from, the epididymis into another set of tubes. These tubes are called the vas deferens. Each vas deferens lead from the epididymis to behind your bladder in the pelvis. There each vas deferens joins the ejaculatory duct from the seminal vesicle. When you ejaculate, the sperm mix with the fluid from the prostrate and seminal vesicles. This forms semen then travels through the urethra ad out of the penis.

Male fertility depends on your body making normal sperm and delivering them. The sperm go into the female partners vagina. The sperm travels through her cervix into her uterus to her fallopian tubes. There, if a sperm and egg meet, fertilization takes place. ***The system only works when genes, hormone level and environmental conditions are right.***

***Causes***

Making mature healthy sperm that travel depends on many things. Problems can stop cells from growing into sperm. Problems can keep the sperm from reaching the egg. Even the temperature of the scrotum may affect fertility. These are the main causes of male infertility.

***Sperm disorders***

The most common problems are with making and growing sperm. Sperm may:

* Not grow fully
* Be oddly shaped
* Not move the right way
* Be made in very low numbers(oligospermia)
* Not be made at all(azoospermia)

Male infertility can be from traits born with, lifestyle choices smoking drinking and taking certain medications can lower sperm count. Other causes include long- term sickness (such as kidney failure) childhood infections (such as mumps) and chromosomes or hormone problems (such as low testosterone). Damage to the reproductive system can cause low or no sperm. About 4 out of every 10 men with obstruction (blockage). A birth defect or a problem such as an infection can cause a blockage.

* ***Varicoceles*** are swollen veins in the scrotum they are found in 16 out of 100 of all men. More common in infertile men (40 out of 100). They harm sperm growth by blocking proper

blood drainage. Varicoceles can cause blood to flow back into the scrotum from the stomach. The testicles are then too warm for making sperm, which leads to low sperm number.

* ***Retrograde ejaculation*** is when semen goes backwards in the body. They go into your bladder instead of out of the penis. This happens when nerve and muscles in your bladder do not close during orgasm(climax).
* ***Immunological infertility*** Sometimes a mans body makes antibodies that attack his own sperm, antibodies caused by injections or surgery. They keep the sperm from working and moving normally.
* ***Hormones*** made by the pituitary gland tell the testicles to make sperm. Very low hormones levels cause poor sperm growth.
* ***Chromosomes*** Sperm carry half of the DNA to the egg. Changes in the number and structure of chromosomes can affect fertility. For example the male Y chromosome may be missing parts.

**Symptoms**

The main sign of male infertility is the inability to conceive a child. There may be no other obvious signs or symptoms. In some cases, however an underlying problem such as an inherited disorder a hormonal imbalance, dilated veins around the testicle or a condition that blocks the passage of sperm causes signs and symptoms.

Although most men with male infertility do not notice symptoms other than the inability to conceive a child, signs and symptoms associated with it includes;

* Problems with sexual friction for example difficulty with ejaculation, reduced sexual desire.
* Pain, swelling or lump in the testicle area
* Recurrent respiratory infections
* A lower than normal sperm count (fewer than 15 million sperm per millilitre of semen or a total sperm count of less than 39 million per ejaculation).