ANEJACULATION

The pathological inability to ejaculate in males, with (orgasmic) or without (anorgasmic) orgasm.

Diagnosis: Male

Related Diagnoses:
- Azoospermia
- Erectile dysfunction
- Obesity
- Ejaculatory disorders
- Retrograde ejaculation
- Prostatitis
- Benign prostatic hyperplasia
- Aspermia
- Obstructive azoospermia
- Oligoasthenoteratozoospermia
- Idiopathic male infertility

About Anejaculation

Despite of stimulation of penis by masturbating or sexual intercourse, men with anejaculation are not able to ejaculate.

There are two kinds of anejaculation, one is situational and the second one is total.

- In situational anejaculation, men are able to ejaculate during masturbation, or have nocturnal emissions, but there is problem with ejaculation during sexual activity. Men can be in able to ejaculation with specific partner or in specific type of sexual activity.
- Total or complete anejaculation is divided into orgasmic and anorgasmic anejaculation. In orgasmic, men are able to achieve orgasm, but there is no semen. It can be caused by blockage of ejaculatory nerves or there can be some obstruction in ejaculatory ducts. On the other hand, in anorgasmic anejaculation, men are not able to have orgasm in any way of sexual arousal, even while they masturbate.

Anejaculation, especially the orgasmic variant, is usually indistinguishable from retrograde ejaculation (when semen, which would, in most cases, be ejaculated via the urethra, is redirected to the urinary bladder). However, a negative urinalysis measuring no abnormal presence of spermatozoa in the urine will eliminate a retrograde ejaculation diagnosis. Thus, if the affected man has the sensations and involuntary muscle-contractions of an orgasm but no or very low-volume semen, ejaculatory duct obstruction is another possible underlying pathology of anejaculation.

Anejaculation can have multiple causes. The main categories are physical causes or psychological causes.

1. Physical causes such as:

   Ejaculatory duct obstruction (EDO) is a congenital or acquired pathological condition which is characterized by the obstruction of one or both ejaculatory ducts. Thus, the efflux of (most constituents of) semen is not possible.

   Damage to the spinal cord impairs its ability to transmit messages between the brain and parts of the body below the level of the lesion. This results in lost or reduced sensation and muscle motion, and affects orgasm, erection and ejaculation.

   Multiple sclerosis, Parkinson’s disease and diabetes mellitus cause damage of nerves which can participate in ejaculation.

2. Psychological causes such as:
A sexual inhibition is a conscious or subconscious constraint or curtailment by a person of behavior relating to specific sexual matters or practices or of a discussion of sexual matters.

Treatment depends on the causes and includes psychosexual counseling, drugs, penile vibratory stimulation and electro ejaculation.

**Associated disease**
- multiple sclerosis
- Parkinson’s disease
- diabetes mellitus
- ejaculatory duct obstruction

**Complications**
- infertility

**Risk factors**

Medication (antihypertensive, antipsychotic, antidepressants, alcohol) and surgery (aortoiliac surgery, retro peritoneal lymph node dissection, colorectal resection, prostatectomy (Pic. 1)) are the most common risk factors of anejaculation. The thoracolumbar sympathetic nerves cause contraction of the smooth muscles of the prostate, seminal vesicles and vas deferens leading to emission of seminal fluid into the urethra. Any surgery, which damage these nerves leads to problems with ejaculation. Nerve-sparing surgery reduces the risk that patients will experience erectile dysfunction. However, the experience and the skill of the nerve-sparing surgeon, as well as any surgeon are critical determinants of the likelihood of positive erectile function of the patient.

**Impact on fertility**

Ejaculatory duct obstruction is the underlying cause for 1–5% of male infertility. If both ejaculatory ducts are completely obstructed, affected men will demonstrate male infertility due to aspermia/azoospermia. They will suffer from a very low volume of semen which lacks the gel-like fluid of the seminal vesicles or from no semen at all while they are able to have the sensation of an orgasm during which they will have involuntary contractions of the pelvic musculature. This is contrary to some other forms of anejaculation.

Men with spinal cord injury (SCI) rank the ability to father children among their highest concerns relating to sexuality. Male fertility is reduced after SCI, due to a combination of problems with erections, ejaculation, and quality of the semen. As with other types of sexual response, ejaculation can be psychogenic or reflexogenic, and the level of injury affects a man’s ability to experience each type. As many as 95% of men with SCI have problems with ejaculation (anejaculation), possibly due to impaired coordination of input from different parts of the nervous system. Erection, orgasm, and ejaculation can each occur independently; however the ability to ejaculate seems linked to the quality of the erection, and the ability to orgasm is linked to the ejaculation facility. Even men with complete injuries may be able to ejaculate, because other nerves involved in ejaculation can effect the response without input from the spinal cord. In general, the higher the level of injury, the more physical stimulation the man needs to ejaculate. Conversely, premature or spontaneous ejaculation can be a problem for men with injuries at levels T12–L1 (12th thoracic nerve and 1st lumbar nerve) (Pic. 2). It can be severe enough that ejaculation is provoked by thinking a sexual thought, or for no reason at all, and is not accompanied by orgasm.

Most men with spinal cord injury have a normal sperm count, but a high proportion of sperm are abnormal; they are less motile and do not survive as well. The reason for these abnormalities is not known, but research points to dysfunction of the seminal vesicles and prostate, which concentrate substances that are toxic to sperm. Cytokines, immune proteins which promote an inflammatory response, are present at higher concentrations in semen of men with SCI, as is platelet-activating factor acetylhydrolase; both are harmful to sperm. Another immune-related response to SCI is the presence of a higher number of white blood cells in the semen.

**Prevention**

Reduce the risk of a spinal cord injury or in cases, that anejaculation is caused psychologically, what is
necessary is to talk about the problem and do not avoid it. There are psychotherapies who are specially focus on sexual problems.

**Symptoms**

- erectile dysfunction
- azoospermia
- enlarged seminal vesicles
- reduce sensation
- reduce muscle motion

**Therapies**

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**Conventional medicine**

**Psychotherapy**

Psychological therapies include sex therapy and cognitive or cognitive-behavioral therapy:

Sex therapy is a form of psychotherapy. Sex therapists assist those experiencing problems in overcoming them, in doing so possibly regaining an active sex life. It is approached with ambivalence in social, religious, and educational systems. The transformative approach to sex therapy aims to understand the psychological, biological, pharmacological, relational, and contextual aspects of sexual problems.

Cognitive therapy (CT) and cognitive-behavioural therapy (CBT) are closely related; however CBT is an umbrella category of therapies that includes cognitive therapy. Cognitive therapy seeks to help the client overcome difficulties by identifying and changing dysfunctional thinking and behavior, as well as emotional responses. This involves helping patients to develop skills for modifying beliefs, identifying distorted thinking, relating to others in different ways, and changing behaviors. Treatment is based on collaboration between the patient and therapist and on testing beliefs. CBT is a psychotherapeutic approach that addresses dysfunctional emotions, maladaptive behaviors, and cognitive processes through a number of goal-oriented, systematic procedures. The category refers to behavior therapy, cognitive therapy, and therapies based on a combination of basic behavioral and cognitive principles and research.

**Pharmacotherapy**

If anejaculation is caused by mild neurological disorders, sometimes there is possibility to treat it with sympathomimetic agents such as ephedrine. In patients with physical causes of anejaculation (except SCI), the administration of midodrine (antihypotensive agent) induces antegrade (normal ejaculation, i.e., forward) and/or retrograde ejaculation in more than 50% of patient.

**Surgical therapy**

A method to treat ejaculatory duct obstruction is transurethral resection of the ejaculatory ducts (TURED). This operative procedure is relatively invasive, has some severe complications, and has led to natural pregnancies of their partners in approximately 20% of affected men. A disadvantage is the destruction of the valves at the openings of the ejaculatory ducts into the urethra such that urine may flow backwards into the seminal vesicles. Another, experimental approach is the recanalization of the ejaculatory ducts by transrectal or transurethral inserted balloon catheter. Though much less invasive and preserving the anatomy of the ejaculatory ducts, this procedure is probably not completely free of complications either and success rates are unknown. There is a clinical study currently ongoing to examine the success rate of recanalization of the ejaculatory ducts by means of balloon dilation.
Other therapy

The first-line method for sperm retrieval in men with spinal cord injury and inability to ejaculate is **penile vibratory stimulation** (PVS). The penile vibratory stimulator is a plier-like device that is placed around glans penis to stimulate it by vibration.

In case of failure with PVS, spermatozoa are sometimes collected by **electroejaculation**. Functional Electrical Stimulation (FES) is a technique of eliciting controlled neural activation through the application of low levels of electrical current. The initial goal of FES technology was to provide greater mobility to the patients after SCI. Other functional applications of FES which help to restore useful functions and thus improve the quality of life include bladder and bowel voiding and electro-ejaculation.

Electroejaculation is one of the several techniques now available to harvest viable sperm for the purposes of artificial insemination or in vitro fertilization. An electric probe is inserted into the rectum near the prostate to stimulate the nerves and contract the pelvis muscles, causing ejaculation. The ejaculate is collected from the urethra and prepared for use in artificial insemination. Caution need to be taken in men with SCI who have a history of autonomic dysreflexia as electroejaculation can cause a significant increase in blood pressure and heart rate.

Assisted reproduction

Usually, men with obstruction of ejaculatory duct have a normal production of spermatozoa in their testicles, so that after spermatozoa were harvested directly from the testes e.g. by TESE (Testicular Sperm Extraction) or MESA, PESA techniques are potentially candidates for some treatment options of assisted reproduction e.g. in-vitro fertilization.

When the number of motile sperm is too low for conventional IVF, the method of intracytoplasmic sperm injection (ICSI) is often used to achieve fertilization. ICSI is a procedure in which a single sperm is injected directly into the egg.

Find more about related issues

Diagnoses

**Azoospermia**
Complete absence of sperm in the ejaculate of a man.
Learn more at: [www.fertilitypedia.org/therapy/diag/azoospermia](http://www.fertilitypedia.org/therapy/diag/azoospermia)

**Erectile dysfunction**
The inability (that lasts more than 6 months) to develop or maintain an erection of the penis during sexual activity.
Learn more at: [www.fertilitypedia.org/therapy/diag/erectile-dysfunction](http://www.fertilitypedia.org/therapy/diag/erectile-dysfunction)

**Obesity**
A disease of excess body fat that can have a negative effect on health, leading to reduced life expectancy and other health problems.
Learn more at: [www.fertilitypedia.org/therapy/diag/obesity](http://www.fertilitypedia.org/therapy/diag/obesity)
Ejaculatory disorders
A class of sexual disorders defined as the subjective lack of normal ejaculation.
Learn more at: www.fertilitypedia.org/therapy/diag/ejaculatory-disorders

Retrograde ejaculation
The semen, which would normally be ejaculated via the urethra, is redirected to the urinary bladder.
Learn more at: www.fertilitypedia.org/therapy/diag/retrograde-ejaculation

Prostatitis
An inflammation of the prostate gland.
Learn more at: www.fertilitypedia.org/therapy/diag/prostatitis

Benign prostatic hyperplasia
A noncancerous increase in size of the prostate.
Learn more at: www.fertilitypedia.org/therapy/diag/benign-prostatic-hyperplasia

Aspermia
Male diagnosis connected with male infertility characterised by the complete absence of semen.
Learn more at: www.fertilitypedia.org/therapy/diag/aspermia

Obstructive azoospermia
Absence of sperm in the ejaculate despite normal spermatogenesis, caused by an obstruction of the genital tract.
Learn more at: www.fertilitypedia.org/therapy/diag/obstructive-azoospermia

Oligoasthenoteratozoospermia
Male fertility diagnosis defined as a combination of low sperm concentration, reduced motility and abnormal sperm morphology in the ejaculate.
Learn more at: www.fertilitypedia.org/therapy/diag/oligoasthenoteratozoospermia

Idiopathic male infertility
A condition in which fertility impairment occurs spontaneously or due to an unknown cause.
Learn more at: www.fertilitypedia.org/therapy/diag/idiopathic-male-infertility

Organs

Bulbourethral gland
Bulbourethral gland is one of two small exocrine glands in the reproductive system of male.
Learn more at: www.fertilitypedia.org/edu/organs/bulbourethral-gland

Penis
External male sex organ that additionally serves as the urinal duct.
Learn more at: www.fertilitypedia.org/edu/organs/penis

Prostate
A walnut-sized structure that is located below the urinary bladder in front of the rectum.
Learn more at: www.fertilitypedia.org/edu/organs/prostate

Rete testis
A network of delicate tubules located in the hilum of the testicle, that carries sperm from the seminiferous tubules to the efferent ducts.
Learn more at: www.fertilitypedia.org/edu/organs/rete-testis

Seminal vesicles
One of two simple tubular glands responsible for the production of about 60 percent of the fluid that ultimately becomes semen.
Learn more at: www.fertilitypedia.org/edu/organs/seminal-vesicles
Testes
Male gonads which produce both sperm and androgens, such as testosterone, and are active throughout the reproductive lifespan of the male. Learn more at: www.fertilitypedia.org/edu/organs/testes

Vas deferens
The duct in the testicle that carries semen from the epididymis to the ejaculatory duct. Learn more at: www.fertilitypedia.org/edu/organs/vas-deferens

Vasa efferentia
Connect the rete testis with the initial section of the epididymis. Learn more at: www.fertilitypedia.org/edu/organs/vasa-efferentia

Reproductive cells

Sperm
A male reproductive cell which is able to fertilize the counterpart female gamete – the oocyte. Learn more at: www.fertilitypedia.org/edu/reproductive-cells/sperm

Spermatogonium
An undifferentiated male germ cell with self-renewing capacity representing the first stage of spermatogenesis. Learn more at: www.fertilitypedia.org/edu/reproductive-cells/spermatogonium

Reproductive functions

Ejaculation
Discharge of the semen (usually containing sperm) from the male reproductive tract, normally accompanied by orgasm. Learn more at: www.fertilitypedia.org/edu/reproductive-functions/ejaculation

Erection
The physiological process by which a penis becomes erect by being engorged with blood. Learn more at: www.fertilitypedia.org/edu/reproductive-functions/erection

Orgasm
The sudden discharge of accumulated sexual excitement during the sexual response cycle. Learn more at: www.fertilitypedia.org/edu/reproductive-functions/orgasm

Risk factors

Alcohol drinking
A pattern of drinking that results in harm to one’s health, interpersonal relationships, or ability to work. Learn more at: www.fertilitypedia.org/therapy/rf/alcohol-drinking

Antidepressants
A broad group of drugs that are used in the treatment of depression and could negatively affect sexual function. Learn more at: www.fertilitypedia.org/therapy/rf/antidepressants

Antihypertensive therapy
A class of drugs that are used to treat high blood pressure. Learn more at: www.fertilitypedia.org/therapy/rf/antihypertensive-therapy

Antipsychotics
A class of medications prescribed to treat mental health issues involving psychosis or delusions and leading to hormonal imbalances. Learn more at: www.fertilitypedia.org/therapy/rf/antipsychotics
Diabetes mellitus
A condition in which the body either does not produce enough, or does not properly respond to insulin, a hormone produced in the pancreas.
Learn more at: www.fertilitypedia.org/therapy/df/diabetes-mellitus

Drug use
A patterned use of a drug in which the user consumes the substance in amounts or with methods which are harmful to themselves or others.
Learn more at: www.fertilitypedia.org/therapy/df/drug-use-1

Groin surgery
A surgery, which is performed in inguinal part of the body.
Learn more at: www.fertilitypedia.org/therapy/df/groin-surgery

Prostatectomy
Surgical removal of all or part of the prostate gland.
Learn more at: www.fertilitypedia.org/therapy/df/prostatectomy

Spinal cord injury
A damage of the spinal cord that causes changes in its function, either temporary or permanent.
Learn more at: www.fertilitypedia.org/therapy/df/spinal-cord-injury

 Symptoms

Abnormal sperm morphology
A normal sperm morphology of less than 4% of sperms in an ejaculate.
Learn more at: www.fertilitypedia.org/edu/symptoms/abnormal-sperm-morphology

Absence of sperm in ejaculate
The medical condition of a man whose semen contains no sperm.
Learn more at: www.fertilitypedia.org/edu/symptoms/absence-of-sperm-in-ejaculate

Anorgasmia
A type of sexual dysfunction in which a person cannot achieve orgasm despite adequate stimulation.
Learn more at: www.fertilitypedia.org/edu/symptoms/anorgasmia

Immobile or dead spermatozoa in semen
A condition in which spermatozoa in semen are either immobile or dead.
Learn more at: www.fertilitypedia.org/edu/symptoms/immobile-or-dead-spermatozoa-in-semen

Inability to have or maintain an erection
The inability to develop or maintain an erection of the penis during sexual activity in humans.
Learn more at: www.fertilitypedia.org/edu/symptoms/inability-to-have-or-maintain-an-erection

Infertility
The failure to achieve a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse.
Learn more at: www.fertilitypedia.org/edu/symptoms/infertility

Low semen volume
A condition in which a man has an unusually low ejaculate (or semen) volume, less than 1.5 ml.
Learn more at: www.fertilitypedia.org/edu/symptoms/low-semen-volume
Lowered libido
The absence of sexual appetite.
Learn more at: www.fertiltpedia.org/edu/symptoms/lowered-libido

Reduced sperm motility
The decreased ability of sperm cell to move progressively.
Learn more at: www.fertiltpedia.org/edu/symptoms/reduced-sperm-motility

Sexual frustration
A frustration caused by a discrepancy between a person’s desired and achieved sexual activity.
Learn more at: www.fertiltpedia.org/edu/symptoms/sexual-frustration

Therapies

Cognitive behavioural therapy
Cognitive behavioral therapy is a form of psychotherapy which is used to treat a number of mental disorders.
Learn more at: www.fertiltpedia.org/edu/therapies/cognitive-behavioural-therapy

Electroejaculation
A procedure used to obtain semen in the treatment of an ejaculatory dysfunction in human males through electrical stimulation.
Learn more at: www.fertiltpedia.org/edu/therapies/electroejaculation

ICSI
A micromanipulative fertilization technique in which a single sperm is injected directly into an egg.
Learn more at: www.fertiltpedia.org/edu/therapies/icsi

Laser-assisted immotile sperm selection
Method, which uses a laser to identify viable sperm cell, recommended in MESA/TESA IVF cycles or in patients diagnosed with sperm immotility.
Learn more at: www.fertiltpedia.org/edu/therapies/laser-assisted-immotile-sperm-selection-1

MACS
Sperm preparation technique for ART eliminating apoptotic sperms depending on their surface antigens in magnetic field.
Learn more at: www.fertiltpedia.org/edu/therapies/mac-1

MESA
A microsurgical procedure to harvest sperm from the single epididymal tubule (epididymis), used in the case of obstructive azoospermia.
Learn more at: www.fertiltpedia.org/edu/therapies/mesa

Micro TESE
Microsurgical method used to identify areas of sperm production within the testes with the aid of optical magnification.
Learn more at: www.fertiltpedia.org/edu/therapies/micro-tese

Penile vibratory stimulation
Use of vibratory device to induce ejaculation in men with complete inability to achieve an orgasm during sexual relations.
Learn more at: www.fertiltpedia.org/edu/therapies/penile-vibratory-stimulation

PESA
Sperm aspiration procedure in which a needle is inserted into the epididymis in order to retrieve sperm.
Learn more at: www.fertiltpedia.org/edu/therapies/pesa

Pharmacotherapy of erectile dysfunction
Various medications used in the treatment of erectile dysfunction.
Learn more at: www.fertiltpedia.org/edu/therapies/pharmacotherapy-of-erectile-dysfunction
Pharmacotherapy of retrograde ejaculation
Medications used to treat retrograde ejaculation.
Learn more at: www.fertilitypedia.org/edu/therapies/pharmacotherapy-of-retrograde-ejaculation

Psychotherapy of erectile dysfunction
Cognitive behavioural therapy or sex therapy is helpful in treatment of psychological problems which could be contributing to erectile dysfunction.
Learn more at: www.fertilitypedia.org/edu/therapies/psychotherapy-of-erectile-dysfunction

Sperm donation
The procedure in which a man (sperm donor) provides his sperm for fertility treatment.
Learn more at: www.fertilitypedia.org/edu/therapies/sperm-donation

Standard IVF
A process in which an egg is fertilised by sperm outside the body: in vitro. Own or donated gametes may be used.
Learn more at: www.fertilitypedia.org/edu/therapies/standard-ivf

Surgical therapy of ejaculatory duct obstruction
Surgical procedures which correct ejaculatory duct obstruction and lead to restoration of fertility.
Learn more at: www.fertilitypedia.org/edu/therapies/surgical-therapy-of-ejaculatory-duct-obstruction

Surgical therapy of erectile disfunction
In patients with erectile dysfunction, inflatable penile prosthesis surgery is regarded as the gold standard treatment.
Learn more at: www.fertilitypedia.org/edu/therapies/surgical-therapy-of-erectile-disfunction

Surgical therapy of retrograde ejaculation
Surgery used to treat retrograde ejaculation.
Learn more at: www.fertilitypedia.org/edu/therapies/surgical-therapy-of-retrograde-ejaculation

TESE
Removal of a small portion of testicular tissue in order to extract a few viable sperm.
Learn more at: www.fertilitypedia.org/edu/therapies/tese

Gallery
Nerves involved in arousal comprise two major pathways: inhibitory input from the psychogenic pathway is sympathetic, while stimulation by the reflexogenic is parasympathetic.

Sources

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