RFSU, the Swedish Association for Sexuality Education, is a politically and religiously independent organization dedicated to promoting an unprejudiced and open-minded attitude to sex and relationship issues. RFSU is founded on a firm belief that relationships and sex are central to the individual and to society. RFSU's activities are designed to inform, educate and shape opinion in Sweden and abroad. RFSU owns a company that sells condoms, the profits of which go towards our information activities.

Dicktionary

Why *Dicktionary*? My choice of the word *dick* to describe the male genitals might be seen as a stunt to grab your attention. In fact, I chose it out of respect for what many men themselves call their penis. There are any number of names for the male sex organs. In my experience men have one name for them in public, for instance when talking to a medical professional, and another name they use in private with their partner. There is a huge variety of inventive names. However, when I ask a group of men what term I should use to refer to their genitals, many of them – irrespective of age – choose *dick*. It seems that *dick* is the word that many men prefer when talking to other men.

Our views on sexuality and how it can and should be expressed is closely linked to our attitudes to men and women. Generally speaking, female sexuality has been – and still is – regarded as "refined", whereas male sexuality is seen as anything but. The word *dick* and what it stands for has therefore become a symbol of the crude, coarse and demonic side of sexuality, which makes the word hard to use in polite company. However, it also represents drive, strength, sexual arousal, love and other positive concepts, and this is the sense in which men use the word among themselves.

In this booklet I shall also use the word *penis*: a good name, and the one I use when performing medical examinations on men. In the latter situation, the word *dick* is inappropriate given its sexual overtones.

ANDROLOGY

The topics covered in this booklet fall within the field of andrology, the branch of medical science dealing with the male reproductive system. Unlike its female counterpart, gynecology, andrology has never become established in Sweden or other countries in the western world and is not considered a specialty in its own right within the Swedish medical profession. As a result, few people are engaged in andrological research, and scant resources are devoted to the subject, which in turn means that our knowledge of male sexuality leaves a lot to be desired. Above all, individual men know very little about their own reproductive organs, but healthcare professionals too are usually short on knowledge regarding the male genitalia and the treatment of men with sex-related issues. Even though there are people with the right knowledge, it can be hard to know where to turn if you ever need advice on a sexual health problem. Many clinics are now making it their business to learn more about male sexual health and how to treat men. In time, it is hoped that this will encourage men to seek advice and get answers on sex-related issues.

This booklet has been produced as a contribution to filling this knowledge vacuum. It is intended for non-scientific readers wishing to learn more about male sexuality.

Stefan Laack, RFSU 2008

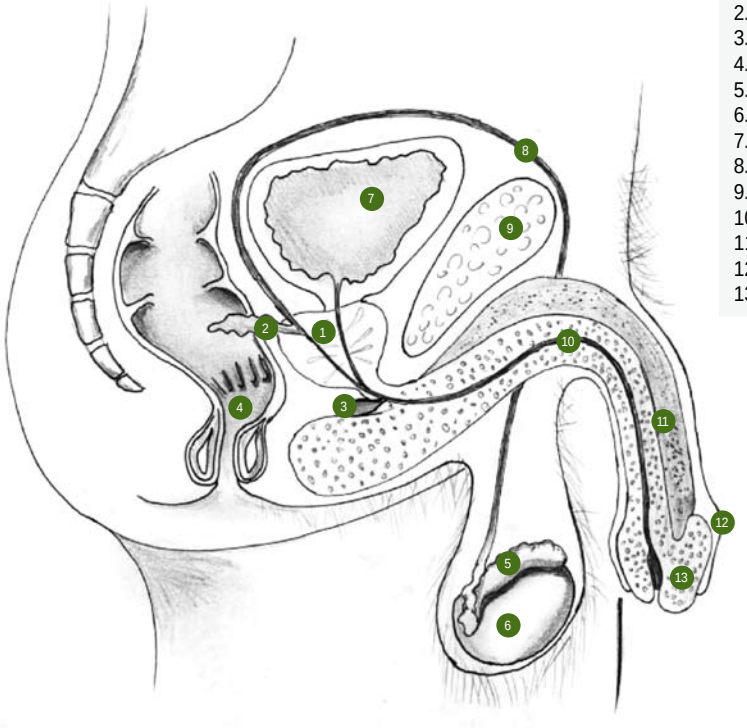
Appearance

Looking at a naked man, what you see is the external genitalia: the scrotum, the shaft of the penis and sometimes, depending on how much foreskin the man has, part or all of the glans. Some men are born with a well-developed foreskin that forms a small "trunk" in front of the glans, while others are born with such a short foreskin that the glans is partially or fully exposed. A third group of men have been circumcised for one reason or another, i.e. had their foreskin completely removed, in which case the entire glans is visible.

FORESKIN

The job of the foreskin (prepuce) is to protect the glans. It provides a barrier against chafing and ensures that the skin of the glans is kept supple. Just inside the opening of the foreskin there is a special kind of sebaceous gland producing custom-made sebum for the particular type of skin found on the glans and inside the foreskin. This skin is similar in character to that on the inside of the lips and on a woman's inner labia (vaginal lips). The same sebaceous glands, Fordyce spots, are therefore found inside the lower lip and in a woman's vulva. The sebum produced by Fordyce spots not only keeps the skin of the glans supple but also protects it from bacterial and fungal infections. Fungal infections inside the foreskin are therefore relatively uncommon. When they do occur, it is usually as a result of overzealous use of soap, which constantly washes away the protective layer of sebum and irritates the skin. The sebum is called smegma but is better known as "knob cheese" because of its cheese-like consistency and smell, the latter being noticeable chiefly if you have not washed for a while.

The foreskin also plays a role in sexual activity, be it masturbation or sex with a partner. Pulling the foreskin back and forth over the glans is probably the easiest and most common means of self-gratification, even though men also find other ways of masturbating. During sexual intercourse, the foreskin reduces friction slightly because it can move back



and forth over the glans. Several of the sensations enjoyed by men during penetrative sex originate in the foreskin – partly because it stretches or rolls over the glans, and partly because some 10 per cent of all nerve endings in the penis are located in the foreskin.

CIRCUMCISION

Men are circumcised for a variety of reasons, most of which are based on very old conceptions. These reasons may be medical, ethnic, cultural, religious, hygienic or sexual health related. Circumcision is usually performed as proof of membership of a particular religion or ethnic group, but many of the circumcisions currently performed are attributable to the anti-masturbation sentiment that prevailed in the English-speaking world at the turn of the twentieth century. In those days masturbation was considered the height of immoral behaviour and the cause of everything from rheumatism to mental disorders. To discourage boys from masturbating, doctors began removing foreskins. An American surgeon, Dr John Harvey Kellogg, was an active opponent of masturbation and launched a health food designed to curb the urge to masturbate. He believed that toasted corn reduced sexual arousal in boys, and was very successful in selling this product to worried parents in the form of flakes.

Nowadays, virtually all authorities on the subject agree that there are no medical benefits to circumcision, except in the case of specific conditions affecting the foreskin, and the procedure is increasingly called into question both in Sweden and internationally. Around 3,000 boys annually are circumcised in Sweden.

TIGHT FORESKIN

A tight foreskin may be one of the reasons given for routinely circumcising boys. It is important to bear in mind that it is perfectly natural for young boys to have a tight foreskin. Personal hygiene, especially in the genital region, is considered vitally important, and it is usually when trying to wash inside a little boy's foreskin that parents discover it is too tight. In fact, however, it is not necessary to wash inside a boy's foreskin, since there is a self-cleaning system that does a perfectly good job all by itself. If you attempt to retract a boy's tight foreskin over the glans, there is a risk you will cause small tears inside the foreskin. These may form scars as they heal, making the foreskin tighter. If a young boy has a tight foreskin, it is generally best to leave well alone, since most foreskins naturally grow wider when the boy reaches puberty. Testosterone, the male sex hormone,

loosens the foreskin. Not until puberty is it necessary to worry about cleaning under the foreskin. Even then, you should take care not to use too much soap. Irritation and sometimes inflammation resulting from overzealous use of soap is a common genital problem in men. Since the skin of the glans and the inside of the foreskin is similar to that inside the lips, it is a good rule to use soap under the foreskin as often as you would use it in your mouth. Normally it suffices to rinse the area with warm water and rub it gently with your thumb to remove any dead skin and traces of smegma.

SCROTUM

The scrotum contains the testicles, the epididymis and the start of the vas deferens (spermatic ducts). Every man who has ever slipped on a bike pedal or been kicked in the balls rightly wonders why the testicles are suspended in such a vulnerable position. The answer is that they are heat-sensitive. They work best at a temperature of 34°C, so the scrotum acts as a climate control system, keeping the temperature at or below this figure. Sperm production ceases if the temperature exceeds 34°C, so there are several independent systems to keep the temperature at the optimum level for the testicles.

To aid cooling, the male genitals have no subcutaneous fat (layer of fat below the skin) and the skin on the penis and testicles is thinner than elsewhere on the body. As a result, all the underlying structure is visible. Sebaceous glands and hair follicles, which elsewhere are embedded in the subcutaneous fat, can be clearly seen, giving the scrotum and parts of the penile shaft a pimpled appearance.

The scrotum walls contain a special kind of heat-sensitive muscle, tunica dartos. In cold conditions it contracts, raising the testicles closer to the warmth of the body and reducing the surface area on which heat can evaporate. In warm conditions the scrotum expands, distancing the testicles from the warm trunk and increasing the area for evaporation and the cooling effect. In fact these muscles are constantly at work. If you look at a naked man standing, you can observe his testicles gently moving up and down the

whole time, provided the surroundings are not too cold or extremely warm. The scrotum also contains the cremaster muscle, which has a protective function. If you touch a man on the lower abdomen or near the top of his inner thigh, his testicles are rapidly raised to minimize the risk of harm, without his being conscious of it. When a man is sexually aroused, too, his scrotum contracts, probably so that his testicles do not "slap" his partner during intercourse, causing pain or discomfort.

As a further means of ensuring that the scrotum stays at or below 34°C, the vessels carrying blood into and out of the scrotum are intertwined. This cools down the incoming blood because some of its heat is absorbed by the blood flowing out. As a result, the blood that reaches the testicles has a lower temperature than blood in other parts of the body. Blood throughflow in the scrotum is also temperature-sensitive, with the outward flow being adjusted to keep the temperature at the right level for the testicles.

The scrotum also contains more sweat glands than any other area of skin, in order to cool the scrotum by means of evaporation. To increase the evaporation surface further, the area is covered in hair. Pubic hair ensures as well that there is always an air canal between the scrotum and the inside of the thigh, which likewise aids cooling.

Any man who has ever sunbathed in the nude will know that the male genitals are heavily pigmented. No other part of the body tans as heavily as the penis. This may also be connected with cooling. Heavily pigmented skin absorbs more heat than pale skin, thereby protecting the underlying tissue. In the dawn of time, when humans walked the earth naked, this may have had some significance. It also means that accumulations of pigment, such as blotches, freckles and birthmarks, are commonly found on the penis and scrotum.

In addition to its purely physiological functions, the scrotum plays a sexual role. The skin is sensitive to gentle touch, and the scrotum is definitely one of the male erogenous zones. Many men find touching the scrotum pleasurable.

TESTICLES

The testicles (testes) are located inside the scrotum. Their principal task is to produce sperm and testosterone, the male sex hormone. The average adult male's testicle (testis) weighs 22 grams, is 4–5 cm long, 2.5–3.5 cm wide, and oval in shape. However, there are wide variations in size, which bears little relation to function. As with all other body parts that occur in pairs, slight differences in size between the two testicles are common. For some unknown reason, the left testicle is usually the larger. The testicles also normally hang at slightly different heights in the scrotum, the left one generally slightly lower. It is reasonable to assume that there may be a practical reason for this, since the difference in height certainly makes it less easy to squash both testicles between the thighs.

The male testicles and the female ovaries are formed from the same embryonic material, which in a male fetus is located inside the abdomen. During the latter stages of fetal development the testicles migrate down to the scrotum. In around two per cent of boys at birth, one or both testicles have failed to descend fully into the scrotum and remain in the groin. In many cases such testicles descend of their own accord during the baby's first three months, but if they remain in the groin after that time, medical intervention is required. Nowadays this normally takes the form of hormonal treatment, but surgery is sometimes performed.

A boy's testicles start to grow just before he enters puberty, and the growth rate is fastest in early puberty.

TESTOSTERONE

Without testosterone, the male sex hormone, there would be no men! The testicles of a male fetus begin producing testosterone in the eighth week of pregnancy. Before that point it is impossible to distinguish male from female fetuses, since all appear to be female, but under the influence of testosterone the fetus starts to develop into a little boy. The embryonic material that develops into the inner labia (vaginal lips) in the female fuses to form the shaft of the penis, while the material that would form the outer labia becomes the scrotum. What would become the clitoris in a female grows to form the

glans and the erectile tissue on the underside of the penis. This is why men have a "seam" running from the urethral opening down the underside of the penis and across the scrotum to the anus.

The testicles of a male fetus produce relatively high levels of testosterone. The amniotic fluid surrounding the fetus is genetically part of the mother and contains estrogen, the female sex hormone. In order for the fetus to develop into a boy, the levels of testosterone need to be higher than those of estrogen. Just before birth, testosterone production drops – for an unknown reason – before increasing again after delivery. The levels then are almost as high as in the womb, probably because breast milk also contains female hormones. The baby therefore requires high levels of testosterone in order to retain his male characteristics. Testosterone production in the testicles subsequently falls away and ceases entirely until the boy reaches puberty. In his late teens or early twenties, testosterone production peaks. However, testosterone levels never fall to zero because testosterone is also produced in the adrenal glands of both men and women. The female sex hormone, estrogen, is produced in a woman's ovaries as well as in the subcutaneous fat of both sexes. After puberty, testosterone levels gradually decline as a man ages.

There is a reason why men produce testosterone and sperm in the same place: an extremely high concentration of testosterone is necessary to produce sperm – so high that it would be impossible to achieve if the body did not produce both in the same place.

SPERM

Each testicle is divided into around 300 pyramid-shaped compartments. The walls between the compartments contain Leydig cells, which produce testosterone. Each compartment contains 2–4 seminiferous tubules in which sperm (spermatozoa) are produced, each tubule measuring 0.2 mm in width and 30 cm to 1 metre in length. The seminiferous tubules are narrow tubes in which stem cells at the inner end divide and develop into sperm as they are transported to the other end of the tube. The total length of a man's seminiferous tubules is estimated at 1.8 km. The seminiferous tubules discharge

through 10–15 ductules into one long tube that is coiled behind the testicles: the epididymis, where the sperm mature and are stored. The entire process from spermatogenesis (stem cell division) to mature sperm takes 72–75 days.

Spermatogenesis in particular is a heat-sensitive process, and if conditions are too warm, no new sperm are produced. This rarely happens, though, since the cooling systems are so effective. However, immersion in hot water can be too much for the cooling systems because there is then no possibility of conducting the heat away. Men who are having difficulty fathering a child are therefore recommended to avoid hot baths. If the testicles stay at the right temperature (34°C), a healthy man produces up to 160 million sperm per day, or more than 1,800 per second.

Each sperm (spermatozoon) can be roughly divided into three components: head, body and tail. The head is a transport container for the DNA, i.e. the inherited characteristics. The body serves as an engine for the tail and contains stored sugar, mainly fructose. The tail is a cilium, a minute filament of the same kind as we have inside the windpipe and the intestine. If you look at sperm under a microscope, they appear to be swimming like tadpoles. In a three-dimensional image, you can see that the tail has a corkscrew motion that propels the sperm through the fluid. The tail moves so long as there is sugar in the "engine", usually 3–5 days. In optimal conditions, such as inside a woman's fallopian tubes, sperm can survive for up to five days. It is good to know this if you are relying on the "rhythm" method of contraception (i.e. periods in which it is safe to have unprotected sex). It is possible to have sex with a woman on a Saturday and for her to be fertilized the following Thursday when she ovulates.

EPIDIDYMIS

All the seminiferous tubules discharge into a single tube, the epididymis, which is approximately five metres in length and is coiled behind the testicles. The tube is surrounded by smooth muscle that contracts rhythmically to move the sperm through the epididymis. The epididymis is where the sperm become fully mature and are stored. Storage takes place in the lower third of the epididymis. Before reaching that point, the

sperm spend 5–7 days in the two upper thirds, where they mature. The exact process is unknown, but we do know that the DNA is stabilized. The head will no longer break so easily, and the sperm "learn" to swim straight. They also acquire the ability to penetrate the shell of the egg cell. However, they do not become fully capable of fertilization until they mix with the secretion contained in a man's seminal fluid.

Storage in the epididymis is again a heat-sensitive process requiring a temperature of 34°C. If the temperature is correct, sperm can be stored for up to 10 days without its viability being affected. After that time it "dies". Men therefore need to ejaculate regularly in order to remain fertile. Sperm production is related to "demand". If you ejaculate frequently, production increases.

With as many as 160 million sperm to choose from, there are naturally variations in quality. Some sperm are incapable of fertilization right from the start, while others "die" early on in the system. If they are stored for too long, the number of viable sperm diminishes. The muscle cells in the epididymis are constantly milking forth new sperm, so the man needs to dispose of the unviable sperm. "Dead" sperm are therefore actively transported via the vas deferens to the urethra to be expelled in the urine. If the man ejaculates, they are expelled that way, but it is also believed that the epididymis contains a recycling system that breaks down some of the "dead" sperm and reuses the material.

VAS DEFERENS

The epididymis opens into the spermatic ducts (vas deferens or ductus deferens), which connect it to the urethra and facilitate the transport of sperm for ejaculation. The transport process is actively aided by muscle cells in the vas deferens.

SEMINAL FLUID AND ORGASM

Seminal fluid, also known as ejaculate and colloquially as sperm or "cum", consists of fluid from several of the male internal genitalia. The largest proportion of the volume, some 60 per cent, comes from the seminal vesicles, while around 30 per cent consists of fluid from the prostate gland. Fluid containing sperm from the epididymis accounts for only a small percentage of the total, while the remaining volume (8–9 per cent) comes

from the bulbourethral glands, two small glands also known as Cowper's glands. Ejaculate comprises 3–5 millilitres of fluid, roughly equivalent to a teaspoonful, containing some 100 million sperm per millilitre. The fluids from the various organs are mixed in the upper part of the urethra, which is embedded in the pelvic floor muscles. This section of the urethra can dilate to 2–3 times its normal volume, which sets the limit for the maximum volume of ejaculate.

The mixing process that occurs a second before ejaculation/orgasm is called emission and is sensed as the "point of no return". Once the fluids have mixed in the urethra prior to ejaculation, there can be no holding back.

Ejaculation produces rhythmic muscle contractions in the pelvic floor, squeezing and increasing pressure in the upper part of the urethra. This causes the contents – the seminal fluid – to come squirting out in a series of 5–8 spurts at 0.8-second intervals. The initial spurts are the most powerful.

Ejaculation and orgasm are two separate phenomena, although they are usually seen as one and the same thing because they tend to occur simultaneously. Ejaculation refers to the expulsion of seminal fluid from the urethra through rhythmic muscle contractions, while orgasm is the accompanying sense of climax and wellbeing.

Given that ejaculation and orgasm are two different things, they may also occur separately. It is possible for ejaculation to happen without orgasm. This may be a consequence of various neurological disorders and can be a major problem for the man in question, since orgasm is important to achieve sexual satisfaction. Ejaculation causes arousal to diminish and the erection to subside.

Orgasm, on the other hand, seems not to have any negative effects on arousal or erection. By learning to distinguish between ejaculation and orgasm, and hence to have orgasms without ejaculating, men too can enjoy multiple orgasms. This technique has been developed and practised for centuries by Taoists, who believe that a man loses some of his life force by ejaculating and should therefore do so sparingly.

Male Internal Genitalia

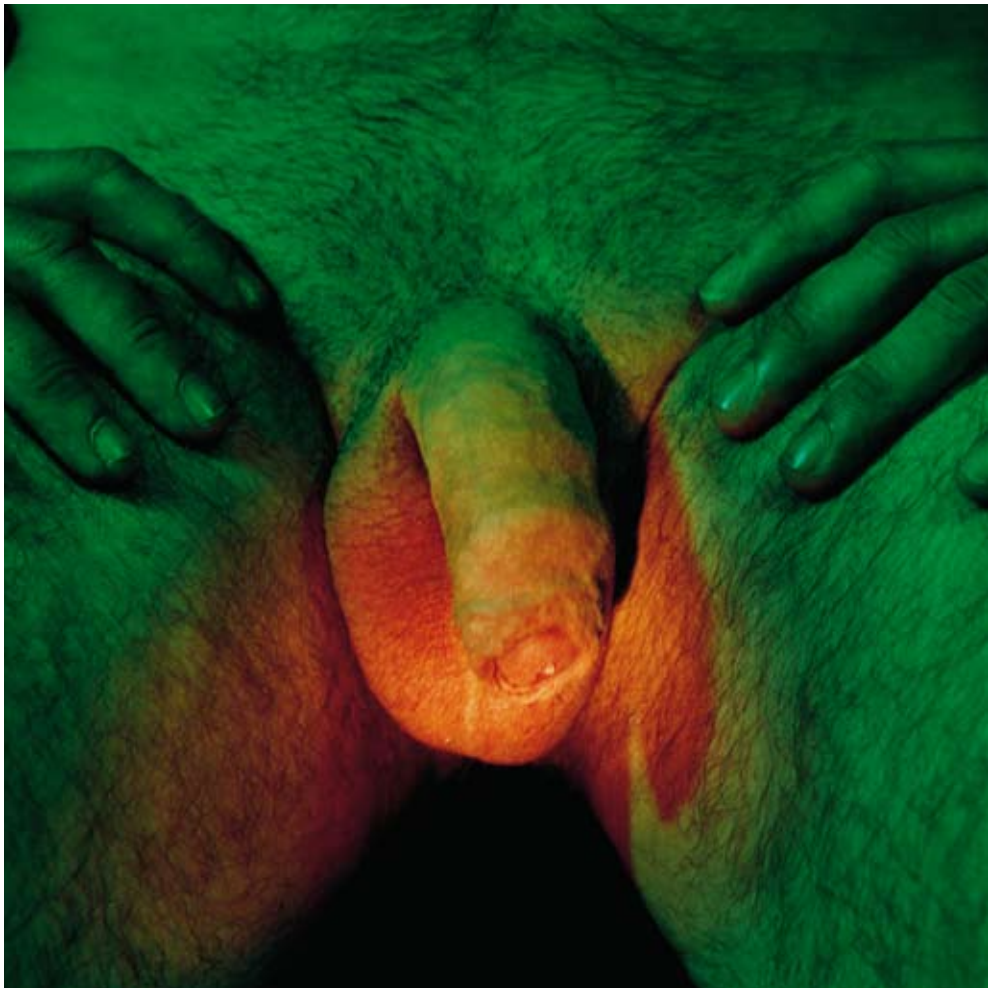
SEMINAL VESICLES

The seminal vesicles (vesicula seminalis) are two glands, each around 5 cm long, that join each vas deferens to form the ejaculatory ducts opening into the urethra. Their function is still largely uncharted, but they contribute the largest part of the seminal fluid. The fluid produced by the seminal vesicles contains a number of sugars, primarily fructose, plus amino acids, proteins and prostaglandins.

PROSTATE GLAND

The prostate comprises not just a single gland but rather a group of around 30 glands surrounding the upper section of the urethra at the point where it is joined by the ejaculatory ducts. It is not known for sure why men have a prostate gland, but in all probability it plays a role in fertility. We know that the prostate has the ability to enrich metals, including zinc, which has a stabilizing effect of the sperm's DNA. The prostate and the secretion it contributes to the seminal fluid contain high levels of zinc, which also has antibacterial properties. It is possible therefore that the job of the prostatic secretion is to protect the sperm from bacteria. Since the ejaculatory ducts join the urethra inside the prostate, it is also conceivable that the prostate acts as a guard to prevent bacteria from travelling down the vas deferens to the epididymis, where they could affect fertility. Prostatic secretion also contains high levels of magnesium and citric acid, the latter reinforcing the antibacterial effect.

The rear of the prostate gland is adjacent to the rectum, so it is possible to insert a finger and feel the prostate through the front wall of the rectum. It feels like a chestnut-sized bulge approximately 7–8 cm up. Its consistency, size and any tenderness provide clues as to the man's state of health. A healthy prostate is chestnut-sized, not tender, and firm in consistency, rather like an eraser. Many men find massaging the prostate gland a big turn-on that heightens their sexual pleasure. Some men report that prostate stimulation



can bring them to orgasm (prostate orgasm). It is therefore not unusual for men or their partners to stimulate the prostate during masturbation or sex. This may improve a man's chances of reaching orgasm when he is the receiving partner in penetrative anal sex.

The anal region is clearly an erogenous zone for many men, who describe stimulation in or around the anus during sex as pleasurable.

BULBOURETHRAL GLANDS/COWPER'S GLANDS

The bulbourethral glands are two glands measuring just under 1 cm located in the upper section of the urethra, immediately below the prostate. They produce a clear, viscous secretion, rather like raw egg white, when a man thinks about sex. This fluid, which is slightly alkaline, fills the urethra and can be observed as a droplet at the urethral opening in many men when they are sexually aroused. It is known as pre-ejaculatory fluid, pre-ejaculate or "pre-cum". It dilates, lubricates and cleans the urethra in preparation for an imminent ejaculation, and adds further volume to the seminal fluid.

The amount of secretion produced by the bulbourethral glands varies from one man to another. In most cases it appears as a clear droplet at the urethral opening, but in some men it is not visible, while others – especially younger men – may produce so much that it pours out of the urethra.

SEMINAL FLUID

The secretions from the various sex glands have to be mixed in a particular order immediately prior to ejaculation if a man is to be fertile. First comes the secretion from the bulbourethral glands, followed by the sperm-filled secretion from the epididymis mixed with prostatic secretion, and finally the seminal fluid is topped up with secretion from the seminal vesicles. If the sperm come into contact with the secretion from the seminal vesicles, their swimming ability is drastically reduced because the secretion contains a substance that reduces motility in micro-organisms and has the same effect on sperm. This may be why some men have fertility problems: the seminal fluid is simply mixed

wrongly. Why the secretion from the seminal vesicles has this function is not known for certain, but it has been speculated that it may be to protect the sperm from bacteria and other micro-organisms.

Seminal fluid varies in volume, colour, smell, taste and consistency from one man to another and from one occasion to the next.

The volume of ejaculate is usually 3–5 millilitres, or slightly less if the man has already ejaculated recently. If he has been sexually aroused for a long time, the glands have a chance to produce more fluid and the volume may therefore be greater.

The characteristic white colour of seminal fluid is due to a substance that crystallizes to form "snowflakes" in the fluid. The degree of whiteness depends on how much of this substance is present. If you look closely, you can see that ejaculate is a grainy white. The colour varies greatly, ranging from white to a greyish shade. Yellowish ejaculate also occurs. This is because a lot of blood circulates in the lower abdomen and genitals, and red blood cells may "leak" into the fluids produced by the genitals, where they "die" and break down into substances including bilirubin, a yellow pigment.

Seminal fluid has a distinctive smell. Asked to describe it, men use phrases such as "a cross between newly cut grass and seaweed" or "Camembert cheese". What gives off the smell is a substance called spermine, the quantity of which determines how strong the smell is.

With a salt content of 9 mg per millilitre like all other bodily fluids, seminal fluid is noticeably saline. It also has a distinct metallic taste, owing to the high levels of zinc and other metals in the prostatic secretion.

The consistency of seminal fluid is initially sticky and gelatinous, becoming more watery after 10–20 minutes. This is because it contains high levels of proteins, which coagulate as the various secretions are mixed in and then slowly dissolve after ejaculation. It is not

known for certain why seminal fluid coagulates, but one theory is that it is intended to adhere to the top of the woman's vagina, around the cervix, where it will then slowly dissolve to ensure a prolonged and steady supply of sperm into the cervical canal. In this case, the coagulate also protects the sperm from the excessively acidic (from a sperm's point of view) conditions in the vagina. In any event, the net result is that the ejaculate does not run straight back out of the vagina but seeps out gradually.

The coagulated seminal fluid may sometimes appear lumpy. There may also be harder transparent lumps in the fluid, because the coagulating proteins may be unevenly distributed.

Fresh blood in the seminal fluid is not uncommon and is generally nothing to worry about. If a man has exposed blood vessels in the urethra, they may burst as a result of the high pressure that builds up during ejaculation, causing streaks of red blood in the seminal fluid. Repeated ejaculations containing fresh blood, pink or brown fluid should be checked out, as this may be a sign of a problem with one of the sexual glands.

PENIS – erection, size and other facts

PENIS

Like the scrotum, the penis has no subcutaneous fat, so the underlying sebaceous glands and hair follicles are visible. This gives the base and underside of the penis especially a pimpled appearance.

The penis comprises the shaft (containing the erectile tissue), the glans and the foreskin. Beneath the foreskin, on the underside of the glans, a band of skin runs from the bottom of the urethral opening to the shaft. This is called the frenulum and, unlike other penile tissue, is fairly rigid and cannot be stretched. For this reason, an erection causes the frenulum to become taut, angling the glans slightly downward. Because the frenulum terminates at the bottom of the urethral opening, an erection also produces tension in the urethral lips, which are pulled tightly closed. This prevents vaginal fluid from entering the urethra during sex, which would increase the risk of infection. Primary defence against infection is probably one function of the frenulum. The other is to transmit movement in the skin of the penile shaft to the glans. The skin of the penis is extremely mobile, as masturbation clearly demonstrates, and it is easy to move the skin on the shaft back and forth. During sexual activity the frenulum, taut as a violin string, relays skin movements to the glans. What is more, the point where the frenulum meets the glans is the most sensitive spot on the entire glans.

ERECTION

Penile erection (a “hard-on” or “boner”) matters a great deal to a man as an individual. Many men with erectile problems feel as though their identity is under threat. This

is surely because, from boyhood onward, the penis is seen as a symbol of masculinity. "I have a willy, so I'm a boy." The penis can be said to personify masculinity. What is more, most men learn at an early age that they can pleasure themselves by playing with their penis, and that this pleasure produces an erection. The increased pressure in the erect penis heightens sensation in the skin of the glans, so erection plays a significant role in male sexual pleasure and arousal. Not only their identity as a man but also pleasure and eroticism are focused on the penis and associated with erection. For a sexually active adult male, erection is synonymous with proper sexual function and, together with a partner, a key ingredient of sexual pleasure. Without erection, a sex life is seen as very limited or impossible.

Penile erection also has a clear biological function and is essential to ongoing fertility. Since the vagina's pH is too low for sperm to thrive, they need to be deposited high up in the vagina, as close to the cervix as possible and therefore near the uterus, which they find a more hospitable environment. Erection facilitates this.

Most erections start in the hypothalamus, an area on the underside of the brain located centrally in the head, just above the pituitary gland (hypophysis). The hypothalamus is the brain's "sex central", where arousal originates.

When a man is aroused, nerve impulses flow from the brain down the spinal cord, which is nested inside the vertebral column (backbone). At the boundary point of the thoracic and lumbar vertebrae, the impulses exit via two parallel nerves that run along the spine, until they eventually reach the erectile tissue of the penis and all the other sex organs, including the testicles.

The penis is able to enlarge significantly thanks to the three areas of erectile tissue in the penile shaft. Two of these are located on the top and the third on the underside, giving the erection a slightly triangular shape in cross-section. The urethra runs through the lower area of erectile tissue, which extends forward to form the glans. Erectile tissue resembles a sponge filled with small, coiled blood vessels. The erectile tissue, and more particularly the arteries supplying it, are surrounded by muscles that normally close tightly around the artery, meaning that very little blood normally circulates in the penis.

When the nerve impulses from the brain reach the erectile tissue, the arterial muscles relax and the arteries dilate, filling the erectile tissue with blood. At the same time, blood flow out of the erectile tissue reduces, creating a build-up of pressure resulting in an erection. The increased pressure resulting from the influx of blood stretches the arterial walls, which in turn release a substance that further enhances the dilation. To ensure that the erection is not permanent, this substance is continuously degraded. Drugs like Viagra produce a longer-lasting erection by delaying the degradation process.

The two upper areas of erectile tissue become hard, while the lower one, which also forms the glans, engorges but stays relatively soft. This gives the glans a slightly spongy texture. If the lower area of erectile tissue were to become as hard as the upper ones, there would be a risk that it would constrict the urethra, making ejaculation difficult or impossible.

An erection may be evidence of sexual desire and arousal, but men may be embarrassed to show desire, and very few would want other people to notice their erection. Becoming hard while dancing with a partner is not unusual, but it should not mean that you have to break off the dance, nor that you should press your erection against your partner. Dancing with your bottom sticking out may be one solution. Usually the erection is beyond the man's control, and he needs to handle the situation appropriately for the circumstances.

Many men have experienced an erection without feeling sexually aroused. For instance, on a rattling train it is possible to become hard without thinking a single sexual thought. There is a natural explanation for this: The area on the underside of the glans where the frenulum joins it to the shaft is by far the most sensitive spot on the male body. If something tickles you there, it sends a signal to a "switching station" at the base of the spinal cord, from where it is fed back to the penis and erectile tissue. The arterial muscles of the erectile tissue relax and an erection ensues – a direct bodily response with no conscious involvement. So, if you are on a bus with its engine idling and the seat is clearly vibrating, you may find yourself with a hard-on – and likewise in other similar situations. Men with spinal cord injuries resort to similar methods of stimulation, using

a vibrator to produce an erection so that they can have sex with their partner. The nerve impulses from the hypothalamus fail to reach the erectile tissue because of the damage to the spinal cord, but the option of a direct bodily response to touching the underside of the glans may still be available.

The other variety of involuntary erection is often called a "morning glory". You wake up in the morning dying for a pee and with the mother of all boners. You may wonder why, because you are usually not feeling horny, or else you need to pee too badly to seize the opportunity for sex. What is more, you face practical difficulties when you reach the bathroom. You have to sit down on the toilet, slide right back on your bottom and use gentle pressure to force your dick down below seat level so that you don't pee over the edge. Some men choose to pee in the shower instead.

The cause of the "morning glory" can be found shortly before we wake up. When we dream, which happens 3–6 times a night, the body and its erectile tissue relax in the same way as when we are sexually aroused. So, every man has 3–6 nightly erections, one each time he dreams. If you are dreaming just before you wake up, the erection, like the dream, may linger. If your bladder is full, the effect is accentuated in two ways: the bladder presses both on the arteries that empty the erect penis and on the nerves that stimulate the erection, providing false stimulation. Why men have nocturnal erections is uncertain, but it is probably because the erectile tissue needs to be exercised to keep it fit, so the body provides nightly training sessions.

ERECTILE DYSFUNCTION

Erectile dysfunction can have many causes. Some medical conditions cause erectile problems, and a side effect of many drugs can be to inhibit erectile function. Having the "wrong" partner may also cause problems with erection, but the most common version is probably stress-related. If you are nervous or stressed before having sex, or if your life is generally stressful, this may have repercussions for your erection. When the parts of the nervous system that produce stress are activated, sexual signals are interrupted and

the erection subsides. Being seriously in love with someone is therefore not unusual as a cause of erectile problems. You particularly want everything to work well when you are with her/him, and you may imagine she/he will leave you if you are not a good lover. Your desire and need to perform well can easily cause anxiety, leading to stress, which in turn leads to erectile failure. The very thing you did not want to happen happens. The next time you find yourself in a sexual situation, you remember what happened last time, you worry that it might happen again, and you can count on not getting an erection. Most men manage to overcome this obstacle by themselves, but if it persists there is now every reason to seek help. New drugs coupled with psychotherapy make it possible to treat almost all types of erectile dysfunction.

PENIS SIZE

"Size doesn't matter" is a mantra that sex educators have been repeating for decades. The subject is debatable. Size does matter to men themselves, at least. Given the notion that the penis is the focus of masculinity and pleasure, its size is naturally significant. In locker-room situations, there is always a certain amount of inspection of other men's genitals, and any deviations from the norm are noted. As a consequence, some men may avoid situations in which they are required to appear naked because they believe their penis is too small or too big to reveal. Teenage locker-room exchanges in particular may have a deep impact on self-confidence. Saying that size doesn't matter shows a lack of respect for all those men who, in their school days, were called names such as "tiny dick" or told they were "hung like a horse". We also know from surveys that many women have views on penis size. Some definitely do not wish to be penetrated by a large penis, since they consider this painful, while others prefer a large penis because it satisfies them. Many women and men, regardless of their preferences in practice, say they are more aroused by the sight of a large penis than a small one. We can therefore say that well-developed penises are a valued sexual symbol, a fact to which men are not oblivious.

In its flaccid state, the penis of a Caucasian usually measures 8.5–10.5 cm, with an average length of 9.5 cm. Its circumference is 6–10 cm, 8 cm being the average. Penis length

is measured with a ruler from the base to the tip of the glans on the upper side. Circumference is measured with a measuring tape around the base.

In a major study, the erections of over 2,000 Caucasians were measured. For the record it should be noted that the men measured their own erections and reported the figures. In this survey, 94 per cent of the men fell within the range 9–22 cm. Five per cent had an erection smaller than 9 cm, and one per cent reported erections of 23 cm or more. Seventy-five per cent of the men surveyed fell within the range 12–18 cm, and the average was 15 cm. The most common circumference range was 8–12 cm, with an average circumference of 10 cm. The survey also asked the men to rate their sex life, and found that there was no connection between penis size and satisfaction with one's sex life.

Two more recent studies have shown a somewhat shorter average erection length. A survey of 80 men produced an average length of 12.9 cm, while another, involving 111 men, reported just over 14 cm as the average length.

An erection normally entails a 60 per cent increase in penis size, but large variations occur. Some men may have a penis that is the same size flaccid as erect, while others may have a very small flaccid penis but an average-size erection. This is because the spontaneous activity of the smooth muscles surrounding the arteries of the erectile tissue varies from man to man. Some men have highly active muscles that close tightly around the arteries, so that little blood circulates in their flaccid penis. Consequently it is extremely small when flaccid but "normal-sized" when erect: a very practical state of affairs, since the risk of injury to the penis is reduced, and a large penis is not required for urination. Other men have less active muscles, so plenty of blood remains in the erectile tissue even when the penis is flaccid, but without the excess pressure of an erection. Their penis is almost as big flaccid as erect, but minus the hardness.

In relationships with a partner, nevertheless, penis size is of lesser importance to sexual satisfaction. If your partner is female, her vagina is very capable of adapting to the size of the male organ, and you can compensate for a small penis in a variety of ways. The situation may be slightly trickier with an extremely big penis that may cause pain on penetration. If

length is the problem – women may feel pain if the man hits the top of the vagina – this can be alleviated by placing a buffer made from a rolled-up piece of fabric around the base of the penis, to prevent the man from penetrating too deeply.

Penis appearance and size may also be a concern when using condoms. If you have a small penis, it can be difficult to keep the condom on. A conical penis, wider at the base and narrower towards the top, can likewise cause a condom to slip off. However, there is a simple, failsafe solution to these difficulties: Once you have rolled the condom all the way down to the base of your penis, keep going and slip the condom over your scrotum. This can be tricky at first, since the testicles have a tendency to slide out, but with practice you can learn how to do it. Some men always use this technique, since they find that the resulting pressure around the scrotum and penis root enhances their enjoyment. In any case, the condom is sure to stay on. You can also try a slightly smaller condom.

As far as large penises are concerned, the elasticity of condoms should enable them to fit any model. However, some men find the condom painful, and rolling it on can be especially difficult. In this case the latex ring at the base of the condom is the problem and causes pain when you try to pull it over the glans. One way to get around the problem and to make the condom more elastic is to unroll it a little before putting it on.

Another method is to use a female condom with your partner. This looks like a large condom with a fixed inner ring and a loose outer ring. The inner ring is fastened like a diaphragm at the top of the vagina, while the outer ring stays outside the vaginal opening, and the man penetrates his partner inside the female condom.

BENT ERECTION

Slight bends in an erection are very common. Or rather, there are few completely straight erections. Bends to the left are the most common, but they can be in any direction.

The cause of the most common type of bending can be traced back to the eighth week of pregnancy, when the genitals of the male fetus fuse together from the two halves of the

body. Our two body halves are not identical, and differences in size between body parts that occur in pairs are common. When the penile shaft is created using embryonic material from both body halves, there may be differences in size between the two halves. This is usually not noticeable when the penis is flaccid, but when it is erect it bends towards the shorter side. A bend of less than 30° rarely causes any problems during sex. However, bends of more than 30° do exist, and there are a number of medical conditions that may affect the erectile tissue, causing serious bending and problems with penetrative sex. Most of these conditions can be treated surgically. If bending is the result of an injury to the penis, you should see a doctor as soon as possible, since the risk of permanent bending increases over time.

SPOTTED DICK

Pimples on the penis are one of the main causes of concern and therefore deserve a special section. Because there is no subcutaneous fat on the genitals, all the underlying structures are visible. Hair follicles and sebaceous glands make the skin of the scrotum and parts of the penile shaft appear pimpled. The shaft varies greatly in appearance depending on the extent of the coarse pubic hair. As well as on the shaft, there are also perfectly natural pimples beneath the foreskin and on the glans.

FORDYCE SPOTS

Under the foreskin there is a special kind of sebaceous gland producing custom-made sebum for the particular type of skin found on the glans and inside the foreskin. These glands are called Fordyce spots, after the man who discovered them, and are visible in many men. They vary in number and appearance, ranging from individual pinhead-size dots, white or yellowish white in colour, to dense groups of spots forming yellowish white "cookies" inside the opening of the foreskin, to a more general pimpled appearance across the inside of the foreskin.

PENILE PAPULES

Around the rim (corona) of the glans, the majority of men have pimples known as penile papules, which can be accurately described in plain English as "skin tags". If you look at

the papules under a microscope, you can see that they contain nothing more than skin cells. Here too, there is wide variation from one man to the next. The papules are white or flesh-coloured, and their number and size ranges from none, to individual pinhead-size pimples, to skin tags the size of a match head forming a fringe around the corona. These normally appear during a man's teenage years but may vary in number and size over time. Since the majority of men have them, there is reason to believe they must once have served a purpose, albeit unknown.

One variety of penile papule is more pointed and angled upward over the corona. This is known as an "emperor's crown" and in ancient Greece was considered a sign of leadership and of a man destined for a senior military position.

Penile papules are sometimes mistaken for genital warts caused by the human papillomavirus (HPV), but a trained eye rarely has problems distinguishing between the two. In most cases penile papules have a smooth, rounded surface, whereas genital warts have a rougher appearance. If you have had unprotected sex, think the pimples are new, and are concerned, you should see your doctor to obtain a reliable diagnosis.

BALLSACHE

As teenagers or young men, many men have experienced a variety of pains in the genital region following prolonged petting. Usually this is perceived as coming from the testicles, and the condition has acquired names such as "ballsache" or "blue balls". It is caused by the increased blood flow to the genitals during sexual arousal. The tissue of the organs is stretched by the blood and by the fluids produced, and if this continues for a long time it will eventually manifest itself physically. The condition is harmless but can cause discomfort. Usually the pain causes the arousal to subside, whereupon the blood flow diminishes and the pain wears off. Another sure way to get rid of the problem is to ejaculate, which empties the genitals of their fluid and causes the blood flow to reduce.

Where to turn for advice

If you are in your teens, the youth clinic is an option. There are youth clinics in many larger towns and cities in Sweden, many of which have expertise in treating men and assessing symptoms in their genitals. Many youth clinics accept male patients up to the age of 25. In countries without specially designated youth clinics, there may be youth-friendly clinics or services as part of the primary healthcare system.

In most countries in the world, at least in larger towns and cities, you can attend a dermatology and STI (sexually transmitted infections) clinic at a hospital. The doctors working there, dermatologists and STI specialists, are usually the ones with the best knowledge of male sexual health and related issues. If they cannot help you themselves, they have an extensive network of contacts and can refer you to the right place. Urologists likewise often have an interest in andrology and may be an option. Some hospitals have dedicated sex and relationship clinics that you can attend.

If you live in a small town or in the country, the local doctor (general practitioner – GP) is your first port of call. Some GPs have an interest in andrology, and if not they should have a network of contacts they can refer you to. Usually you need a referral to obtain an appointment with the right specialist, so there is never any harm in starting with your GP. If you don't feel you are being well treated, don't give up. Demand answers to your questions. This is the best way of bringing about an improvement in knowledge of male sexual health issues and the treatment of patients with such issues.

The healthcare system differs from country to country, and you will have to look into your options in the region or country where you live.

What happens in an examination?

The answer depends on the questions and symptoms that you present with, but in general the procedure is as follows: You don't need to undress completely; it is usually sufficient to drop your trousers and underpants to knee height and lie down on the examination bed. Lying down helps the patient to relax and the doctor to carry out the examination. Sometimes you may be asked to stand up to facilitate examination of the testicles. To see better, the doctor uses a powerful lamp and sometimes even a lamp with a magnifying glass.

During the examination, the doctor will feel the lymph glands in your groins to check whether they are swollen, which can be a sign of genital infection. He/she will palpate the scrotum to identify any changes and check that the testicles feel healthy. The doctor will inspect the skin of the penile shaft and the foreskin (if you have one), then he/she will pull back the foreskin to examine its inside and the glans. Finally the doctor will part the lips of the urethral opening, using his/her fingers, to check that the outermost section of the urethra appears healthy.

If you are attending the clinic because of prostate problems, you will be asked to lie on your back or lean over the examination bed. Using lubricant and a surgical glove, the doctor will insert a finger into your rectum and palpate the prostate gland.

Many men have perfectly normal details on their penis, such as marks and pimples, that they may have wondered or even worried about. Sometimes the doctor will comment on normal variations, but if he/she fails to mention whatever you are wondering about, make sure you ask. Then you can avoid any concern that he/she might have missed that particular detail. The final step is to take samples, if that is what you have agreed with the doctor. The examination usually takes 3–5 minutes.

What happens when they take samples?

The most common reason for taking samples is if the doctor suspects you have a sexually transmitted infection (STI), or if you wish to reassure yourself that you don't have an STI.

CHLAMYDIA

A urine sample is now taken to test for chlamydia. For the test to be conclusive, you should not have urinated for two hours prior to the sample being taken.

GONORRHEA

This sample is taken using a cotton bud, with which the doctor collects secretion from the urethral opening. Because there is no need to insert the cotton bud very far, the process is seldom painful.

HIV

The HIV test involves a blood sample taken from an artery in the crook of the arm.

SYPHILIS

The syphilis test likewise involves a blood sample taken in the same way as for an HIV test. If you present with lesions (sores) that the doctor suspects may be caused by syphilis, a swab may be taken direct from a lesion.

GENITAL HERPES

A sample is taken using a cotton bud direct from a blister or sore that the doctor suspects may be caused by genital herpes. In some cases a blood sample may also be taken to check for herpesvirus antibodies, which, if present, will prove that you have the virus.

HUMAN PAPILLOMAVIRUS (HPV)

There is currently no test for HPV. The physical examination confirms the presence of any genital warts.

DIRECT SWAB

A direct swab is a common test at male sexual health clinics. It involves using a small metal or plastic instrument to collect a swab of secretion from the urethral opening, which is placed on a glass slide and examined under a microscope. The test provides the doctor with a clearer picture of the patient's state of health and confirms or excludes the presence of urethritis, an infection of the urethra.

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