The Sexual Body

Sexual behavior involves a physical body, and biological processes certainly can affect sexual behavior in remarkable ways. This chapter provides the basic knowledge about the sexual body needed to more fully understand sexual behavior as discussed in the remainder of the course. Here we also address some of the ways individuals experience their bodies that are related to their sexuality, such as body image. The ways in which bodies respond sexually and function during sexual activity are covered in the next chapter.

The Male Genital System

The male genital system is comprised of the testes, which produce sperm and sex hormones, a few glands that produce fluids that mix with the sperm before they are expelled from the body, and a series of tubes that allow for transportation of the sperm mixture to the outside world. The penis is the final part of the system–a sort of extension of the internal network so that the sperm can be deposited elsewhere.

Androgens is an umbrella term referring to a group of masculine hormones–the primary one being testosterone. Both males and females produce small amounts of androgens with their adrenal glands, which lie on top of the kidneys. However, the primary source for testosterone is the testes, so men have substantially higher levels of testosterone compared to women. The testes produce about 95% of the testosterone in a man's body.

The testes also produce sperm in huge quantities. In terms of protection, an ideal location for the testes would be inside the body, tucked in safely with other organs and bones. However, to produce healthy sperm the environment in which they are created must be about 5 degrees cooler than a man's core body temperature (it's unknown why). For this reason, the testes are suspended in a sack of skin--the scrotum—that allows the testes to hang far enough away from the man's body to maintain that cooler temperature. If the outside environment is too cold, however, the testes may need to lie closer to that man's body to be kept warm. There's a cord connected to each testicle that automatically lowers or raises the testicle according to the temperature inside the scrotum.

From each testicle, sperm travel up a tube called the vas deferens. If a man has a vasectomy, the physician removes a small portion of each vas deferens and ties off or seals the opens ends, preventing sperm from traveling any further. In this case, when sperm cannot escape, they die and are simply absorbed by the man's body. A vasectomy doesn't affect sperm production or functioning of the testes because only the vas deferens is cut.

Each vas deferens loops up inside the man's abdomen and joins with a seminal vesicle to form an ejaculatory duct. Each of the two seminal vesicles produces a fluid that's mixed with the sperm as the sperm pass by that point in the system. The fluid contains fructose sugar to energize the sperm and also serves to neutralize the acidity inside a woman's vagina. The vagina remains relatively acidic to kill bacteria and foreign micro-organisms. The sperm could

also be killed by this acidity. To add further protection, the prostate gland contributes prostatic fluid to the mixture at the point where the ejaculatory ducts pass through the prostate. Notice that prostate sits directly below the bladder, and the urethra (the tube allowing urine to pass from the bladder to outside the body) runs through the prostate. However, when the man is sexually aroused, the opening to the bladder is closed off, preventing urination or mixing of urine with the sperm.

The mixture of sperm, fluid from the seminal vesicles, and the prostatic fluid are what people call semen or ejaculate. The volume of a typical ejaculate is only about one teaspoon. Sperm are the smallest cells in the human body, so even though that teaspoon of fluid typically contains between 200 million and 400 million sperm, sperm make up only about 1 percent of the total volume of semen. Sugary fluid from the seminal vesicles makes up about 70% of semen and fluid from the prostate constitutes the other 30%.

There's one important structure that hasn't been mentioned. The Cowper's gland empties into the urethra much further along in the network of ducts than do the seminal vesicles and the prostate gland. The reason is that the Cowper's gland often functions much earlier in the process of sexual activity. Before leaving the male's body, sperm have to travel through the urethra. Urine is also relatively acidic and harmful to sperm. So, as the male becomes sexually aroused (or sometimes just before ejaculation), the Cowper's gland secretes a small amount of clear, slippery fluid to neutralize the acidity of the urethra and to lubricate the urethra for passage of semen. This fluid will show up as a drop or two at the opening to the penis, and people sometimes refer to this fluid as "pre-cum."

What are the structures of the penis?

The human penis was shaped by evolution to solve a reproductive problem: in a species where the egg is fertilized internally, how will the sperm be delivered to the egg? Part of the answer lies in the fact that the penis has to be rigid enough to be inserted into a female's body. In many mammal species this problem is solved by the existence of a bone that runs the length of the penis. In humans and whales, however, there is no such penile bone. Despite some misconceptions, there is very little muscle tissue in the human penis, although there is some fibrous tissue. Given the lack of bone and muscle, the human penis has to become rigid through internal pressure, which is accomplished by three parallel cylinders of spongy tissue. Two larger cylinders, the corpora cavernosa, run the length of the penis, one on each side of the urethra. The urethra itself is surrounded by a third, smaller cylinder of spongy tissue, the corpus spongiosum.

The tissue that makes up the corpora cavernosa is similar to a sponge--it has many little spaces and cavities. When the man is not sexually aroused, those spaces remain empty, and the penis is flaccid (soft). However, sexual arousal causes an increase of blood flow to the penis and these cavities become engorged with blood. As the corpora cavernosa swell the engorged tissue places pressure on the vessels that allow blood to flow out of the penis, thereby closing off those vessels and creating even more pressure inside the penis.

It's quite common for an erect penis to exhibit some slight degree of curvature. However, there are cases in which the penis is so curved as to cause pain during erection and to prevent insertion of the penis into a partner's body. This condition, called Peyronie's disease, results when fibrous tissue and calcium deposits form above and below the corpora cavernosa, restricting the straightening of the penis during erection.

The end of the penis consists of a mushroom- or acorn-shaped cap. The edge of this cap, where it meets the body or shaft of the penis, is referred to as the corona, and the head itself is called the glans. The glans is much more sensitive to touch and pressure than is the shaft of the penis, and there are two places that are most sensitive of all: the corona and the frenulum, a strip of skin on the underside of the penis where the glans meets the shaft. The entire glans, or in some cases a portion of it, is covered with a sleeve of skin extending from the shaft. This protective layer of skin is called the prepuce or foreskin. It's this sleeve of skin that is removed if the individual male is circumcised.

What sizes are men's penises? Does it matter?

A male's penis is typically its full size by around age 15. When flaccid (soft), the average size of penises is about 9 cm (3.5 inches) long and about 9.5 cm (3.75 inches) around. The average size of erect penises is about 16 cm (6.3 inches) long and about 12 cm (4.85 inches) around. About 98% of males have erect penises that measure somewhere between 4.5 and 7.5 inches, leaving only the relatively rare individual who falls outside of this range. Interestingly, smaller flaccid penises tend to increase proportionally more when they become erect compared to larger flaccid penises. So, there is less variation among men with regard to erect penis size than with regard to flaccid penis size.

The answer seems to depend on who and what we are talking about. Because in Western culture the penis is frequently equated with a man's sexuality, men are often concerned about the size of their own penis. To make matters worse, men in Western cultures rarely see the penises of typical men. They may shower with other males in locker rooms, but social taboos prevent looking at other men's penises. The result is that men often do not have much of a basis for comparison. The one exception might be sexually explicit magazines, Internet sites, and videos. However, men who model or act in sexually explicit media tend to represent the large end of the continuum with regard to penis size, so people who view such media may develop a distorted perception of the size of a typical penis.

In one study of male college students, respondents were asked to indicate in a questionnaire whether their penis size was above average, average, or below average, and to do the same with regard to their physique and their body hair development. About 50% of the men reported average body size and body hair, and the remaining 50% were evenly split between "above average" and "below average." This is what one would expect if the men were accurate and honest in their reports. However, when it came to penis size, nearly 70% rated themselves as "average" and only 5% rated themselves as "above average," leaving about 25% who thought they had penises that were below average in size. Interestingly, the men

who reported having smaller-than-average penises were also most likely to report making mental comparisons to penises they saw in sexually explicit media.

With as much concern as some men experience regarding their penis size, one would think penis size is extremely important to women. It may be surprising, then, to learn that there really has not been any empirical research on the topic. As actors and models in sexually explicit erotica typically have penises that are well above average size, the assumption seems to be that it is more arousing to see large penises that it is to see average or small ones. With regard to the ability to stimulate a female partner, the thickness of the penis may be more important than the length. The outer third of the vagina is the most sensitive, and a wider penis would result in more friction with the outer parts of the genitals. In contrast, the vagina is much less sensitive further up inside the woman's body (which makes sense since infants are delivered through the vagina). So, a lengthier penis does not necessarily result in more stimulation, and a very long penis may actually cause some discomfort internally.

Can penis size be increased?

Because of men's concerns about penis size within Western culture, there is a continuing market for products that claim to increase penis size. These products often include devices designed to stretch or exercise the penis, as well as various creams and pills. None of these interventions work, but they continue to be sold because there are enough men who are willing to try them (and pay for them) in hopes of increased penis size. These products often come with a money-back guarantee, but perhaps many men are too embarrassed to admit failure by returning the products.

The one intervention that does have a noticeable effect involves surgery. Because part of the penis extends up into the man's body, some surgeons will perform an operation in which some of the ligaments anchoring the penis inside the body are severed, thereby allowing the penis to hang down further. The added length remains if the patient consistently follows a program of stretching the penis with weights for a period of time after the surgery. Such a procedure may add an inch or more to the length, but doesn't increase the width or circumference of the penis. So, in addition to the lengthening procedure, the surgeon may take some fat from elsewhere on the man's body (such as the waist) and inject it under the skin at several points on the penis. A potential problem is that the fat may not distribute itself evenly, leaving a dimpled effect, or areas that are relatively lumpy and uneven.

Contemporary Western culture is not the first to attempt to find ways to enhance the size or sexual appeal of the penis. For example, a report from the 16th century explorer Soares de Souza described how some men in certain tribes in Brazil would let poisonous animals bite their penises so that they would swell to abnormal size for the following several weeks. Men in other cultures have been known to pierce the penis in various ways so that the piercings would be both visually appealing as well as add physical stimulation to a partner's genitals. Some men in contemporary Western culture pierce their glans in what is known as a "Prince Albert" piercing. In addition to piercing, the members of some cultures have been known to

cut the penis in some way to alter its appearance and form, a process referred to as either circumcision or subincision.

A relatively common form of penile alteration is **circumcision**, which involves the removal of the foreskin. Worldwide, most males are uncircumcised, yet in some cultures the large majority of males are circumcised, either as infants or later in life. The act of circumcision appears to be a very old one, dating back to at least the Egyptions before 2000 BC.

Why circumcision? The answers have varied, depending on the culture and the period in history. In ancient Egypt the purported reason was for cleanliness. Members of Jewish and Moslem religions have performed circumcision as a religious rite. In some cultures in the South Pacific Islands, the foreskin is not removed, but a slit is made through the foreskin so that bacteria do not accumulate and cause an unpleasant odor. In the United States circumcision has been performed primarily for purported health reasons. Recall from Chapter 1 that during the 19th and early 20th centuries there was concern among Europeans and Americans that masturbation caused a host of ill effects. One method for attempting to curb childhood masturbation was circumcision.

Later it was believed that circumcision lowered the risk of sexually transmitted diseases, infections, and cancer of the penis. This conclusion was based on correlational observations: cultures that did not practice circumcision appeared to have higher rates of penile cancer and infections of the genital system than did cultures where circumcision was widely practiced. Similarly, uncircumcised boys in the United States seemed to experience higher rates of urinary tract infections compared to circumcised boys. However, those cultures and subcultures that did not practice circumcision also varied from circumcised groups in numerous other ways, including sanitation, hygiene, and general health. Recent research has demonstrated a correlation between circumcision and rates of HIV infection, even within the United States. The hypothesis is that the foreskin is more vulnerable to allowing the virus into the bloodstream than is the skin on the shaft of the penis. If, however, a male does not encounter HIV+ partners, this increased risk factor is not a concern. Currently, only about half of male infants born in the U.S. undergo circumcision.

Part of the rationale for performing circumcision in Western cultures may be that the foreskin is seen as redundant or unnecessary skin. However, the foreskin contains a rich network of nerve endings, providing additional sexual stimulation. Also, the glans and the surface where the foreskin comes into contact with the glans are mucous membranes that function to keep the surface of the glans soft, moist, and sensitive. When the protective foreskin is permanently removed, the surface of the glans dries and thickens somewhat in reaction to the increased friction with clothing. This has been said to result in decreased sexual sensitivity and decreased lubrication during sexual activity.

The purpose of male circumcision may differ depending on whether the operation is typically performed during infancy or puberty. From a sociological perspective, circumcision rituals performed during puberty may serve the same function as other puberty rituals--to clearly separate the identities of males from females, and boys from men. For example, it appears

that circumcision during puberty is most likely in cultures where the men are not around the children much of the time. In such cultures, boys will tend to be closer to their mothers than to their fathers. However, circumcision rituals during puberty may help to separate the boys from their mothers, and help strengthen a bond with other males (primarily their fathers). In cultures where circumcision is performed during adolescence, an added motivation for the boys may be that the procedure often signifies that the individual is subsequently allowed to engage in sexual intercourse (i.e., he has become a sexually mature man).

Like circumcision, **subincision** is a form of genital mutilation, but it does not involve the foreskin. Instead, a slit is cut the entire length of the penis, on the underside, down to the urethra, allowing the penis to flatten out much like a hotdog bun that has been turned over to open facing down. Unfortunately, this procedure leaves the man unable to direct his stream of urine (or semen), so he must squat or sit to urinate. This custom is relatively rare, and seems to only have existed in cultures exposed to kangaroos or closely related animals (marsupials). These cases seem to be good examples of how the physical environment can affect the sexual attitudes and practices of the people who inhabit that area. Kangaroos have two-headed penises, and men who practice subincision appear to do so in imitation of the kangaroo (or other marsupials). Perhaps the men envy kangaroos, a species whose male members can engage in sexual activity for up to two hours at a time.

Even in cultures that have not engaged in physical alteration of the penis, there has often been some customs that revolve around the appearance of the penis. Displaying the penis has been taboo in most cultures, so it is not surprising that various coverings have been used to clothe or encase the penis, even in cultures where men do not wear anything else. However, in some cultures those coverings have taken on extreme characteristics. For example, in some cultures the penis is housed in a sheath, perhaps constructed from a hollowed-out gourd, or strips of cloth several yards long that are wrapped around the penis numerous times.

Why penis sheaths? The first explanation might involve modesty, yet penis sheaths are typically anything but modest, drawing greater attention to the penis than if it were not covered. The sheaths may reach two feet in length, and be decorated with feathers, flowers, or animal fur or tails. Also, they are often worn at an upward angle, suggesting the appearance of an erection. In Europe, between the late 14th and 16th centuries, men frequently wore a codpiece, or thick bundle of padding in the front of their tights. The codpiece might have originated out of a desire to hide the outline of the penis in the tights that were fashionable during the time, but gradually codpieces became larger, more suggestive of an erect penis, and decorated with bows and embroidery. The motive for penis sheaths and codpieces remains controversial, although it is easy to speculate that they serve to enhance the appearance of penis size and state of erection.

Sperm Competition

The shape of the penis, and the size of the penis and the testicles, may tell us something about the environment in which our distant ancestors evolved. Different species vary as to

whether the typical member is monogamous (only one sex partner) or engages in sexual activity with multiple partners. Depending on how monogamous a particular species tends to be, natural selection has an opportunity to affect the size and shape of the genitals and the size of the testicles. For example, in a species where the typical member engages in sexual intercourse with several different partners, those males who have the largest testicles (producing more sperm) may have a reproductive advantage. In such a species, those males with longer penises may also be at an advantage as they may be more likely to deposit sperm deeply inside the female's vagina and may be less likely to have their penis fall out, or be ejected from the vagina, prior to ejaculation.

Sperm can live inside a female's reproductive system for three to five days. So, in non-monogamous species, sperm from different males may be competing to fertilize a particular female's egg because that female has engaged in sexual intercourse with two or more males within that period of time. Biologists refer to this phenomenon as **sperm competition**. The more non-monogamous a particular species, the more important sperm competition is in determining which males have offspring. If there is a great deal of sperm competition, then males with longer penises and larger testicles should have more offspring than those males with shorter penises and smaller testicles. For example, among primate species, chimpanzees are relatively indiscriminate in their sexual pairings, with several males sometimes lining up to copulate with an individual female. Relative to their body size, chimpanzees have very large testicles and penises. In contrast, male gorillas live with stable harems, and hence are fairly monogamous. Gorillas also have very small testicles and, even though a male gorilla is about three times the bulk of a male human, it's erect penis is only about two inches long.

Where do humans fit in? Among primates, the size of the human penis and testicles, relative to overall body size, places us in the middle of the group. This means it is likely that our very distant ancestors were somewhere in the middle of the continuum between complete monogamy and completely indiscriminate sexual intercourse with numerous partners. So, despite the policy of monogamy that characterizes contemporary Western cultures, our distant ancestors were probably not monogamous. With a fair amount of sperm competition occurring among humans, the very shape of the penis may have played a factor as well.

Some researchers have noted that the shape of the human penis, with its head larger around than the shaft, may be the result of natural selection. During sperm competition, a male with a penis of such a shape might have effectively removed some of a prior male's semen during the thrusting of sexual intercourse as the corona acted as a plunger or squeegee, drawing out old semen from inside the vagina. Had ancestoral females been entirely monogamous, there would not have been a reproductive advantage to having such a penis shape. Of course, the female genitals evolved to solve other reproductive dilemmas. We now turn to an examination of the female reproductive system.

The Female Genital System

The female internal genital system is comprised of the ovaries, which produce eggs and sex hormones, a set of tubes to transport eggs to the uterus, and the vagina and cervix, which function to receive a penis and hold semen that is expelled.

The main feminine hormones are estrogen and progesterone, and the ovaries are the primary source for each. Eggs are also produced in the ovaries, and approximately once per month one of the ovaries releases a mature egg. That egg is swept into the corresponding fallopian tube by the fimbriae, or finger-like projections at the end of the fallopian tube. Eggs are only viable for fertilization for about 24-48 hours after being released from the ovary. If the egg meets sperm in the fallopian tube, it will be fertilized and continue down the fallopian tube to the uterus. The uterus is the place where the fertilized egg would attach itself and continue to develop into a fetus.

In a woman who has never been pregnant, the uterus is only about 3 inches long and 2 inches wide. However, the muscular nature of the uterus allows it to expand to accommodate a developing fetus and to contract to push a fully developed infant out of the uterus during labor. If an egg travels down the fallopian tube and never encounters sperm, it will die. The innermost layer of the uterus disintegrates and is expelled during the woman's menstrual period if a fertilized egg has not attached itself to the wall of the uterus. That is why a missed period signals a potential pregnancy.

The vagina is a muscular organ into which a penis might be inserted and through which an infant might be born. The vagina's muscular nature allows it to expand to accommodate a penis of any realistic size and to allow an infant to emerge at birth. When not sexually aroused, the vagina is approximately 3 to 5 inches long and its walls are collapsed upon themselves (much like a deflated balloon). The layer of the vagina one feels if an finger is inserted consists of mucous membranes, so the vagina typically feels warm, soft, and moist, much like the inside of the mouth. The link between the uterus and the vagina is the cervix. The cervix is much like a neck extending down from the uterus into the vagina. The vagina is relatively acidic to discourage the growth of bacteria or other unwanted microorganisms. As another safeguard, the cervix provides only a small opening so as to keep microorganisms, or a very long penis, from entering the uterus.

The opening to the vagina is referred to as the introitus, and it contains a ring of muscle tissue. Almost all of the nerve endings in the vagina are in the lower third, near the introitus. So, sexual pleasure from stimulation of the vagina occurs primarily in this area. Because the vagina itself can expand and contract, the "tightness" of a vagina as experienced by a sexual partner refers to the size of the introitus. After having birthed one or more children, a woman's introitus is not as small ("tight") as it was before.

For receiving sexual stimulation, in general the outer portions of the female genital system are most important. Also, typically the only people who see the inside of the vagina are health professionals who perform pelvic examinations. For most people, the female genitals

are associated with what can be seen. The entire set of external genitals (what you see) is referred to collectively as the vulva.

Starting a few inches below the belly button, there is a fatty pad referred to as the mons veneris (or mons pubis or mons). Translated from Latin, mons veneris means "the mound of Venus," the Roman goddess of love and beauty. The mons contains numerous nerve endings that are very sensitive to light touch. The mons is also typically covered with a substantial amount of body hair.

Between the mons and the introitus lies the clitoris (rhymes with "hit-or-miss"), which may vary from a slightly raised bud of tissue to a much more pronounced or protruding organ. Covering the clitoris is a fold of skin, referred to as the prepuce or clitoral hood. Similar to the penis, the clitoris consists of a glans and a shaft. If the prepuce is gently pulled back, the glans will be exposed, and will appear smooth and somewhat translucent. The shaft of the clitoris cannot be seen directly, but can be felt, and perhaps the outline of the shaft can be seen through the prepuce. There are small chambers (corpora cavernosa) inside the shaft that fill with blood when sexually stimulated. The clitoris is richly supplied with nerve endings, making it very sensitive to touch. Most women report experiencing the clitoris as the primary site of sexual pleasure.

The urethra lies between the clitoris and the introitus, so urine does not pass through the clitoris or through the vagina, but rather empties directly from the bladder. Surrounding the introitus are the labia majora (major lips) and labia minora (minor lips). The labia majora, or outer lips, are rolls or ridges of fatty tissue. The labia majora are covered with hair and contain touch receptors similar to those in the mons. The labia minora, or inner lips, are thinner than the labia majora, yet usually more pronounced. The labia minora are hairless and very sensitive to touch. Also, there is a great deal of normal variation among women with regard to the size, shape, and appearance of their labia minora. The labia minora come together at the top to form the prepuce or hood over the clitoris.

Between the labia minora and the vagina there is a thin membrane--the hymen--that partially covers the opening to the vagina. The degree of opening in the hymen varies across women, yet some degree of opening is necessary for the flow of menstrual blood. A common slang term for the hymen is "cherry." The slang term is sometimes used in reference to a male "getting a girl's cherry" or "breaking a girl's cherry." These terms refer to the fact that the opening in the hymen is typically too small to accommodate sexual intercourse, so a woman's first experience of penetration by a penis may cause some pain and bleeding as the hymen is stretched and torn. Still, many women do not have this problem as the hymen has been stretched or torn through insertion of tampons, riding a bicycle, or some other means.

Because of the potential bleeding during first sexual intercourse, the hymen has taken on special significance in many cultures. For example, among the Chewa of Africa it was commonly believed that a girl had to have experienced sexual intercourse prior to the onset of menstruation, or she risked death. If she had not experienced sexual intercourse, her hymen would be ruptured in a ritualistic fashion. Similarly, some Hindus believe that sexual

intercourse with a bride whose hymen is unbroken is dangerous for the groom. So, mothers of young daughters may rupture the hymen during bathing. Typically, however, an unruptured hymen has been valued as a sign of virginity. In several cultures, bleeding from a broken hymen is expected on one's wedding night. The blood-stained sheets or sleeping garments from the honeymoon night might be saved, displayed, or sent to family members as physical evidence of the bride's virginity. The Bible also makes reference to this proof of virginity. The problem, however, is that each hymen varies with regard to elasticity and thickness, so a hymen may not rupture during sexual intercourse, or it may have stretched or ruptured years earlier without awareness.

What is the female G-spot?

The infamous G-spot, or Grafenberg spot, is an area of tissue is named after the male physician who identified it (Grafenburg, 1950). Typically it can be found about half-way between the pubic bone and the cervix on the anterior wall of the vagina (the side of the vagina facing the woman's abdomen). This area of tissue is said to be notably more sensitive to touch and pressure than is the surrounding tissue, but there is controversy as to whether the G-spot is an identifiable area in all women. Also, G-spots may vary in size.

When a woman first experiences stimulation of her G-spot she commonly feels an urgent need to urinate. The predominant theory is the G-spot is the tissue that develops into the prostate in males (who typically experience a similar sensation when the prostate is stimulated). Assuming an empty bladder and patience, many women go on to experience intense pleasure during further stimulation of the G-spot. However, such stimulation usually requires continual pressure, as might be applied by a partner's fingers. Sexual intercourse from behind while the female lies face down may also result in stimulation of the G-spot.

Genital Alterations

Just as males have altered their genitals in various ways, so have females. For example, in several cultures in the pacific islands large clitorises and labia minora are considered most attractive and desirable, so girls are encouraged to pull and stretch their labia minora and utilize magical spells to enlarge them. Among the Trukese of this region, the labia minora were traditionally pierced, and small tinkling objects were inserted into the piercings so that a tinkling sound was made when the women walked with their legs held somewhat apart. In contemporary Western cultures there is a minority of women who pierce either their labia minora, the clitoral hood, or both.

The most common alteration of male genitals involves circumcision, and likewise circumcision is the most common alteration of female genitalia. **Female circumcision** refers to partial or complete removal of the clitoris, also known as clitoridectomy. Many times a more radical procedure, called **infibulation**, is performed in which the labia minora are also removed, along with the surrounding fleshy tissues, and the entire wound is covered by sewing together the labia majora. Only a very small hole is left for passage of urine and menstrual blood. Because the hole may be as small around as a match stick, difficulties passing urine

and menstrual blood, and resulting infections, are unfortunately common. These procedures are limited almost exclusively to Islamic cultures in Africa, yet because of the dense populations in these cultures, it is estimated that up to 100 million women in the world today have undergone clitoridectomy or infibulation.

Why clitoridectomy or infibulation? The procedures seem to be ancient as there are written references to infibulation dating back to at least 500 BC. Today, the practices seem to be supported by inaccurate beliefs that conception and childbirth will be easier, and that vaginal discharges, odors, parasites, and sicknesses will be prevented. Unlike male circumcision, there is also a distinct sexual rationale for the operations. The belief is that clitoridectomy will reduce a woman's sexual interest and infibulation will guard against sexual activity before marriage (a sort of chastity belt made of the woman's own flesh). In both cases, then, the rationale is that males will be more assured of marrying a virgin.

Female circumcision may be motivated by an attempt to control female sexual activity prior to marriage, but after marriage, the husband has to contend with the physical effects of his wife's circumcision. The opening to the vagina is typically not large enough to allow penetration of a penis, so he might have to use force or cut the scar tissue. The inelastic wall of scar tissue also does not allow for delivery of an infant, so the infibulation is "undone" by cutting, then re-stitched after delivery.

Recall that male circumcision may reduce sexual sensitivity. What about female circumcision? Such drastic alteration of the genitals are bound to have negative effects on sexual enjoyment and functioning, yet surprisingly, the large majority of such women report having pleasurable experiences during sexual intercourse. Perhaps this is an example of relativity, as having one's clitoris removed at an early age leaves the individual without a set of experiences for comparison. Informal accounts from men who have had sexual relationships both with women who were circumcised and women who were not indicates decreased sexual interest and responsiveness among the circumcised women.

At least to members of Western cultures, clitoridectomy and infibulation are barbaric practices, and frequently the term "female genital mutilation" is used to refer to them. Why do they persist? Ancient blood rituals are powerful, and there are contemporary incentives for keeping the practices alive. In some cultures in Africa uncircumcised women are seen as less desirable wives than are circumcised women, and in other cultures uncircumcised women are completely rejected by their social group, often left with no alternative except prostitution. Because women in these cultures have so few options, conformity is virtually guaranteed.

Although official government positions discourage or prohibit female circumcision, the practices are carried out by local women or family members who themselves underwent the procedure. Typically the girls on whom the procedures are performed are 4-10 years of age, and hence helpless to resist. There has been pressure from human rights organizations and members of outside cultures to end female genital mutilation. However, as the psychological principle of reactance would predict, such attempts have met with resistence as African people resent judgment passed on their traditions and the attempt at outside interference in

their way of life, especially by Westerners who have a long history of exploiting Africans.

Notice how people in Western cultures may refer to female circumcision as genital mutilation, yet tend not to think of male circumcision in those terms. Is there a substantial difference between these male and female forms of genital mutilation? Perhaps the primary difference is that one is considered acceptable in Western cultures whereas the other is not. Because there is no clear medical reason for performing male circumcision, then each decision to circumcise a male in Western culture is primarily based on conformity, either to prevailing norms for the culture or to particular religious beliefs. The same is true for female circumcision, which may help us better understand why a large group of people can continue a practice that may seems so wrong to us.

The Breasts

The breasts are not part of the female genital system, and they do not have any obvious sexual function. However, in Western cultures women's breasts are typically eroticized; the breasts are considered sexual stimuli and sources of sexual pleasure. The biological function of the breasts is lactation (providing milk for infants). So, the breasts contain numerous mammary glands that produce milk. Otherwise, female breasts consist of fatty and fibrous tissue. Because each woman has approximately the same number of mammary glands (15-20 clusters), the amount of milk produced is not related to breast size. The variation among women in breast size depends almost entirely on differences in the amount of fatty and fibrous tissue. The breasts, and particularly the nipples, are richly supplied with nerve endings. However, because each woman possess the same number of nerve endings in her breasts, small breasts theoretically should be more sensitive to stimulation because those nerve endings are packed into a smaller area compared to larger breasts.

Why do human breasts protrude as much as they do? Other species do not exhibit such prominent breasts, begging the question why such should be the case for humans. From evolutionary theory, the answer is that distant ancestral males who preferred partners with larger breasts had more offspring than those who preferred partners with smaller breasts. Why might this have been the case? Some possibilities include the fact that women with larger breasts probably had higher stores of body fat, which may have meant they were healthier or more resistant to starvation compared to women with smaller breasts. It is also possible that, at humans began walking upright, the buttocks became less prominent as a sign of sexual availability (as is the case in other primates). Perhaps larger breasts served as a replacement for the visual signal of the rounded cheeks of the buttocks, and one way that females were distinguished from males.

Regardless of their evolutionary origins, men and women in contemporary Western cultures frequently focus on the size of a woman's breasts. Many men find breasts of a certain size to be erotic, and many women are concerned with the size of their own breasts, believing them to be too small or too large. In one sample of college student women in the United States, for example, 40% were satisfied with the size of their breasts, 40% wanted larger breasts, and only 20% wanted smaller breasts.