

Human Sexuality – Unit I

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Introduction to Human Sexuality as Psychology

Perspectives on human sexuality: The topic of human sexuality is already covered by a number of different academic disciplines. However, each of these has its particular focus and perspective.

Biology - Biology primarily looks at the physiological aspects of sexuality. It is concerned with the anatomical structures, the biochemistry of hormones, the nature of the sexual response, the formation of gametes, and the process of fertilization. On a larger scale biology also examines the genetic diversity offered by sexual reproduction as well as mate selection as it relates to natural selection, evolution, and species survival.

Medicine - The focus in medicine is on abnormal function and disease. Medicine is concerned with sexual function and dysfunction, fertility, developing methods of contraception, as well as the detection and treatment of sexually transmitted infections (STIs).

Health Education - The purpose here is to inform people, especially young people, about not only sexuality but also the risks associated with it. The goal is to allow them to make intelligent decisions regarding their sexual behavior. This perspective focuses on sexual anatomy, the sexual response, family planning, contraception, sexually transmitted infections (STIs), and safe sex.

Sociology - In sociology the interest is in the role sexuality plays in shaping society and the influence of society on sexual behavior. Sociology examines social factors that may influence sexual orientation, as well as gender roles and expectations. Sociology also deals with a society's openness about sexuality and nudity, conceptions of what is attractive, and attitudes about different forms of sexual behavior. In recent times sociology has studied the prevalence and influence of sexual content in the media. On an interpersonal level sociology examines the role of communication and the nature of relationships between sexual partners.

Anthropology - Of interest from an anthropological perspective are the cultural variations regarding sexuality in terms of traditions and attitudes. Anthropology examines institutions such as marriage, extended families, and sexual taboos such as incest. Anthropology also compares different cultural attitudes concerning nudity, promiscuity, childhood sex play (even childhood sex training in certain cultures), and forms of male and female circumcision.

Political Science - Many areas pertaining to sexuality become political issues such as abortion, gay rights, discrimination, gays in the military, and same-sex marriage.

Criminal Science - The legal system defines a number of sexually related crimes such as prostitution, polygamy, child pornography, incest, stalking, sexually related invasions of privacy, as well as sexual assaults and rape. In addition, there are various crimes of passion and instances of domestic violence that stem from people's involvement in sexual relationships. Better understanding of the precipitating factors leading to such crimes may aid in the recognition of potential offenders or prevent crimes in the future.

What does psychology have to offer? Many of the same areas of interest listed above are covered by a psychological examination of human sexuality. Again the difference is in the perspective, just as it is between all of the other disciplines discussed.

Psychology is interested in how aspects of sexuality affect psychological function. Some forms of sexually transmitted infections directly affect the nervous system. Genetic and hormonal factors related to sex and gender influence brain development and organization as well as cognitive functions and abilities. Sexually related hormones affect physical and mental development, cognition, mood, emotional responses, motivation, and behavior. Gender is significantly involved in determining sexual orientation and defining personality. And it should be noted that the concept of gender involves much more than just one's biological sex. Gender defines appropriate roles in society and influences the roles we take on. The effects of accepting and taking on specific gender roles shape the individual (especially in the area of individual self-esteem). Thus psychology explores the individual's perceptions of his or her sexual identity, and the interpretation of one's role in society based upon that identity. And finally, psychology examines the individual experience of sexuality and the individual motivations driving sexual behavior. Admittedly, we tend to spend more time thinking about sexuality than other physiological motivators such as hunger and thirst.

Of course, psychological factors also shape sexual behavior. Personality factors influence how we express our sexuality. Social influences play a role in shaping our sexual preferences, what we find attractive, and what we consider to be acceptable and desirable behaviors. Mood, stress, and anxiety all affect sexual desire and performance. Psychology has had an influence on sexual education in relation to its role of helping people make good decisions about their sexual activity, especially the prevention of unwanted pregnancies and sexually transmitted infections. When discussing sexually transmitted infections psychology considers not only their transmission and physical consequences. Psychology addresses the question of how to motivate individuals to practice safe sex as well as to seek

testing and treatment. Psychology also suggests ways to overcome the lingering stigma still associated with these conditions. And just as sexual behaviors in general are influenced by a number of psychological factors, so are atypical sexual behaviors. Psychology examines the nature and possible origins of such behaviors. And psychological therapy is an essential component of treatment in the extreme cases. Finally, psychological factors also play a role in cases of sexual harassment and assault. So psychology examines the factors that may motivate these behaviors, how such incidents might be avoided or prevented, and how to help victims deal with the associated trauma.

The concept of gender: From a psychological standpoint gender is a more encompassing concept than sex. It is one's conception of his or her gender that shapes the perception of the self. It includes, but is more extensive than, simple biology. There are at least nine different factors contributing to the overall definition of gender.

- [1] Chromosomes, genetic sex determination.
- [2] Gonads, the glands that produce sex-related hormones and either sperm or egg cells.
- [3] Hormones secreted and the proportions of them at various stages of development determine final outcomes. Estrogen primarily female hormone, androgens (particularly testosterone) primarily male hormones.
- [4] External genitalia, most obvious means used to indicate gender.
- [5] Accessory organs that support reproductive role. Females have vagina, uterus, fallopian tubes. Males have seminal vesicles, prostate gland, and vas deferens.
- [6] Gender identity, how one actually perceives oneself and how confident or secure one is in regard to that perception.
- [7] Gender role, societal expectations for behavior.
- [8] Secondary sexual characteristics, generally don't fully emerge until puberty. Female characterized by menstruation, enlargement of breasts, wider hips and pelvis, higher percentage of body weight composed of fat. Male characterized by heavier facial hair, longer vocal cords (lower voice), broader shoulders and deeper chest cavity, higher percentage of body weight composed of water.
- [9] Sexual orientation referring to which sex an individual finds attractive as a sexual partner.

Brief history of research on human sexuality: Concerted efforts to examine human sexuality are relatively recent. Especially in western culture there was relatively little open discussion, much less scientific investigation, of human sexuality. Even as science and technology began to flourish in other areas sexuality was generally considered off limits as an area of inquiry. The 19th century Victorian Era was particularly repressed when it came to anything related to sexuality. So there simply wasn't much research related to human sexuality until the 20th century.

Sigmund Freud (1856-1939): Although he based most of his psychological theories on the influence of sexuality on personality Freud did no real research on sexuality. His work was completely theoretical, based on his interpretations of what his patients revealed to him or what he inferred to be the underlying basis of their behavior. However, Freud's work did usher in a greater openness regarding sexuality. This allowed others to seriously study sexuality itself, and the role it plays in human behavior.

Havelock Ellis (1858-1939): Pioneer in scientific, rather than theoretical, investigation of human sexuality. Did research showing that male nocturnal emissions were not harmful or related to any medical condition. Also gathered information on the female sexual experience.

Alfred Kinsey (1894-1956): Interviewed some 18,000 subjects about sexual attitudes, preferences, and practices in an attempt to detail general patterns. The most well known publications of his research were The Kinsey Reports (1948, 1953). This data is still used as the baseline for modern studies on changes in patterns over the years.

Masters and Johnson (1961, 1966, 1970): Detailed measurement of sexual responses during actual sexual encounters with volunteer subjects. First observations and experiments performed in laboratory setting on the human sexual response.

National Health and Social Life Study (NHSLs, 1994): Extensive survey of the sexual practices of 3,432 respondents aged 18-59. Considered the most representative survey of sexuality in the U.S. and to reliably reflect the general U.S. population in the 1990s.

International Sexuality Description Project (Schmidt et al., 2003): Anonymous written self-reports collected from over 16,000 men and women worldwide. This was the first large-scale multi-national survey ever done.

Durex Global Sex Survey (2005): Online survey conducted via the Durex Corporation's website. Collected data from over 50,000 men and women worldwide, though the majority of respondents were young white Americans.

Historical Perspectives on Human Sexuality

Modern human beings, such as we are today, first emerged around 40,000 years ago (perhaps earlier). That we are here now indicates that they had sex. So what were the prevailing views and attitudes toward sexuality over the course of human history? We're interested not only in sexual conduct and practices, but also larger issues concerning how sexuality was viewed, the role it played in different societies, and the importance of gender in defining one's position in society. Were people open about sexuality or was it repressed as much as possible? Did sexuality play an important role in society or was it considered of little consequence? What role did gender play in the structure of early societies? Were most societies primarily matriarchal or patriarchal? For much of human history there were no written records, so what we know concerning sexual conduct and practices during that early period comes from the interpretation of archeological sites. From those sites we have learned about living arrangements, indicative of the roles played by men and women in early societies. And gravesites often indicate the status of the individual, so we gain some insight into the division of power within the society. Finally, the art produced by a society often tells us a great deal regarding their attitudes about sexuality, the role sexuality played in the society, and what was deemed attractive.

With the advent of written language the historical record becomes far more detailed. However, in regard to sexuality there's a limited amount of information. Until relatively modern times most of what we find concerns proscriptions as to what is and what is not proper sexual conduct. This is mostly found in religious texts, as well as what is mentioned in legal and historical documents. We gain some other insights from some scattered poetry (*Song of Solomon*, the love poetry of Ovid) and works of art. However, by and large, there are relatively few accounts of individual attitudes or experiences until the renaissance.

Fertility: Fertility seems to have played a large role in early cultures and religions, and still holds a strong position in African culture and tradition today. In terms of biological and cultural survival more people was originally a good thing, allowing a tribe to expand and secure territory. Modern western civilization is the exception, not the norm, in terms of patterns of mortality. Throughout most of history (and for much of the world today) death rates were relatively high throughout life due to disease, accidents, and war. Infant and childhood mortality rates were especially high. Not only are human children born fairly premature and vulnerable, there are a host of childhood diseases they may succumb to as well (vaccinations being a recent invention). So in the past there was a need to produce lots of replacements, as well as 'spares.' Even today the leading cause of death worldwide is diarrhea (and the associated problems of dehydration and electrolyte imbalances) resulting from a number of different types of disease and infection.

When it comes to fertility females play the more vital role. If necessary, one male can service multiple females. So males are more expendable in that sense. And in prehistoric times women played the greater role in gathering food, which could be done in conjunction with the role of primary caregiver to the children. Although men did most of the hunting, meat served more of a supplemental role in the diet. In the role of gathering food women came to learn about plants and growing seasons (also related to fertility). And in the role as primary caregivers to the children women also came to learn about the medicinal benefits of various plants. Thus, women were playing the larger role in providing the primary dietary staples, caring for the children, and dispensing medical treatment. Originally the importance of the role women played seems to have been recognized as early cultures and religions developed. We see a number of early religions based on goddesses and priestesses. Indeed, for much of history religion was more of a female oriented institution. In particular, fertility goddesses became important cultural icons. Ideal forms often depicted rather well endowed women, often with large breasts, wide hips, and swollen (pregnant) bellies.

Patriarchal Cultures: So how is it that most cultures and religions eventually became patriarchal? Men were generally more involved in hunting and warfare. This was due to generally greater upper body strength than that of women. These were also more dangerous activities, but men were more expendable reproduction-wise. However, the most daring hunter or warrior often gained respect and status. And that translated into leadership roles in the society at large, societies that tended to become ever more patriarchal. As for religion, while women came to learn about astronomical movements to better predict growing seasons, so did men in order to predict herd migrations and to determine direction when traveling at night. Astronomical knowledge, of course, can be both mysterious and quite impressive when predicting things like solstices and eclipses. So it was often tied to religion. But this also made religion and astronomy a source of power. Men sought to consolidate power and so became more involved in religion as well, moving women out in the process. As a result new patriarchal religions came to dominate. So both culture and religion became increasingly patriarchal, with women being recast in submissive roles or even relegated to the status of

property.

Now with the rise of patriarchal systems came a major change in how sexuality was viewed. The focus shifted from female to male fertility (or prowess), hence the rise of phallic symbolism (pun intended) in art and architecture. In religion gods, not goddesses, came to play the primary role. And these later religions tended to make clear statements regarding sexual conduct and the specific roles of men and women in society.

Marriage: We know that human sexuality has always been regulated to some degree, throughout history and across cultures, by way of tradition and religion. In particular, some conception of marriage always seems to exist. The two most common forms of marriage have been monogamy (husband and wife) and polygyny (husband with multiple wives). The former has been the more common of the two. So the norm has been to have one mate exclusively, at least until death, when one may take on another single mate. In cases of polygyny, often only the first wife would have any claim to title or property (if any was allowed for women). The same would follow for their offspring. However, the males from any wife generally superseded female children in importance and status. And the eldest male, even if not from the first wife, would have the highest status. And in some societies surviving wives were even expected to follow their husbands in death (literally). Norse and Hindu custom, in particular, required wives to throw themselves on their husband's funeral pyre. This stems from a view of wives as being nothing more than male property and of little use to society on their own.

So is marriage, especially monogamous marriage, a male or female invention? Of course, it's not necessarily a human invention. A number of bird and mammal species (e.g. penguins, wolves) mate for life. And from a biological perspective there are two plausible arguments. One view holds that the best strategy for a male is to take multiple partners as often as possible to better insure that his genes get into the next generation (the so called Coolidge Effect). But at the same time females need security and support during pregnancy and the child's infancy to insure their own survival and that of their offspring. So it would be the females that promoted monogamy to enlist male support. Of course it should be noted that females are not that fragile and males are not always that supportive. The opposing view points out that it might be advantageous for the female to seek a different mate for each child in order to provide greater genetic diversity among her offspring. So both the males and females might benefit from multiple partners. However, males can never be completely sure that their endeavors with multiple partners actually result in offspring, unless they hang around. Even then, if the female has also been 'playing the field' there's no guarantee that her offspring is also his. So while the female always knows that the offspring is her own (with the exception of a few current scientific advances), the male is not always that sure. Hence, males may have promoted monogamy to increase the likelihood, if not insure, that the offspring produced were their own. Given the emphasis on the transfer of titles and property from father to son in most societies this seems the more likely scenario.

Provisions for divorce also existed in most societies. The most common grounds for divorce were adultery (generally on the part of the wife) and infertility (generally assumed to be the fault of the wife). Again, both of these reflect the desire of men to have heirs. In particular, to have male heirs that they were sure were their own offspring. Some societies required a great deal of legal wrangling to divorce, while others made the process quite simple. In fact, one Native American society merely required repeating the phrase 'I divorce you' three times.



Wasting Semen: Another recurrent theme especially in Judaic, Christian, and Muslim traditions was the idea of not wasting semen, that this was an exceptionally important element. A common view was that within the semen was a fully intact little person. But that little person needed to be placed into a womb in order to be nurtured to a viable offspring (note that the women's role is now nothing more than that of a vessel). Given this viewpoint the only acceptable form of sex becomes vaginal intercourse for the purpose of reproduction. Even within marriage sex was only to be engaged in for the purpose of reproduction, not its enjoyment (except for Muslim tradition). Masturbation was looked at as sin, as it wastes semen. And since sex outside of marriage is generally not aimed at reproduction it too was regarded as sin. And in the case of women it also raises the question of paternity, a matter of honor. Indeed, although the Muslim tradition allows the man multiple wives and concubines, it does not tolerate adultery on the part of a wife. Even today an adulterous wife may be killed for the sake of honor. Overall, the more removed a sexual behavior was from vaginal intercourse (usually for the purpose of reproduction) the more sinful it was considered to be and the harsher were the penalties for engaging in it. Needless to say, there was zero tolerance for homosexuality. For the Jews these precepts reflect a long struggle to preserve their ethnic race and culture, by keeping up their numbers. For the Christians and Muslims they reflect the need of new religions to increase membership while becoming established. Celibacy became the only allowable alternative, in some cases considered part of a 'higher calling.' In western society these views were quite prominent during the formation of the early Christian church from Paul (died A.D. 66) to Augustine (354-430). Thomas Aquinas (1225-1274) espoused the doctrine that sex for other than reproduction was a form of heresy. Again, the penalties were exceedingly harsh. In Western Europe it wasn't until the Reformation, and particularly the formation of a group known as the Calvinists (established during the mid 1500s), that Christians began to lighten up. The Calvinists conceded that there was a role for sex in marriage beyond reproduction. They proposed that sexuality had a place in easing the burdens of life, was important in order to avoid fornication, and was an honest means of expressing love and endearment.

Other Cultures: Outside of Western tradition other cultures and religions had more liberal views of sexuality. The Taoists in China had a sex manual of sorts defining acceptable practices and so forth dating back to around 200 B.C. Sexuality was not limited to solely a reproductive role and there were acceptable forms of both oral and anal sex. Sexuality in various forms was part of pursuing spiritual growth and harmony. However, more conservative elements came to power around 1000 A.D. and China has for the most part been relatively conservative since (although Emperors often were allowed multiple wives).

The Hindus in India also developed a view of sexuality as one path to greater spirituality. They developed the *Kama Sutra* between 200 and 400 A.D. More than a sex manual, it is considered a religious text.

For the most part neither the Polynesians nor Native Americans were particularly concerned about nudity. Sexuality was often part of ritual rites and festivals. Premarital sex and childhood sex play were accepted behaviors. And although a few tribes practiced polygyny, most promoted monogamy. But unlike any of the European or Asian traditions Polynesian and Native American cultures generally did not have well defined conceptions of either property

or sin. Theirs was a more communal lifestyle. Wives were not viewed as property but as equal partners. As an offshoot, the concept of rape was quite foreign to them. And the use of marriage to produce heirs to title and property was not common. As mentioned, divorce was uncomplicated for both men and women. Children were not particularly affected as they were considered part of the whole tribe, not just the immediate family, and raised communally. And in Native American societies there were even positions for cross-gender individuals, especially for those with usual talent or skill for things generally considered to define the role of the other sex.

Female Roles: The various views of sexuality and the role of reproduction in defining religious and cultural norms also did much to define the political power of women, or rather the lack of it. Again, looking at Western tradition, women had limited power once patriarchal religions came to predominate. Women came to be cast in one of two roles. One view was of women as evil temptresses seducing men to transgress. [Eve in the Garden of Eden](#) and the [Whore of Babylon](#) were prototypical examples. The other view was that of the Madonna with Child. This ideal reflected the proper role of women based on the sex for reproduction only concept, that of bearing and caring for children. Under the Greco-Roman Republics women had no real public role in politics or much legal protection. Under the Roman Empire women gained some rites to property, and played a somewhat larger role in politics although it was largely behind the scenes. Upon her arrival the Romans viewed Cleopatra as a threat, as a woman with that much political power was a very foreign concept. Similarly the Romans were dismayed when they encountered the Celts (women often served as warriors side by side with their husbands).

Renaissance: It wasn't until the second half of the renaissance that women really began to come into political power. Beginning in the late fifteenth century the role of queen expanded from merely being the consort of the king to being an independent sovereign. Some of the key figures along the way were Isabella I of Spain (1451-1504), her daughter Catherine of Aragon (1485-1536), followed by her daughter Mary I of England (1516-1558). However, it was Mary's half-sister Elizabeth I of England (1533-1603) who achieved the most. Known as 'The Virgin Queen' she never married. She served as queen for 44 years during which time England defeated the Spanish Armada and was on its way to becoming a true world power. Note that her only serious rival to power was also a woman, her distant cousin Mary of Scotland, who was beheaded in 1587. Elsewhere Catherine II (1729-1796) became Empress of Russia. She was well known for her fondness for young men who served to 'entertain' her. By the time of the American Revolution women had gained a good deal of political power, though much of it was behind the scenes in the salons and royal courts. Jefferson got nowhere in his attempts to gain aid for America's revolution dealing with the male French nobility. However, Franklin charmed the ladies in the French salons, and they in turn pressured their husbands to lend aid to the American cause.

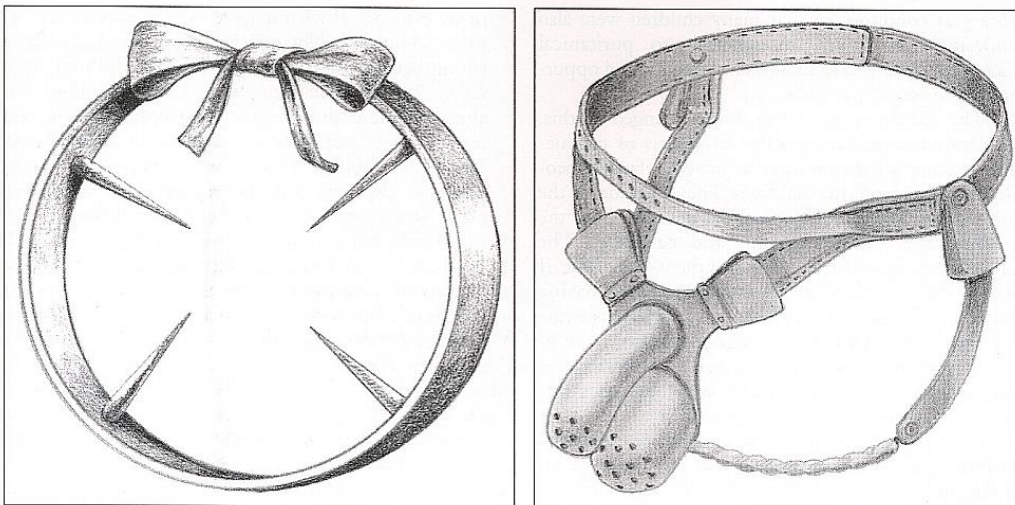


Figure 1-4 Two antisex devices invented and patented during the Victorian era: (A) a spermatorrhea ring to prevent nocturnal emissions; (B) a "surgical appliance" made of leather straps and metal pockets to prevent masturbation.

The Victorian Era: Then came Britain's Queen Victoria (1819-1901). Throughout her reign (1837-1901) Great Britain was at the height of its power and influence, with a well-established worldwide empire. But after the death of her husband she remained 'in mourning' for the last 40 odd years of her reign until her death in 1901. During her reign views concerning sexuality became exceedingly more conservative and repressed. The terms white meat or dark meat

referring to chicken, turkey, and other poultry became the fashion because breast and thigh were considered too sexually suggestive. On countryside estates piano legs were covered because the curves were considered too sexually suggestive as well. The prevailing cultural view was that sexual curiosity and expression were improper. Those who engaged in nudity, masturbation, or homosexuality were considered deviant. That included normal childhood curiosity about the body, as well as sexual arousal during sleep. Various devices were employed to prevent masturbation and nocturnal emissions. And those with an alternative lifestyle did not fair well either. In a widely publicized case at the end of the century the celebrated English author Oscar Wilde was imprisoned on charges of homosexuality. Yet there was also a great deal of hypocrisy. In 19th century Britain prostitutes outnumbered men in many of the large cities. And don't think there wasn't any pornography. By the late 19th century bound volumes of nude photos were being produced, especially in France and Germany, and sold throughout Europe and Great Britain.

And as Britain was the dominant world power at the time, it's policies and social conventions had a huge effect worldwide as missionaries were sent out across the empire to preach these repressive views. Most of Europe tended to follow suit. Even in the United States Victorian views had a good deal of influence. For example, at the end of the 19th century both corn flakes and graham crackers were invented on the assumption that a bland diet would decrease masturbation.

This conservative climate also led to the role of women in politics being greatly curtailed. Not until the end of the 19th Century were women's claims to political rights taken seriously (suffrage movements in Britain and the United States). And it wasn't until 1920 that women finally won the right to vote in the United States.



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20th Century: The 20th Century saw the most rapid and far-reaching changes in attitudes regarding sexuality, acceptable practices, and the role of women in society. Part of this is due to **advances in technology**, part of it to **higher levels of education**, and part of it to an **expanding and very open media**. All of these factors came into play at roughly the same time during the 20th century leading to social change.

Technology - Technologically, better forms of contraception opened up the use of sexuality as a form of expression without the potential consequence of pregnancy. In previous times there were few choices, most were rather unsatisfying, and they were not entirely effective. A man could simply separate from the women just before orgasm (pulling out). Sexual contact could be limited to particular times in a woman's monthly cycle to reduce the risk of pregnancy (rhythm). Relatively expensive condoms made from lamb shin and goat bladder existed since ancient times, but many could not afford them, nor were they all that reliable. The latex rubber condoms developed in the mid-20th Century were much more reliable, though not entirely convenient. Likewise, the practice of blocking the cervix has existed since ancient times. Various methods were employed, and the forerunner of the modern diaphragm was developed in Europe during the 1870's. But again, this method was not entirely convenient. The use of spermicidal agents has increased the reliability of all these forms of contraception. However, contraception by way of hormone regulation proved to be affordable, convenient, and effective (the pill and time-released implants such as Norplant). In conjunction with these advances, technology also provided cures for many of the most dangerous forms of sexually transmitted infections (e.g. syphilis, gonorrhea) in the form of antibiotics and sulfa compounds (especially from the late 1930s onward). All of this had a liberating effect regarding sexuality in western countries. However, since the mid-1980's AIDS has become an ever increasing threat and the result has been a general trend toward a slightly more conservative lifestyle once again. Sexuality is reserved as part of longer-term relationships, rather than mere casual encounters.

Education - Better overall levels of education lead to people having a better understanding of basic biology, including reproductive biology. This served to reduce misconceptions and various forms of anxiety concerning sexual behavior. Better educated people are also able to understand and debate issues related to sexuality such as abortion, homosexual rights, and so forth. The United States has not yet developed any real standards regarding sex education, but other countries have done so. Since 1949 communist China has committed to a rigorous and relatively conservative program of education and laws as part of an overall policy aimed at decreasing population growth. They have been successful in greatly reducing both population growth and the prevalence of sexually transmitted infections (virtually eradicated). In Sweden government sponsored family planning services have existed since the 1930s. Sex education has been required in all schools since 1954. Free reproductive counseling, contraceptives, and legal abortions have been provided since 1974. Extensive parental leaves of absence from work for both parents are also the norm. China and Sweden represent differing extremes in government policies regarding sexuality as a social issue. Other nations hold government policies either somewhere in between, or have no real policy and leave these issues to be taken up by either religious groups or personal values. It is notable that in those countries where sex education has been promoted and well funded there are fewer teen pregnancies, fewer unplanned pregnancies, and lower incidences of nearly every type of STI.

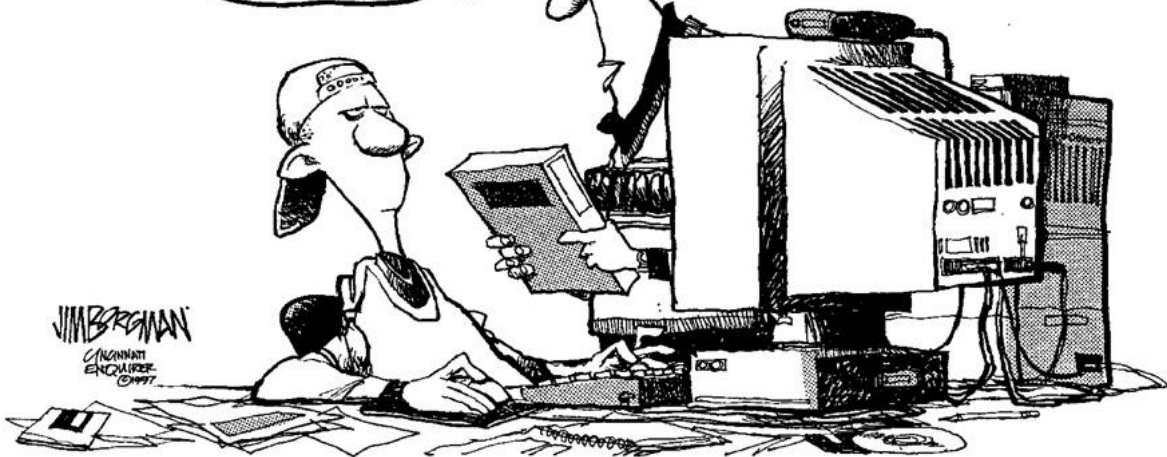
Media - Finally, the media has played a large role in expanding coverage of all issues related to sexuality. Sex has played an expanding role in advertising since the 1920s. Likewise, sexual issues and information became a mainstay for numerous publications. Sexual themes and rather explicit sexual scenes became more common first in film, then in television. Sexuality was depicted ever more graphically from decade to decade. The use of sexually explicit lyrics in music, and high sexual content in music videos, was yet another outlet of sexual expression (especially since the 1980s). And pornography became a major industry in the United States, especially since the advent of national magazines with sexual content in the late 1950s, pornographic videos in the 1980s, and the opening up of the internet in the 1990s. Finally, by the end of the century gays and lesbians went from being acceptable to being mainstream even in some of the more conservative standard media such as films from major studios and broadcast television.

21st Century and the Internet: Since the 20th, and now into the 21st century, the internet has provided a whole new means of contact between individuals. For many a good part of their social life now includes the internet. People are meeting and interacting by way of chat rooms, blogs, email, and texting. Now we face questions like whether or not an internet affair is really an affair. And there are questions of ethics regarding deception (imagine finding out your new internet romance is actually with Koko the gorilla). Moreover, the internet remains largely unregulated, and virtually any type of sexual content is available. A recent problem is that unsolicited ads may be sent to people, and many of these ads are for pornography and contain either sexual messages or images. Some of these may not require people to be actively surfing the internet, and may unpredictably 'pop up' while other applications are being run (and that includes when one's small children are using the computer for games or homework). However, recent court decisions have supported cases seeking to restrict the importation of certain forms of content (such as child pornography), and the use of the internet to seduce children for sexual exploitation. Similar ways of restricting unsolicited advertising are being debated. Although these steps might help prevent unwanted exposure to pornographic materials, it's doubtful much can be done to prevent children from viewing pornography if they want to do so. Most adolescents know computers quite well and can find ways to get around filters and security programs. This is probably more the case with boys, who also have an intense curiosity regarding pornography. That combination seems difficult to fight.

YEAH,
THIS'LL WORK...

THIS PROGRAM
WILL BLOCK YOU
FROM SEEING
ANYTHING I DON'T
WANT YOU TO SEE
ON THE INTERNET.

WILL YOU
INSTALL IT
FOR ME?



The Future: What's on the horizon? Probably the biggest changes we're going to see this century will be in the area of same-sex marriage. Already five U.S. states, a number of European countries, Mexico City, and Argentina all have legalized same-sex marriage. There's no reason why certain perks of marriage such as being considered your partner's next of kin during a medical crisis, extending medical insurance to one's partner, and direct inheritance avoiding probate shouldn't be granted to any couple in a long-term relationship. Of course, this may entail separating the legal from the religious concept of marriage.

Then there are other possible technological advancements that may impact our sexuality. There's the possibility of sexually based virtual reality, opening a whole new kind of sexuality or pornography (as depicted in various films such as *Sleeper*, *Brainstorm*, *Lawnmower Man*, and others). We could also travel in the direction of Huxley's *Brave New World*, completely separating sexuality from reproduction (sex totally for recreation, and sexually based reproduction regarded as a savage practice). Reproduction might then take the form of offspring being conceived artificially and brought to viability in artificial wombs. There's also the possibility of genetic manipulation and design aimed at either eliminating certain conditions or producing superior specimens (see the film *Gattaca*). Then there is cloning, which offers the possibility of producing exact copies of ourselves, enhanced copies (genetic defects replaced), and other sex clones (really you only need to change one portion of an allele). And recent research with animals has even been successful in fertilizing the eggs of one female with genetic material extracted from another female. This could eliminate the need for males altogether. However, it seems that for the most part people are just getting comfortable with sexuality as it has always existed. So radical departures are probably unlikely.

Final Comments: Overall, the prevailing views and standards that a culture employs for acceptable sexual practices have far reaching consequences. These definitions of 'proper' sex are tied not only to conceptions of marriage but to different views on the role and treatment of women in society, the upbringing of children, and the degree of tolerance towards homosexuals. Wider views of the role of sexuality, and acceptable standards and practices, lead to liberality concerning the forms of physical contact in sexual expression. Moreover, greater liberality generally extends to increased equality for women, more openness in the treatment of sexual curiosity and behavior in children, and greater tolerance for homosexuality. Human sexuality is better looked at as a form of expression, often conveying feelings of trust, loyalty, endearment, and love. Many people have difficulty communicating these feelings by other means such as language. As a result sexuality often plays a fundamental role in the formation and maintenance of interpersonal relationships.

Sexuality Research

How do you study sexuality, particularly human sexuality? There are some unique aspects to this area of study. Obviously people are of one gender or another, and have a preferred sexual orientation. These are often critical factors, yet they cannot be randomly assigned to subjects. And as with certain other high-risk behaviors, such as drug use or criminal behavior, subjects are self-selected when it comes to their first experiences, and the frequency of their behaviors. It would be unethical to assign subjects to groups that were required to begin engaging in sexual activity at a certain age, or that dictated how many sexual partners a subject was to have within a specified time frame. Other ethical considerations apply concerning actually observing or monitoring sexual behavior. And there are concerns about data security and invasion of privacy that play a large role when human sexuality is the subject of research. Actually, most of the true experiments on sexuality itself are carried out in the context of biology and medicine. Much of the research on human sexuality done within psychology is not even of an experimental type. Often quasi-, or pseudo-, experiments are performed instead. And more often than not in psychology and sociology the approach is more one of fact finding to assess general population trends and attitudes and their effect on individual behavior. However, the ultimate goals are the same as any other form of scientific research. Research is aimed at describing, predicting, controlling, and explaining phenomena in order to reach an overall *understanding*.

Funding of research in human sexuality: The most distinguishing aspect of research in human sexuality in the United States is the lack of public funds. No other area inspires as much objection, usually by fundamentalist moral or religious groups, to the use of public monies for research. Fortunately there are privately funded institutions carrying on much needed research, but for some of the same reasons donations are lacking. So these institutions are generally limited to carrying out small-scale studies.

This lack of research funding is despite recognized needs to curb teenage pregnancy, to minimize population growth, to prevent the spread of sexually transmitted infections, and to prevent sexually related crime. And still people object to both sexuality research as well as sex education. One claim made often is that much of this research is somehow frivolous. The idea being that we already know all we need to about sexuality. However, the research has often pointed out that what people think they know regarding sexuality, by way of anecdotal accounts and so forth, is often either overly simplistic or just plain incorrect. And some of the objections stem from a misconception that research in human sexuality is only concerned with studying the actual sexual response. This is a small area of actual research. The majority of the research has to do with people's attitudes regarding sexual behavior and then comparing those attitudes with their actual behavioral practices.

Goals of research in human sexuality: One goal is to inform people about what practices increase the risk of unwanted pregnancies or sexually transmitted infections, and find ways to motivate safe behavior. Another goal is to find ways to help people avoid or deal with situations that could lead to sexual abuse or assault. Another goal is to find out what causes people to become sex offenders. This could lead to early detection, thus preventing some of these crimes. Connected to all of these goals is the goal of finding ways to get people to seek treatment, whether they have a sexually transmitted infection, have been the victim of a sexually related crime, or are at risk of committing a sexually related crime. And there are also broader goals such as better understanding sexuality itself, understanding the role it plays in an individual's life, and the effect of social attitudes regarding sexuality on the individual.

Nonexperimental Research Methods

Naturalistic Observation

Observing behavior in natural settings

Clinical Method/Case Studies

Studying psychological problems in clinical settings

Surveys

Using questionnaires to poll large groups

Correlation Studies

Studying the relationships between events

Classic methods of descriptive psychological research: Those studying sexuality employ a number of methods also common to more general areas of psychological inquiry. Often these methods need to be adapted to the study of human sexuality.

Naturalistic Observations - Unobtrusively observe individuals in various settings, often in places where people go to meet potential sexual partners (malls, clubs, bars, the beach, the grocery store, etc.). Researchers may also go to 'specialty' locations such as strip bars, gay or lesbian bars, pornography stores. Researchers note differences in behaviors due to makeup of the groups, number of people in groups, and so on. The mere presence of an observer may affect the phenomena being studied. So there is need to blend into the surroundings. Masters and Johnson's studies of the human sexual response are also examples of this type of research. Although their subjects were observed in controlled laboratory settings, they were not otherwise interfered with.

Participant Observations - Infiltrate groups in order to gain information and experience. This can facilitate understanding of how the group is perceived and what motivates members to act in certain ways. So researchers may join a singles club, a dating service, various internet groups, or hire an escort service. Need to experience it from the inside to gain full understanding.

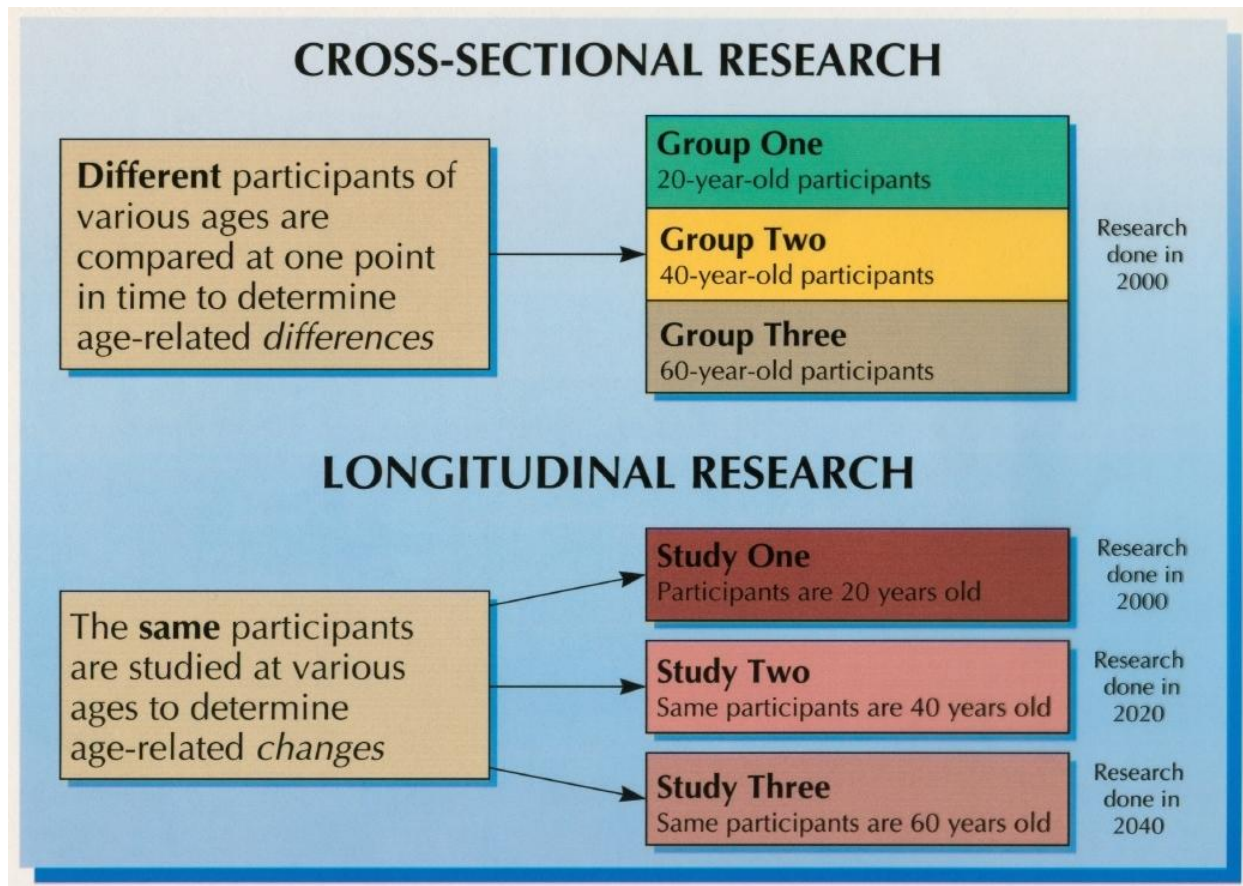
Case Studies - Members of certain unique groups may be studied at length. For example, there has been a good deal of research on criminal sex offenders. If research can provide insights into what led to their deviant behavior, perhaps those tendencies could be detected early in others. And that could help prevent some of these crimes in the future. Another example would be people who are genetically of one sex, but are physiologically the other. This research has helped shed light on the role of prenatal exposure to various levels of hormones or chemicals in gender differentiation. In other cases, where the mismatch was due to medical procedures carried on at some later time, insights were gained regarding the degree to which sexual roles are controlled by genetics versus cultural expectancies. The important point about case studies is not just what they tell us about the unique individuals, but what they can tell us about typical functioning. Case studies often help us isolate critical factors that would be difficult to determine from studying average individuals.

Surveys, Polls, and Interviews - All of these allow researchers to obtain large amounts of information about individual perceptions with relatively little expense. The biggest drawbacks concern how representative the sample is and self-selection of the subjects. What's the difference between those that participate and those that do not? Are those that do not participate paranoid, lazy, too busy, or apathetic? Problems also arise concerning subject bias as they may

shape their responses based upon their perceptions of what the researcher is looking to find. On the other hand, there can be problems arising from experimenter biases as well. The way in which questions are stated may lead to certain responses or particular responses may accidentally receive reinforcement.

As already noted, public monies have not been particularly forthcoming. The two most extensive surveys of American sexual attitudes and practices have been the Kinsey Reports (1948 & 1953) and the National Health and Social Life Survey (NHSLs, 1994). Note that 40 years elapsed between these two major studies. Frequently these are cited as baseline references to interpret the results of smaller or more limited studies conducted since (despite the Kinsey data being 60 years old).

Also note that this data is far different from the self-administered quizzes and such provided by many magazines and other sources. These often entail no actual collection of data, and so no real collaboration of the results with any baseline measures. Without any such analysis these quizzes are virtually meaningless, and must be considered only as entertainment. The purpose is not to attain information or to educate, but merely to increase sales of these publications.



Cross-Sectional Studies - Compare attitudes and perceptions of individuals from different areas of society (age, ethnic background, SES, geographic region, etc.). An example would be comparing the attitudes toward, or frequency of engaging in, various sexual practices across different groups. Do the younger people who grew up with a greater openness about sexuality hold more liberal views and experiment more, or has growing up with the threat of AIDS caused them to be more conservative than relatively older individuals? In some cases a great deal of effort is devoted to creating [demographically balanced samples](#) in order to mirror the overall population.

Long-Term Longitudinal Studies - Entire societies can change significantly in a relatively short time. Since the mid-1960s the explicit sexual content on television and in film has dramatically increased. The proliferation and accessibility of pornography on the internet is unprecedented in any other media. Have individuals growing up with these changes become more open about sexuality over time, or have they stayed the same while their children are better informed and more open? As the American population ages will the current preference for young models and so forth give way to an increasing preference for slightly more mature sexual icons? Global changes have also occurred as communication between different groups has become more prevalent and more open. So questions regarding how the attitudes of particular individuals change over time as both they and their culture evolve are of interest. Unfortunately few longitudinal studies have been performed, and one of the major studies attempted (NHSLs, 1994) lost much of its public funding and was largely converted into a cross-sectional / survey study.

Types of experimental research: Although the majority of research in human sexuality has been descriptive, some true experiments have also been performed in certain areas. However, note that most of the experimental work has been conducted in biology and medicine.

Animal studies - Sex is sex. When one is concerned with the role of hormones, pheromones, or overcrowding on sexual activity then animal studies may provide a good deal of information. The same goes for studies of various drugs on sexual performance. These can then be followed up with research on human subjects.

Studies of brain physiology and sexually related hormones - Much has been learned from recent research on the role of gender-related hormone exposure on brain organization. Research has also uncovered the basic feedback loops allowing the brain to monitor and regulate sex hormones and sexual responses.

Studies of various conditioning methods - Conditioning and learning studies are conducted in order to find ways to improve sexual performance (and then employed by relationship counselors) or to curtail sexual deviance (such as counter-conditioning used with sex offenders).

ETHICAL PRINCIPLES OF PSYCHOLOGISTS IN THE CONDUCT OF RESEARCH

1. Psychologists must take steps to avoid harming their research participants.
2. When planning research, psychologists must evaluate its ethical acceptability. Because individual researchers might not be objective judges of the ethical acceptability of their studies, they should seek ethical advice from others, including Institutional Review Boards. (Institutional Review Boards are a group of scientists and nonscientists who judge whether the risks to participants outweigh the potential gains of the research.)
3. As much as possible, the researcher should describe the procedures to participants before they take part in a study, and obtain informed consent from participants that documents their agreement to take part in the study as it was described to them.
4. Deception may be used only if there are no other viable means of testing a hypothesis and only if an Institutional Review Board rules that it does not put participants at undue risk. After the study, participants must be provided with a full description and explanation of all procedures, in a post-experimental interview called the debriefing.
5. All participants must be informed that they are free to withdraw from a study at any point.
6. All information obtained from individual participants must be held in strict confidence, unless the consent of the participant is obtained to make it public.

Basic Statistics: As most of the data collected in sexuality research is descriptive we need only briefly consider simple descriptive statistics and measures of correlation. The idea is simple. How do you summarize and present large collections of data? How do you compare different groups? And do relationships exist between the various phenomena measured?

Summary of Descriptive Statistics

Descriptive Statistic	Explanation of Statistic
Correlation Coefficient	A number between -1.0 and +1.0 whose sign indicates the type ('+' = positive and '-' = negative) and whose absolute value (0 to 1.0) indicates the strength of the relationship between two variables.
Mean	Numerical average for a distribution of scores.
Median	Middle score in a distribution of scores when all scores are arranged in order from lowest to highest.
Mode	Most frequently occurring score or scores in a distribution of scores.
Range	Difference between the highest and lowest scores in a distribution of scores.
Standard Deviation	Average extent to which the scores vary from the mean for a distribution of scores.

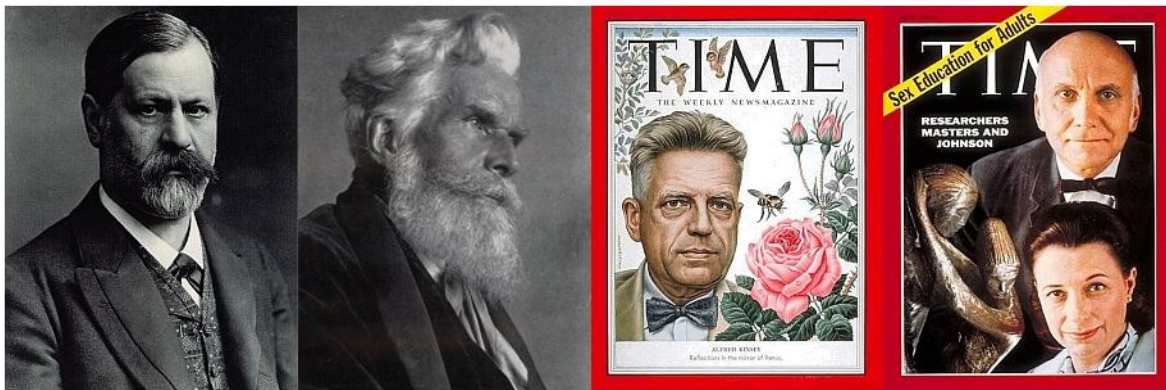
The nature of correlational data: For the most part, the research methods described yield correlational data at best. We learn what factors co-vary, or change, in conjunction with each other. And we can determine the nature or direction of those changes, and the strength of those relationships. Thus, correlational data provides a basis of discovering, evaluating, and describing relationships. Such relationships are numerically represented as *measures of correlation ranging from -1.0 to 0 to +1.0*. Given two factors A and B, finding a correlation of *zero means the two factors are not related*, meaning that knowledge of the value of A tells nothing about the value of B. When a correlation is found, there is some degree of relationship between the factors A and B, meaning that knowledge of the value of A can provide information about the value of B. For measures of correlation *positive and negative signs only reflect the direction of the relationship*, not its strength. *A positive correlation means that as the value of A increases, the value of B increases. A negative correlation means that as the value of A increases, the value of B decreases.* In either case knowing the value of A aids in predicting the value of B. The farther a measure of correlation is from zero, whether positive or negative, the stronger that correlation. Stronger correlations imply stronger relationships and greater predictive power.

Correlation in and of itself, however, does not imply causation. All finding a correlation tells you is two factors are somehow related, and so they co-vary. However, you don't know which is affecting which, or if another factor is affecting both of them. Correlational data provides clues as to where to begin looking for a causal relationship, if one exists. This information can be used to generate hypotheses. Those hypotheses, in turn, can be tested via quasi-experiments or true experiments. Only from that type of research can we begin to form causal statements.

The P-Value ($p < \text{or} = 0.05$): Are differences found between groups on a particular measure due to mere chance differences in sampling or do they reflect genuine differences between those groups? P-Value reflects how sure we want to be about this question. It is set at 0.05 in most social science research, meaning that there's only a 5% probability (5 times in 100) that the results are due to chance differences between the groups due to sampling. That also means that there's a 95% probability (95 times in 100) that the results are due to actual differences between the groups. The number could be set higher or lower, but the 0.05 level used in social sciences strikes a nice balance between not missing a real difference (not demanding overly rigorous standard), nor accepting as real what is merely due to chance sampling error (false alarms). Other values of p go further toward one extreme or the other.

Major Studies of Human Sexuality:

Virtually no scientific research regarding human sexuality was done until the very end of the 19th century. And that initial work was primarily aimed at curbing masturbation. One assumption was that diet played a role. Spicy foods were believed to over stimulate and lead to a continued desire for stimulation, in the form of masturbation. Kellogg invented corn flakes on the assumption that bland foods would decrease masturbation. Graham crackers were invented for the same reason. The latter were commonly given to children before naps and at bedtime so as to 'calm them down'.



Sigmund Freud

Havelock Ellis

Alfred Kinsey

William Masters
Virginia Johnson

Sigmund Freud (1856-1939): Although he based most of his psychological theories on the influence of sexuality on personality Freud did no real research on sexuality. His work was completely theoretical, based on his interpretations of what his patients revealed to him or what he inferred to be the underlying basis of their behavior. However, Freud's work did usher in a greater openness regarding sexuality. This allowed others to seriously study sexuality itself, and the role it plays in human behavior. Freud was also one of the first to recognize the importance of childhood experience on later development and to acknowledge that children have sexually related experiences.

Havelock Ellis (1858-1939): Pioneer in scientific, rather than theoretical, investigation of human sexuality. Dissatisfied with the prevailing medical views regarding sexuality Ellis began his work in sexuality doing research that showed male nocturnal emissions were not harmful or related to any medical condition. He went on to gather information on the female sexual experience.

Alfred Kinsey (1894-1956): Interviewed some 18,000 subjects about sexual attitudes, preferences, and practices in an attempt to detail general patterns. The most well known publications of his research were The Kinsey Reports. The first was Sexual Behavior in the Human Male (1948). The subjects consisted of 5,300 white male volunteers interviewed face to face. The second was Sexual Behavior in the Human Female (1953). The subjects consisted of 5,940 white female volunteers interviewed face to face. The Kinsey reports collected data on over 300 specific questions. This data is still used as the baseline for modern studies on changes in patterns of sexual behavior and attitudes over the years. However, the data underrepresented rural residents, the less educated, and the elderly while completely excluding non-whites.

Masters and Johnson (1961, 1966, 1970): Detailed measurement of sexual responses during actual sexual encounters with volunteer subjects. First observations and experiments performed in laboratory setting on the human sexual response. Masters and Johnson developed specialized equipment to monitor physiological changes such as blood flow to the sexual organs and muscle tension in those areas. Ultimately they summarized approximately 10,000 sexual episodes for analysis. Nothing on this sort of scale has been done since, but new technology such as PET and MRI

scans may provide a completely different level of understanding if such research can gain support.

The Hunt Report (1974) and the Hite Reports (1976, 1981, 1987) were primarily based on written questionnaires. The major problem encountered was a low rate of return (Hunt: 20%, Hite: 3-6%). That translates into possible bias due to self-selection of subjects.

Blumstein and Schwartz (1983) did the first study to focus on couples, including gay and lesbian couples. The subjects consisted of 6,071 heterosexual, gay, and lesbian couples that filled out a written questionnaire and were subsequently interviewed. However, the sample underrepresented the elderly, ethnic minorities, and those of lower socioeconomic status.

National Health and Social Life Study (NHSL, 1994): Extensive survey of the sexual practices of 3,432 respondents aged 18-59 based on face to face interviews. This study achieved an exceptionally high rate of compliance (79%). It is considered the most representative survey of sexuality in the U.S. and to reliably reflect the general U.S. population in the 1990s. However, the 90-minute interviews were often conducted in the presence of spouses or children, a possible source of bias or misrepresentation concerning some responses.

International Sexuality Description Project (Schmidt et al., 2003): Anonymous written self-reports collected from over 16,000 men and women worldwide. This was the first large-scale multi-national survey ever done.

Durex Global Sex Survey (2005): Online survey conducted via the Durex Corporation's website. Collected data from over 50,000 men and women worldwide. However, there are potential bias problems given it was a nonrandom, self-selected sample. In addition, the majority of respondents were young white Americans.

Final Comments: Unfortunately, the importance of research in this area continues to be overlooked. Note that many of the shortcomings of research into human sexuality stem directly from the lack of funds available. Given limited resources there is a tendency to settle for whatever data can be obtained economically rather than more rigorous, but more expensive, methods of collection. Thus, much of the research involves surveys of self-selected subjects rather than demographically balanced or random samples. Nevertheless, throughout the rest of this course we will examine the findings from the research cited here, along with other sources of information. But it is always important to keep that in mind the limitations of some of this research when interpreting the findings.

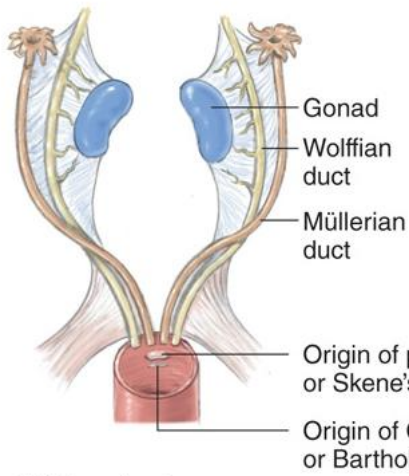
Determination of Sex and Gender

Male and female refer to biologically determined sex, as determined by a number of factors. Gender goes beyond just one's biologically determined sex, although in most cases that forms the cornerstone of one's gender identity. Gender encompasses one's perceptions of gender identity. Gender also entails subsequently learning society's expectations for a particular gender, what is referred to as gender role. So a number of additional psychosocial perceptions, expectations, and meanings are attached to being either of the male or female sex by the concept of gender. However, these labels may come to limit the range of expression an individual experiences as comfortable. Note that there really are far more similarities than differences between the sexes. For that reason it makes more sense to use a term like 'the other sex,' rather than 'the opposite sex.'

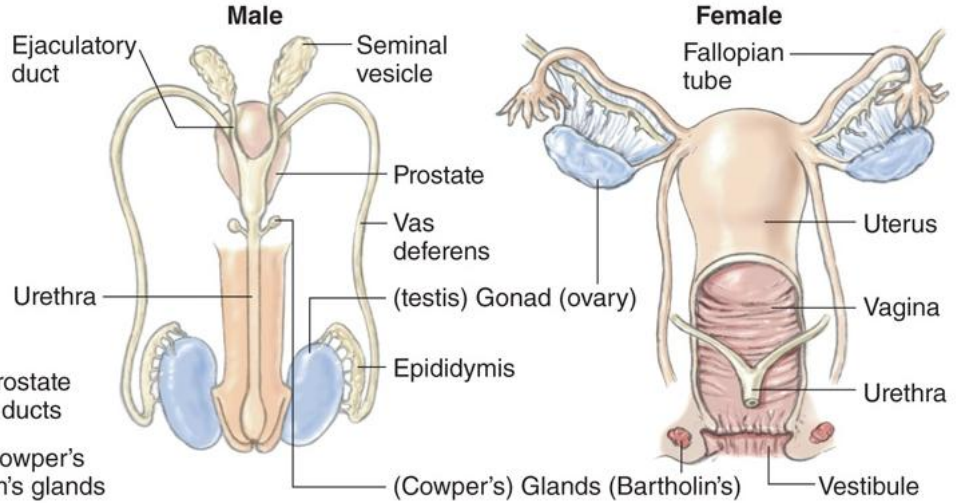
Determination of Biological Sex and Related Characteristics

Female	Male
XX chromosomes - genetic sex	XY chromosomes - genetic sex
Undifferentiated gonads follow general female pattern by default, but DSS gene on X chromosomes may play a role in further defining proper development of ovaries (Bardoni et al., 1994).	SRY gene on Y chromosome initiates development of testes from undifferentiated gonads (Eicher, 1994; Swain, et al., 1998; Wilhelm et al., 2007).
Not all species determine sex via chromosomes. Alligators bury their eggs in a mound of moist vegetation (a compost heap). Heat is generated as the vegetation decays under the sun. If the temperature remains under 87 degrees all the offspring will be female by default. If the temperature is maintained above 90 degrees or more all the offspring will be male. Temperatures between these points result in mixed proportions of male and female.	
Six weeks after conception ovaries are developed. Role of chromosomes ends, with levels and proportions of sex-related hormones guiding further development of anatomical sex differences.	Six weeks after conception testes are developed. Role of chromosomes ends, with levels and proportions of sex-related hormones guiding further development of anatomical sex differences.
Ovaries produce estrogens, with estradiol being the most important for the development of female sex characteristics. Ovaries also produce progesterone (play a role later in life).	Testes produce androgens, with testosterone being the most important for development of male sex characteristics.
There are definite 'critical periods' for the action of sex-related hormones affecting development of both genitalia and brain organization.	
Eight weeks after conception appropriate internal reproductive support ducts and glands develop. Absence of androgens results in complete degeneration of Wolffian duct system. Mullerian ducts develop into fallopian tubes, uterus, and inner portion of vagina.	Eight weeks after conception appropriate internal reproductive support ducts and glands develop. Wolffian ducts develop into vas deferens, seminal vesicles, and ejaculatory ducts. Mullerian-inhibiting substance released by testes results in complete degeneration of Mullerian ducts.
Video	
Twelve weeks after conception external genitalia are formed. Without testosterone symmetric undifferentiated structures don't fuse, and develop into inner and outer vaginal lips. Absence of testosterone results in development of clitoris.	Twelve weeks after conception external genitalia are formed. Dihydrotestosterone induces symmetric undifferentiated structures to fuse, and develop into shaft of penis and scrotum. Presence of testosterone results in development of glans penis.

Undifferentiated

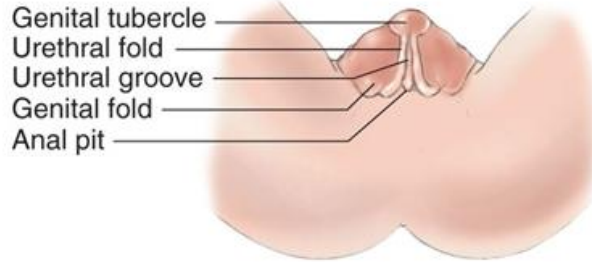


Differentiated

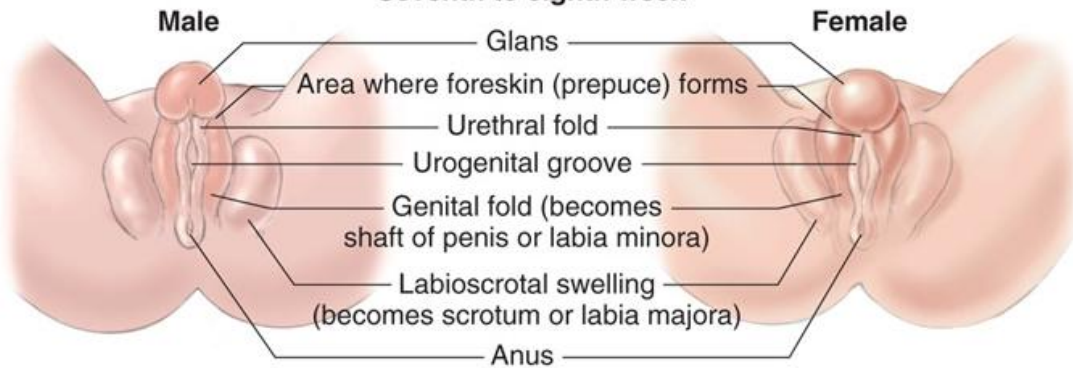


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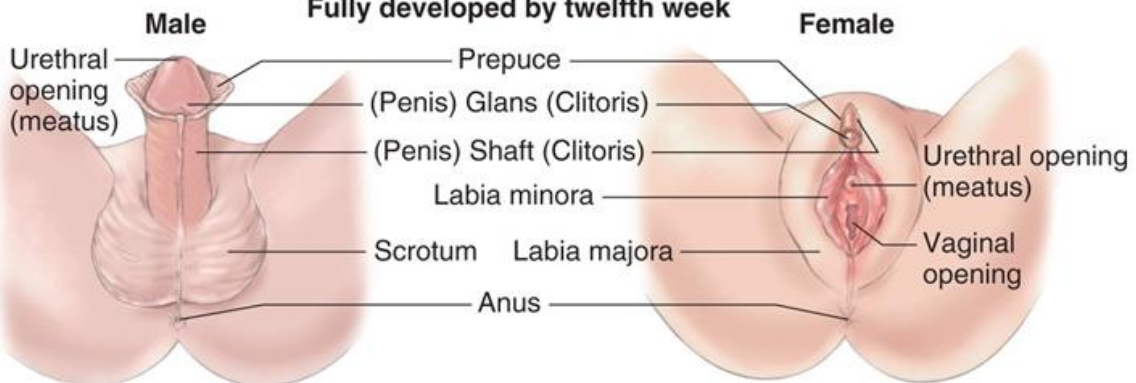
Undifferentiated before sixth week



Seventh to eighth week



Fully developed by twelfth week



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Determination of Biological Sex and Related Characteristics

Female	Male
<p><u>Brain organization</u> affected by prenatal <i>absence of circulating testosterone</i>.</p> <p>Hypothalamus develops estrogen receptor cells. At puberty these begin role of directing pituitary to cause release of sex hormones in cycles. Posterior portion of hypothalamus smaller in women than heterosexual men (Zhou et al., 1995). Part of pre-optic area of anterior hypothalamus smaller in adult females and gay men (LeVay, 1991; Swaab et al., 1995).</p> <p>Amygdala is smaller.</p> <p>More nerve fibers in thicker, denser posterior corpus callosum may result in better communication between the cerebral hemispheres (Smith et al., 2005).</p> <p>Cerebral cortex of right hemisphere slightly thinner (Diamond, 1991).</p> <p>Overall, less hemispheric lateralization of function.</p>	<p><u>Brain organization</u> affected by prenatal <i>presence of circulating testosterone</i>.</p> <p>Hypothalamus does not develop estrogen receptor cells. At puberty lack of these results in relatively steady production of sex hormones. Posterior portion of hypothalamus larger in heterosexual men than women (Zhou et al., 1995). Part of pre-optic area of anterior hypothalamus larger in adult heterosexual males (LeVay, 1991; Swaab et al., 1995).</p> <p>Amygdala is larger.</p> <p>Fewer nerve fibers in thinner, less dense posterior corpus callosum may result in greater lateralization of hemispheric functions (Smith et al., 2005).</p> <p>Cerebral cortex of right hemisphere slightly thicker (Diamond, 1991).</p> <p>Overall, more hemispheric lateralization of function.</p>

From birth there are noted differences in certain behavioral patterns as well as average cognitive abilities between males and females. Prenatal exposure to different proportions of sex-related hormones affecting certain aspects of brain organization may account, in part, for certain masculine versus feminine behavioral propensities. The hypothalamus monitors and regulates metabolic equilibrium, driving motivations to eat, to drink, and to seek sexual stimulation. By way of connections to other limbic structures such as the amygdala it also exerts an influence over impulsive and aggressive action. Differences in the density of the corpus callosum no doubt affect communication between the cerebral hemispheres and may play a role in the differences found related to hemispheric lateralization of function. And the cerebral hemispheres exert control over a vast array of cognitive abilities. Differences in the degree to which various functions are lateralized may affect ability.

Recent research points to the role of nutrition during the first six months in the continuing development of masculine traits. Males tend to grow considerably during this period and testosterone levels are quite high. Both of these require adequate nutrition. Events during this period may even affect later aspects of development such as how early puberty begins for male adolescents and the degree to which masculine secondary sexual characteristics are expressed (Kuzawa, 2010).

By age six the human brain reaches full adult size, with the average male brain approximately 15% larger than the average female brain. It should be noted that differences in brain size and weight have never been shown to have any relationship to human intelligence. The difference is most likely the result of greater hemispheric lateralization of function in the male brain. Note also that by adulthood the average male is physically larger overall. A larger body may require a larger brain to maintain homeostasis and coordinate movements.

Determination of Biological Sex and Related Characteristics

Female	Male
<p>Less physically aggressive, and slightly less competitive presumably due to smaller amygdala.</p> <p>Centers for motor function selection and purposeful movement closer to frontal cerebral areas. As this is closer to motor cortex, may account for generally superior fine motor control.</p> <p>Utilize both brain hemispheres when processing verbal and spatial information.</p> <p>Have an edge in verbal skills, especially grammar and spelling. Also better at detecting lying, perhaps because there's better integration of verbal information with spatial information regarding facial expression and posture.</p> <p>Higher scores on mathematical calculation, perceptual speed, and fine motor coordination (Kimura, 1992; Kimura & Hamgron, 1994).</p> <p>Aesthetic appreciation of natural and artistic beauty for visual stimuli bilaterally symmetrical (Cela-Conde, et al., 2009).</p>	<p>More physically aggressive, and slightly more competitive presumably due to larger amygdala.</p> <p>Centers for motor function selection and purposeful movement closer to rear cerebral areas. As this is closer to visual cortex, may account for generally superior targeting ability.</p> <p>Primarily left hemisphere lateralization for verbal processing and right hemisphere lateralization for spatial processing.</p> <p>Have an edge in visual/spatial skills, especially for tasks involving rotation of three-dimensional objects.</p> <p>Higher scores on mathematical reasoning, spatial perception, and target-directed tasks (Kimura, 1992; Kimura & Hamgron, 1994).</p> <p>Aesthetic appreciation of natural and artistic beauty for visual stimuli lateralized to right hemisphere (Cela-Conde, et al., 2009).</p>

Note that all of the differences in cognitive abilities discussed represent differences in central tendency, average ability. There is considerable overlap between the overall ranges of male and female abilities. And even the widest and most persistent difference found, that of higher levels of aggression among males, is only for physical aggression. Tendencies towards verbal aggression are equal across genders. In addition, once commonly cited differences in general mathematical abilities have now virtually disappeared. The implication is that those differences were more likely due to social influences than differences in brain organization.

Atypical Determination of Sex and Gender

Within the scope of this course the typical course of development is of primary concern. Sex-chromosome disorders and hormonal deficiencies or insensitivities are relatively rare and more a matter of biological than of psychological interest. But case studies of these intersexed individuals have provided a great deal of information about the specific roles of prenatal hormones on development. In some cases gender re-assignment has been implemented with varying degrees of success. So it seems that as in the typical course of development, both hormones and social learning ultimately influence the determination of gender identity.

Atypical Sex Chromosomes: More than 70 atypical configurations of the sex chromosomes have been identified.

In cases of *Turner's syndrome* there is only *one X chromosome* (one in 2500-3000 live female births). Although the external genitalia are normal, the internal reproductive structures do not fully develop. Since the ovaries are especially affected, often completely absent, there is a deficiency of female hormones. At puberty breasts do not naturally develop and menstruation never begins. Despite the absence of female hormones they are indistinguishable from most other females in their feminine gender identity.

Klinefelter's syndrome is characterized by *a Y and two X chromosomes* (one in 1000 live male births). They develop to be anatomically male, supporting the view that it is the presence of the Y chromosome and the resulting levels of circulating testosterone that triggers the male pattern. However, they are more feminine in appearance and both the penis and testes tend to be undersized. Sex drive is generally diminished. Gender identity is usually masculine, but often there is considerable gender confusion as well.

Super Male Syndrome is characterized by *an X and two Y chromosomes*. Anatomically they are male, with little to distinguish them from typical males. Behaviorally they are masculine in the extreme. Sex drive is high, as is the propensity for aggression and violence.

Atypical Hormonal Processes: One of three things can happen, an individual may have too much of a particular hormone, not enough, or have some sort of insensitivity rendering it ineffective.

Fetally Androgenized Females are masculinized by excessive exposure to androgens produced by their own adrenal glands. Although female their internal reproductive structures are normal, the external genitalia take on a masculine form. The clitoris is enlarged, resembling a penis, and the labia may be fused, resembling a scrotum. With surgery to make the genitalia conform to what is more common for females they are reared as females. The majority develop a female gender identity. However, some never adopt feminine attitudes and behaviors and identify more strongly with things masculine. These individuals point to the strong role of factors such as hormone exposure to gender identity.

DHT Deficiency - In some males a genetic defect prevents conversion of testosterone into the related hormone dihydrotestosterone (DHT). DHT is essential for complete development of the male genitalia. Without it the testes do not descend and the penis and scrotum remain undeveloped, resembling a clitoris and labia. Even a shallow vagina is partially formed. However, the rest of the internal reproductive structures are male. Generally classified as female and reared as girls, at puberty the genitalia are rapidly masculinized. The testes descend and the clitoris-like organ enlarges to a penis. From this point on they assume a masculine gender identity without great difficulty. This certainly calls into question the idea that once gender identity is formed in early childhood it can't be changed.

Androgen Insensitivity occurs when a male fetus is insensitive to androgens, resulting in feminization of the external genitalia. Born with normal looking external genitalia and a shallow vagina they are reared as females. However, as their internal reproductive structures remain undifferentiated the condition is discovered at puberty when menstruation never begins. Studies indicate no real difference in gender identity from that of typical females. The implication is that it's not the chromosomes, but the effect of hormones that influence gender.

Other Conditions: A number of other conditions may complicate the development of gender identity.

Penis Loss - For whatever reasons some chromosomally male individuals lack a penis. A rare condition known as cloacal exstrophy results in the development of normal male testes and hormone levels, but there is no penis. In this case the penis isn't so much lost, as it never existed. Accidents have also occurred during circumcision of male infants, severely damaging the penis. In both of these cases the approach has been to remove the testes and surgically alter the external genitalia to resemble a female. However, despite being raised as females many exhibit masculine activities and eventually declare their gender identity to be masculine. This points to a strong influence of prenatal hormone levels in the determination of gender identity.

Transgendered is the term applied to those whose appearance and/or behaviors do not conform to traditional gender roles. Cross-dressing is the most apparent manifestation. However, they are not inclined to surgically alter their sexual anatomy. Native American cultures often held these individuals in high regard.

Transsexuals are those whose gender identity differs from their biological sex. There is mounting evidence that in at least some of these cases prenatal hormone levels also play a role. This may be the basis of accounts given by transsexuals who report having had feelings of being trapped inside a body of the wrong gender (Blanchard et al, 1987). Surgeries performed in adulthood serve to correct the discrepancy. Note transgender individuals are not necessarily homosexual. Most female to male transsexuals have a heterosexual orientation based on their gender identity. Male to female transsexuals may be either heterosexually or homosexually orientated based on their gender identity. We will further address transgendered individuals and transsexuals conditions when we discuss sexual orientation.

Determination of Gender Identity and the Adoption of Gender Roles

Gender Identity: The individual's subjective perception of being either male or female. It is also reflected in the degree of comfort the individual has in taking on a masculine or a feminine role in society.

Gender Role: Refers to a culturally specific, defined set of expected attitudes and behaviors considered normal or appropriate for a particular sex. That which is considered socially appropriate and typically associated with males is termed masculine. That which is considered socially appropriate and typically associated with females is termed feminine.

Gender Stereotype: Beliefs concerning what personality characteristics are thought to be more common to one gender than the other. This extends to assumptions about how someone is likely to react in various situations based on his/her sex. Generally, people accept and adopt many of these stereotypical ideas in the process of establishing their own gender identity. Likewise, many gender role expectations reflect these stereotypical ideas as well.

Social-Learning Theory: There are multiple social influences that contribute to the establishment of gender identity and the adopting of appropriate gender specific social roles and behaviors. By the [age of three](#) most children have developed a strong gender identity, with no doubt as to whether they are a boy or a girl. From this age on they seek to act in ways deemed appropriate to their gender, primarily because such actions lead to social approval. In modern society there are five major agents of socialization; parents, peers, schools, media, and religion. For the most part each of these tend to back up the message of the others. Thus, all the major influences are providing similar messages as to appropriate gender role behavior.

Parents - Typically parents provide a child with his or her earliest exposure to what it means to be male or female. Of course, the parents themselves have preconceived conceptions of what is masculine and what is feminine. And these notions even affect [how they perceive their children](#). One study found that parents of newborn males described them with terms like strong, active, and robust. Parents of newborn females used terms like soft, tiny, and delicate. Yet all of the babies were of similar size, with similar muscle tone. Parental expectations regarding a child of a particular sex continue at home and guide choices when it comes to the color of the child's room, the furniture in the child's room, and the child's first toys. These expectations can also affect how parents respond to their children, such as pampering and being overly protective of a female child, while encouraging male children to shrug off minor injuries and be adventurous. At the same time, children come to see their parents as [models of gender appropriate behaviors](#) and imitate what they observe.

Peers - Once they are school-aged the influence of peers becomes increasingly strong. And in the early years they tend to prefer playmates of the same sex 95% of the time. There are fundamental differences that are often exaggerated in order to justify this separatism. Hence you hear female children say things like, "Boys are gross. They pee outside." While male children are saying, "Girls are a pain. Just when you're having fun they have to stop everything and find a bathroom." There are also differences in the toys and types of play activities enjoyed by boys versus girls. These reflect the sex-typed roles children are expected to follow later in life. So while boys are shooting at each other with toy guns and building forts, girls are playing house and trading doll clothes. Those children that fall outside these norms are often ridiculed, bullied, or ostracized. By junior high school peers are generally the dominant social influence, surpassing even that of parents. And conformity becomes key to social acceptance.

Schools - As formal institutions devoted to the acculturation of the young it is the job of schools to teach children what behaviors are, and are not, appropriate. That has generally included gender role behaviors. In the past textbooks often perpetuated gender stereotypes. Men often were the dominant characters in American reading texts (80% of the time in the 1970s, 65% of the time in the 1980s). Women were often portrayed negatively; as passive, dependent, not particularly clever and lacking ingenuity. More recent texts have improved considerably in their presentation of both women and men as intelligent, capable, and effective.

However, there's another aspect to the school environment that needs to be examined. There are subtle differences in how teachers tend to treat male and female children in their classes. Research has shown that boys are more likely to receive attention, to be called on to answer questions, to receive remedial assistance, and to be shown greater latitude for disruptive behavior. Girls are more likely to be reprimanded for calling out answers, and receive more attention for acting dependently rather than independently. These differences in classroom treatment reflect and reinforce the

overall gender role expectations of the society. Perhaps as teachers become more consciously aware of their own actions these differences in treatment will be reduced.

White Men Are in Charge

In both television commercials and entertainment programming, White men are more common, more prominent, and more dominant than others. According to a content analysis of commercials, White male characters were more prominent than any other group (Coltrane & Messineo, 2000). Male prominence extended to those who appeared in voice only—male voices narrated commercials more than 10 times more often than female voices. The patterns of men in positions of authority and men as the voice of authority exist in the United Kingdom, Europe, Australia, and Asia as well as in the United States (Furnham & Mak, 1999).

In the United States on entertainment programming, women have a history of underrepresentation. Despite increases in female characters during the 1980s and 1990s, women are not only portrayed less often than men, but women's roles also tend to be less significant and less serious (Harwood & Anderson, 2002). Women have been more likely to be shown as dependent, and around the world, women appear more often at home than in other settings (Furnham & Mak, 1999).

Media - Television, movies, and music have a great deal of influence on people of all ages, especially children and adolescents. Unfortunately, those producing these forms of entertainment have no mandate to promote positive social change. Content is geared to market demands, and as long as people like shows, movies, and song lyrics that perpetuate gender stereotypes then that's what's going to be produced. Prime-time television still favors males, especially for roles portraying active, intelligent individuals in positions of authority or leadership. Women are still primarily playing subordinate roles, such as a male character's romantic interest. Female characters in television and movies are much more likely to behave seductively and rely on physical attractiveness than male characters. And even television commercials tend to present men as authorities on a wide range of topics while women only know about cooking, household cleaning products, and cosmetics. Even toy commercials convey strong messages as to who should be playing with what toy. Finally, music has traditionally supported the same gender stereotypes. Your typical love song usually involves the story of a man pursuing a woman.

Religion - Most religions have a patriarchal orientation. There is an underlying theme of male supremacy. Even the object of the religion is generally male, a god not a goddess. And until recently there were few female clergy. In the United States the first female member of a Protestant faith was ordained in 1970, the first female rabbi in 1972. Certain faiths like the Roman Catholic Church still do not allow female clergy. Women may serve in other, subordinate roles, but not as clergy. This sends a strong message regarding what is the acceptable role for each gender.

The Interactional Model: More recent theories of gender have come to accept that gender identity and the adoption of gender roles is a product of both biological factors and social learning. Mounting evidence points to a host of underlying biological substrates (such as differences in brain architecture due to prenatal exposure to hormones) that predispose children to interact with the social environment in either a masculine or feminine way. These factors may set a biological pattern that limits the variation with which one is comfortable (Reiner, 1997). This may account for why attempts to encourage greater androgynous development (melding gender roles to allow more even expression of masculine and feminine characteristics) have not been entirely successful. So children are not psychosexually neutral at birth. However, not everything is completely pre-determined either. There is also a great deal of evidence showing that life experiences are integral to how we come to perceive ourselves and our role in society. Social learning may direct behavior along certain paths mandating different ways of expressing masculine and feminine qualities for males and females. Thus, an interactive model is best suited to fully understand gender identity (Golombok & Fivush, 1995).

Masculine and Feminine: Certain activities and characteristics are often associated with one gender more than the other. These conceptions are the basics of gender stereotypes, and help to define the gender roles we adopt. Those that have come to be viewed as generally more appropriate to men are referred to as masculine, those more appropriate to women as feminine. This has always been the case, perhaps reflecting a basic division of labor between the sexes. In ancient times women were primarily responsible for raising children, as well as gathering, cooking, processing, and storing food. Women also took care of the home, clothing, and so forth. Men were engaged in building, exploration, hunting, and warfare. Some have argued that this dichotomy was enhanced in western societies by the Industrial Revolution of the 19th century. Separate spheres of influence were established with men entrenched in the world of commerce earning money, while women remained at home managing house and children. Whatever the origins, the fact is there have always been roles specific to men and women. And a host of qualities and behaviors are tied to one gender or the other. Traditionally, masculine and feminine have also been viewed as opposite ends of a spectrum. Thus, to be masculine one must be all that was not considered feminine, and vice versa. Overall, to be masculine is to be strong, independent, and unemotional. To be feminine is to be nurturing, dependent, and supportive. The table below list numerous other traits commonly used to define masculine and feminine.

Masculine: Strong, Independent, and Unemotional

Feminine: Nurturing, Dependent, and Submissive

Adventurous
 Dominate
 Forceful
 Independent
 Masculine
 Strong

Sentimental
 Submissive
 Superstitious

Acts as a leader
 Aggressive
 Ambitious
 Analytical
 Assertive
 Athletic
 Competitive
 Defends own beliefs
 Dominant
 Forceful
 Has leadership abilities
 Independent
 Individualistic
 Makes decisions easily
 Masculine
 Self-reliant
 Self-sufficient
 Strong personality
 Willing to take a stand
 Willing to take risks

Affectionate
 Cheerful
 Childlike
 Compassionate
 Does not use harsh language
 Eager to soothe hurt feelings
 Feminine
 Receptive to Flattery
 Gentle
 Gullible
 Loves children
 Loyal
 Sensitive to the needs of others
 Shy
 Soft-spoken
 Sympathetic
 Tender
 Understanding
 Warm
 Yielding

Active
 Independent
 Direct
 Strong
 Coarse
 Tough
 Confident

Passive
 Dependent
 Timid
 Weak
 Refined
 Delicate
 Pure

Daring
Loud
Autonomous
Stoic
Instrumental
Rational
Violent
Carefree
Firm
Sarcastic
Rude
Bossy
Feels Superior
Likes Hunting
Disobedient as a Child

Virtuous
Quiet
Neat
Expressive
Cooperative
Pious
Uninterested in Sex
Nervous
Devoted
Patient
Appreciative
Need for Approval
Does Not Use Harsh Language
Likes Charades
Afraid of the Dark

Neutral Terms: Adaptable Conceited Conscientious Conventional Friendly Happy Helpful Inefficient Jealous Likable Moody Reliable Secretive Sincere Solemn Tactful Theatrical Truthful Unpredictable Unsystematic

The first group of attributes comes from the work of Williams and Best (1990) who found the six masculine and three feminine adjectives listed were associated with those specific genders in all 30 of the cultures they surveyed.

The second group of attributes comes from Bem's (1974) Sex Role Inventory. A group of university undergraduates judged from 200 gender related terms. Those attributes that were most strongly identified with one gender or the other, by both men and women, comprise the 40 listed. The list of neutral attributes also comes from Bem's (1974) research. From a list of 200 items, these are the 20 least associated with either gender in particular by both men and women.

The remaining groups of attributes come from a variety of different sources and have often been associated with one gender more so than the other.

Three interesting points to emerge from the table and the research associated with it. First, considering the work of Williams and Best (1990), some attributes are considered masculine or feminine across a number of cultures. This lends support to the idea that there may be biologically based predispositions to act in certain ways that are influenced by gender. However, they also found that certain characteristic patterns that serve to differentiate masculine from feminine in western culture do not do so in Asian cultures such as China and Japan. Those cultures are more collectivistic and family ties and obligations play a larger part in society. So characteristics such as being independent, assertive, competitive, and self-reliant are not desirable for either men or women. Likewise, conformity and obedience are favored traits for both genders. So again, an interactional model of both biological and social influences best describes how we may come to adopt certain behaviors once we have established a gender identity. Second, consider the attributes found by Bem (1974) to differentiate masculine and feminine. Both men and women agreed upon these terms. So both men and women share the same notions about what it means to be masculine and feminine. Third, assessing the two lists for masculine and feminine overall, western society tends to favor more of the masculine attributes than the feminine ones. This may be a holdover from a long history of patriarchal bias in our culture. And this is where the social sciences can play a role. Even if some traits and abilities are inherent to a given gender, different does not necessarily imply that one is better than the other. Different is simply that, and both masculine and feminine qualities should be recognized for their role in contributing to the general variation within the species that ultimately contributes to adaptability and survival. It will be interesting to see if this preference changes as western society continues to promote greater equality between the sexes.

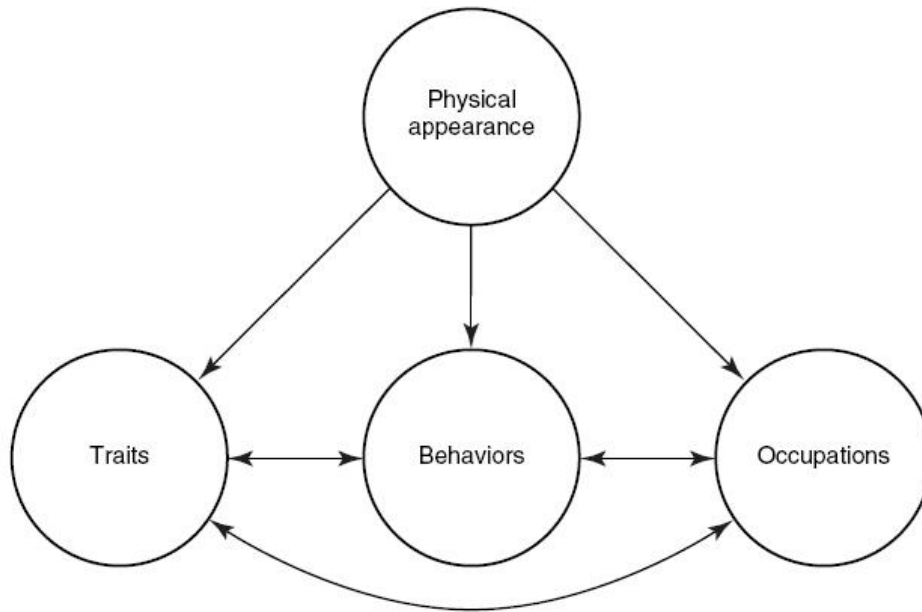


FIGURE 7.2 *Components of Deaux and Lewis's Model of Gender Stereotyping*

In all of this the primary factor in determining expectations as to how a person should act based on gender stereotypes is one's physical appearance of being either male or female. Other factors such as job or commonly engaged in behaviors influence our assessments and expectations, but outward appearance carries the most weight. And so we find a woman doing something masculine or in a predominately male field incongruent. These things don't fit with the prevailing expectations based upon physical appearance, and we consider them exceptions to the general rule. Of course much of this is based upon learned associations, which may change as society changes. Thirty-five years ago men with earrings and women with tattoos were the exceptions. Now neither is associated in particular with either gender. It is also the case that people tend to be more accepting of their own variability and idiosyncratic tendencies concerning gender roles and adherence to stereotypes than they are to those of others.

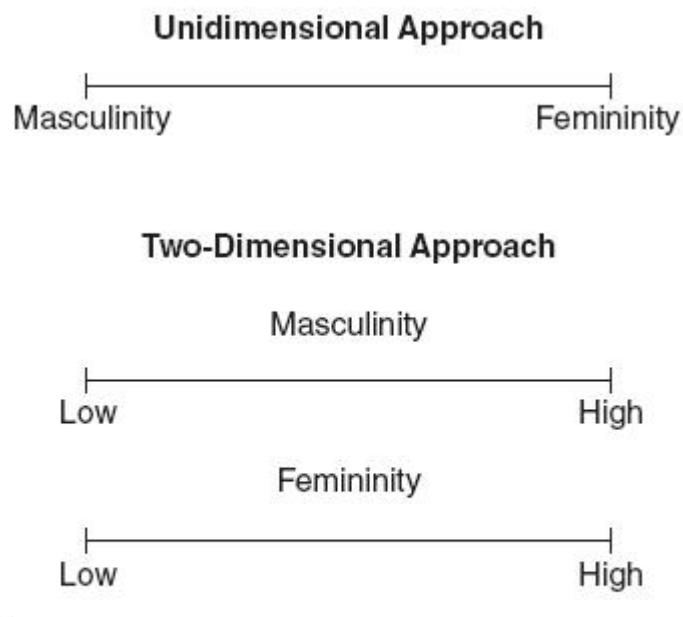


FIGURE 7.3 *Two Approaches to the Measurement of Femininity and Masculinity*

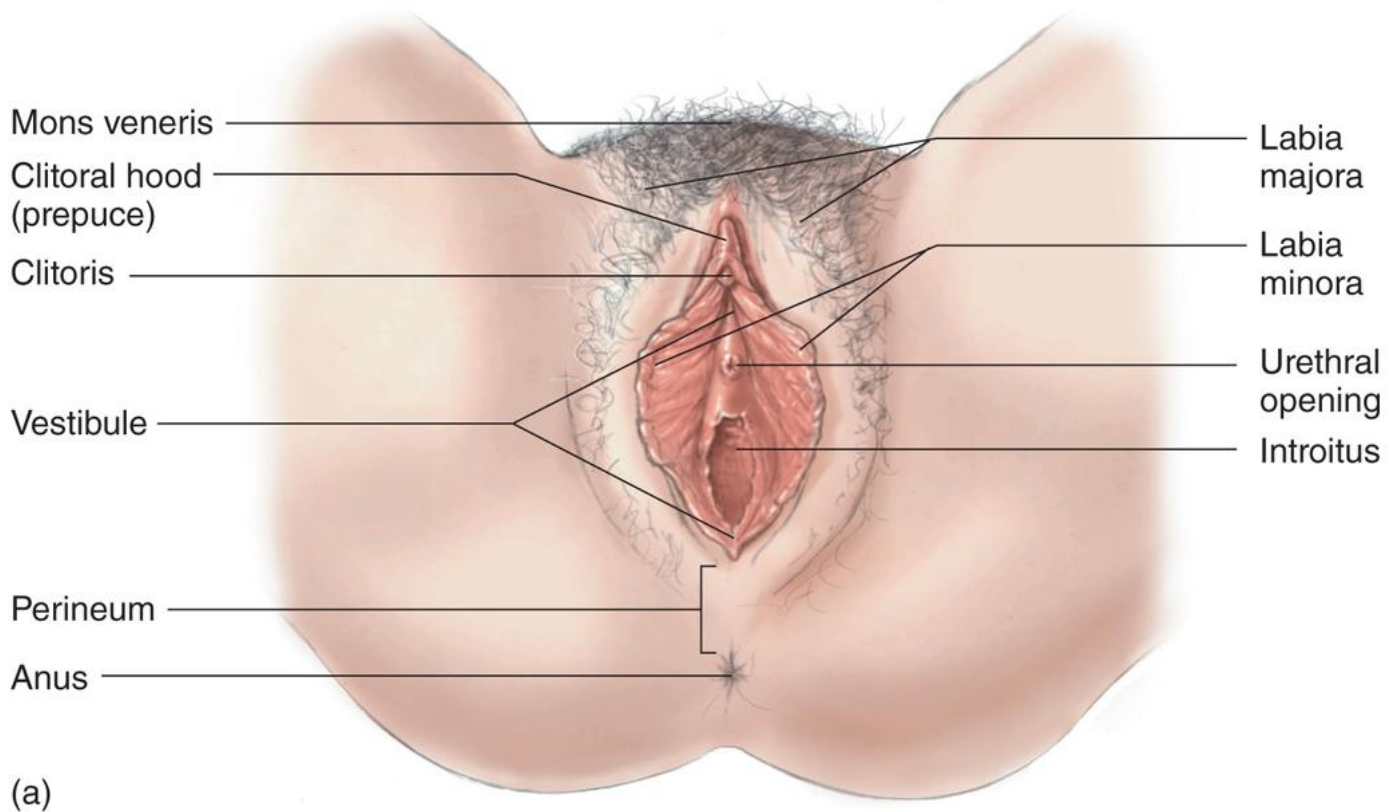
Androgyny: Bem (1974) decided to approach the whole concept of masculine and feminine from a different perspective. The traditional approach was to view these terms as diametrically opposed polar opposites on a continuum, masculine *versus* feminine. Bem viewed them as two separate dimensions of personality, masculine *and* feminine, that are both present in the individual. Carl Jung proposed this same idea referring to the masculine aspect of personality as animus and the feminine aspect as anima. Each of us has a masculine and a feminine aspect, though some of us emphasize one far more than the other. In a sense one is not masculine or feminine, but rather one may have a preponderance of masculine or feminine attributes or be more comfortable expressing either masculine or feminine propensities. And in certain areas or situations we may think and behave in ways that are quite masculine, while in others we may think or behave in a more feminine manner. So while we may be able to separate male and female into non-overlapping categories, the same may not apply to masculine and feminine.

In addition, some people very much embrace both aspects of their personality. Androgyny refers to the idea that we all have masculine and feminine aspects to our personalities. To be androgynous is to strike a balance between masculine and feminine characteristics and dispositions. So rather than trying to fit oneself to a strictly masculine or feminine role, the androgynous individual freely expresses both sides of his or her personality. However, don't think of being androgynous as being somehow between masculine and feminine. It's not so much a *blending*, as it is a *balance*, between masculine and feminine propensities. An androgynous person may think and act in a very masculine fashion in one situation and a very feminine fashion in another. The key is that they're not locked into acting one way or the other in every situation. So rather than just masculine or feminine it comes down to those that emphasize their masculine traits more (perhaps exclusively), those that emphasize their feminine traits more (perhaps exclusively), and those that express both depending upon different situations.

There is great deal of variation concerning just how masculine, feminine, or androgynous a person may be. For example, someone may be extremely feminine, or slightly androgynous expressing mostly masculine attributes with a few exceptions, or very androgynous expressing both masculine and feminine attributes regularly. It is of interest to assess this aspect of personality. So tests have been developed for that purpose. The two most commonly employed are the [Bem Sex Role Inventory \(BSRI\)](#) developed in 1974 and the Personal Attributes Questionnaire (PAQ) developed by Spence, Helmreich, and Stapp (1974). Both examine the mix of masculine and feminine characteristics that individuals attribute to themselves. Both tests have found their respective masculine and feminine scales to not be negatively correlated. That is to say, knowing how someone responded to the items associated with masculinity were not predictive of their responses to the items associated with femininity, and vice versa. So people have had all different combinations of scores and that supports the idea that masculine and feminine are not opposites.

Adult Female Sexual Anatomy and Physiology

Ultimately the female sexual anatomy is designed for the production and fertilization of ovum, as well as carrying and delivering infant offspring. Puberty signals the final development of primary and accessory organs that support reproduction.



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The female external genitalia consist of the following:

Vulva - All the external genital structures taken together.

Mons Veneris - Pads of fatty tissue between pubic bone and skin.

Labia Majora - Outer lips surrounding all the other structures.

Prepuce - Clitoral Hood (foreskin above and covering clitoris)

Clitoris - Glans (head), Shaft, and Crura (root). The clitoris is particularly sensitive to stimulation.

Labia Minora - Inner lips surrounding the vestibule. Sweat and oil glands, extensive blood vessels and nerve endings.

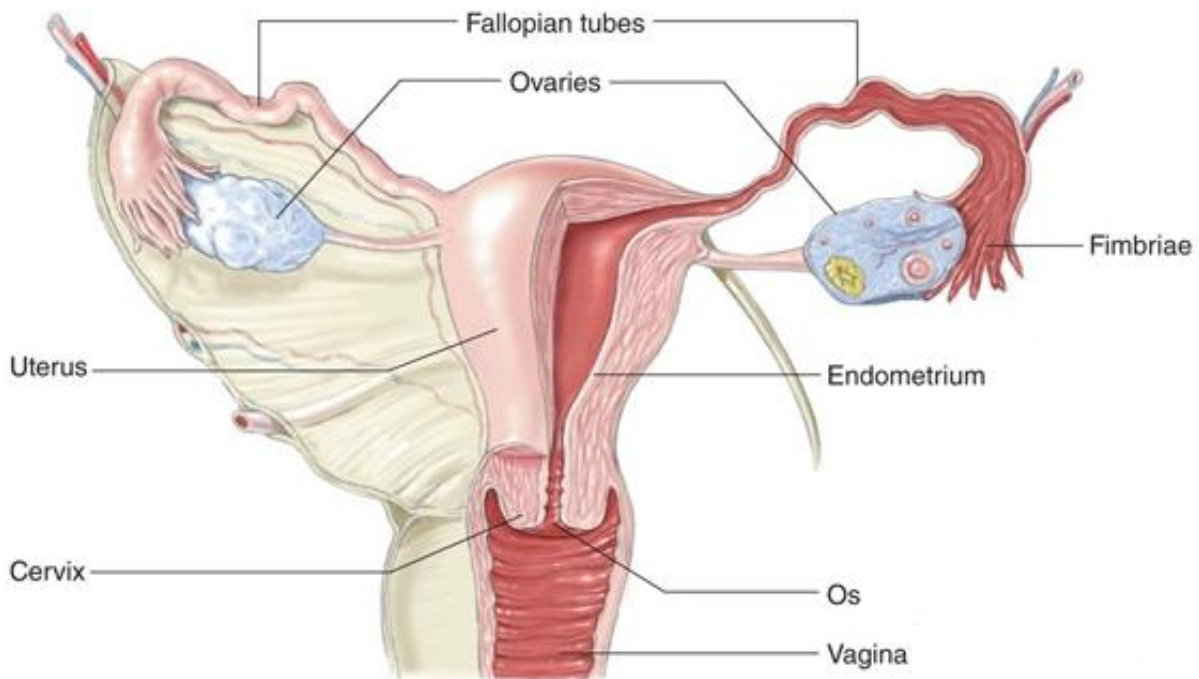
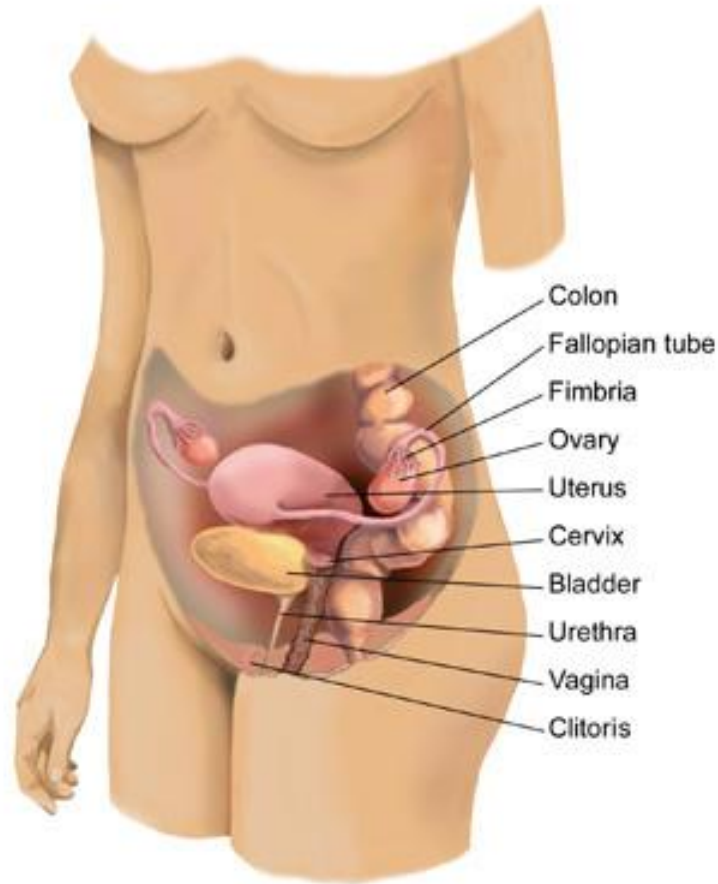
Vestibule - Area surrounding the urethral opening and vagina. Highly sensitive, extensive blood vessels and nerve endings.

Urethral Opening - End of tube connecting to bladder and used for urination.

Vaginal Opening - Also called Introitus.

Perineum - Area of skin separating the genitalia from the anus, distance is less in females than males.

The Female Reproductive System



The **female internal reproductive structures** consist of the following:

Vagina - Collapsible canal extending from vaginal opening back and upward into body to cervix and uterus. During arousal it is engorged with blood. This aids its expansion and triggers the release of lubricants from vaginal mucosa.

Cervix - Small end of uterus to which vagina leads. Os is the opening in cervix leading to interior of uterus.

Uterus - Womb, organ within pelvic zone where fetus is carried.

Fallopian Tubes - Carry egg cells from ovaries to uterus, this is where fertilization occurs.

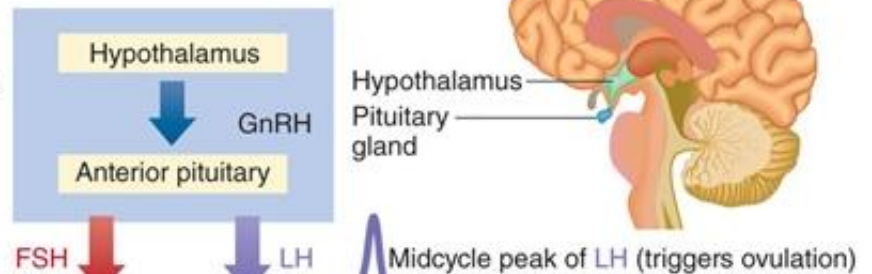
Ovaries - Produce estrogens and progesterone. Estrogen influences female sex characteristics and initiates menstrual cycle. Progesterone aids in regulation of menstrual cycle and promotes mature development of uterine lining to allow for zygote implantation. Also produce ova, egg cells, and bring them to maturity. As many as 1 million immature ova are present at birth, with about 400,000 surviving to puberty. Of these only about 400-450 are typically brought to maturity and released into the fallopian tubes.

Monthly Cycle of Menstruation: The first instance occurs between 11 and 15, referred to as *menarche*. In the United States the average age of menarche is 12.4 years. It has progressively gotten earlier from generation to generation. Weight seems to play a role, perhaps tied to the hormone leptin, which is produced by fat cells and plays a role in reproductive functions. Vigorous exercise and a lean body have been known to delay onset of first menstruation and to suspend menstruation for those who have already begun. Menstruation itself is the sloughing off of the uterine lining if conception has not occurred. It can last from two to six days, and follow a cycle ranging from 24 to 42 days. Regardless of the length of the cycle, menstruation begins about 14 days after ovulation (give or take a day or two). The overall cycle is governed by the hypothalamus as it monitors hormone levels in the bloodstream. The hypothalamus stimulates the pituitary gland to release follicle-stimulating hormone (FSH) that stimulates the ovaries to produce estrogen and causes ova to mature in the ovarian follicles (proliferation phase). The pituitary also releases luteinizing hormone (LH) that causes the ovary to release a mature ovum and causes the remaining portion of the follicle to develop into the corpus luteum (secretory phase). The corpus luteum then produces progesterone. If the ovum is not fertilized, and does not implant itself into the uterine lining, the continued high levels of estrogen and progesterone causes the pituitary to stop releasing FSH and LH. Estrogen and progesterone levels decrease, triggering the sloughing off of the uterine lining (menstrual phase). We will revisit this discussion of the female cycle in greater detail when we discuss conception and contraception.

Problems associated with menstruation include premenstrual syndrome (PMS, 80-95% of women), dysmenorrhea (painful menstruation caused by overproduction of prostaglandins causing uterine muscles to contract), and amenorrhea (disruption or absence of menstruation). All of these involve the fluctuation of hormone levels associated with menstruation. At menopause (usually around age 45-50), a woman stops menstruating as ova are no longer brought to maturity. During the three to four years of this transition women may experience hot flashes, night sweats, sleep disturbances (resulting in fatigue, irritability, short-term memory loss, difficulty concentrating), headaches, anxiety, depression, and difficulty becoming sexually aroused.

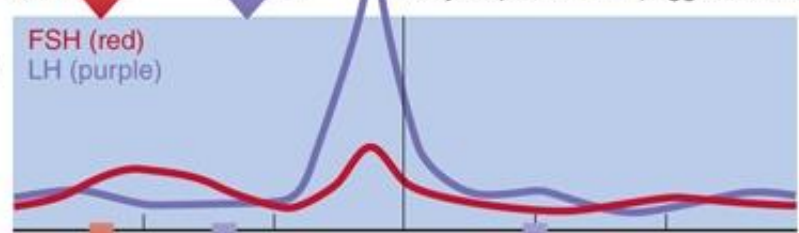
(a) Brain

The hypothalamus in the brain measures levels of hormones and releases GnRH (gonadotropin-releasing hormone) to stimulate the pituitary to secrete FSH and LH into the bloodstream.



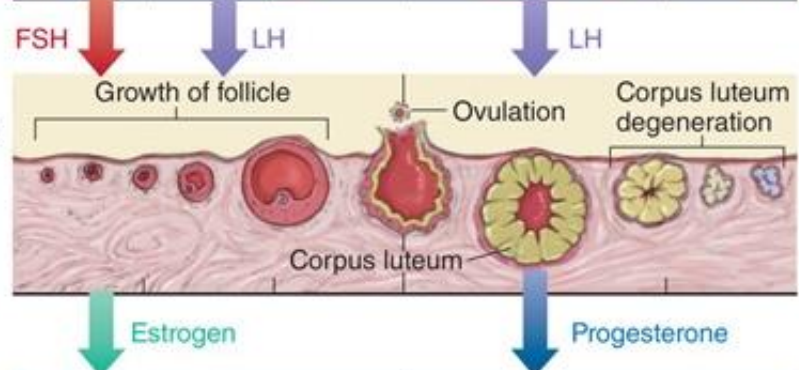
(b) Blood Levels of FSH and LH

The levels of FSH (red line) and LH (purple line) vary during the complete cycle.



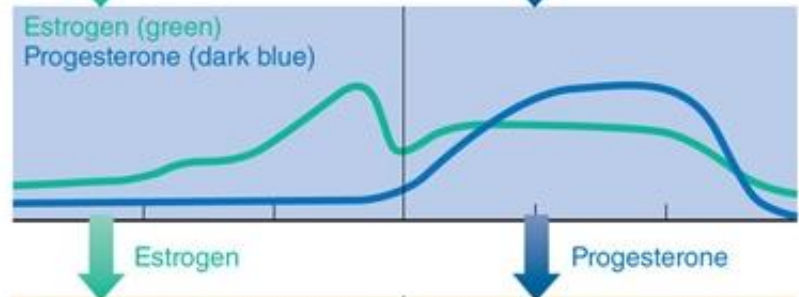
(c) Ovary

Ovarian changes during the phases of the cycle.



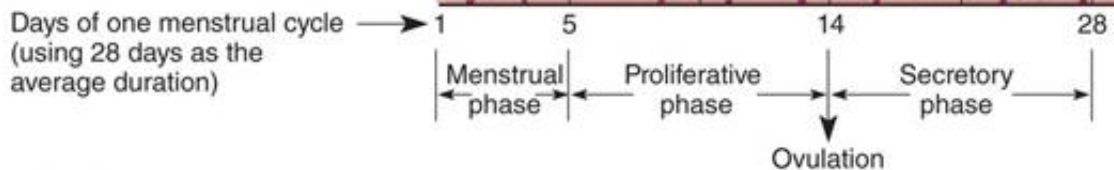
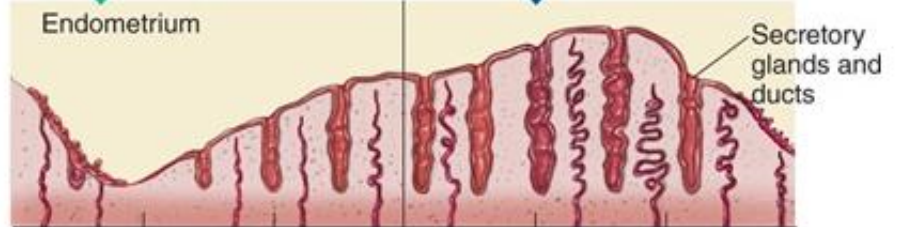
(d) Blood Levels of Estrogen and Progesterone

Fluctuations in blood levels of estrogen and progesterone produced by the ovaries.

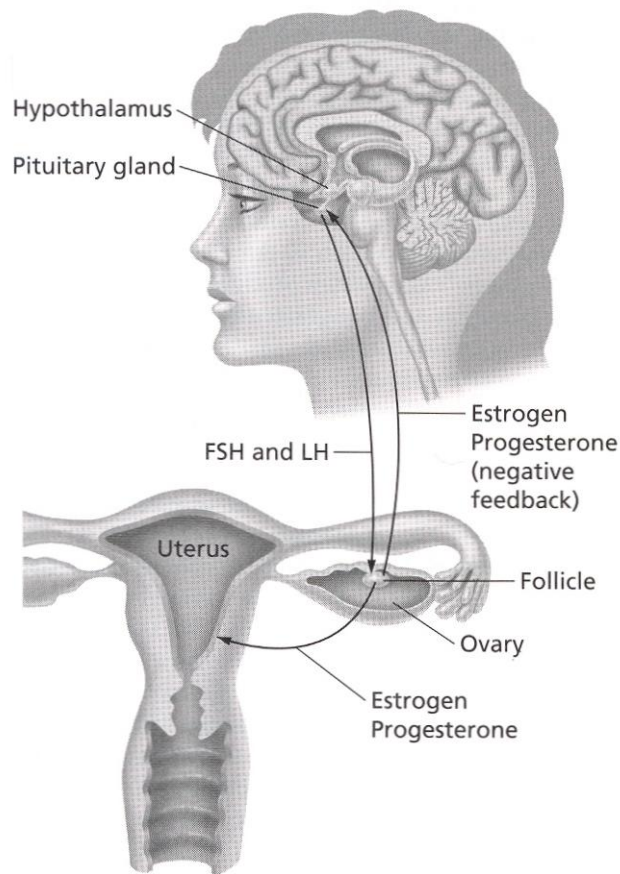


(e) Endometrium of Uterus

Effects of estrogen and progesterone on the lining of the uterus. After ovulation, the glands and ducts inside the endometrium (drawn as vertical tubes and spirals) develop and secrete nutrients that, if the woman became pregnant, would support the embryo.



Female Brain-Pituitary-Gonad Negative Feedback Loop

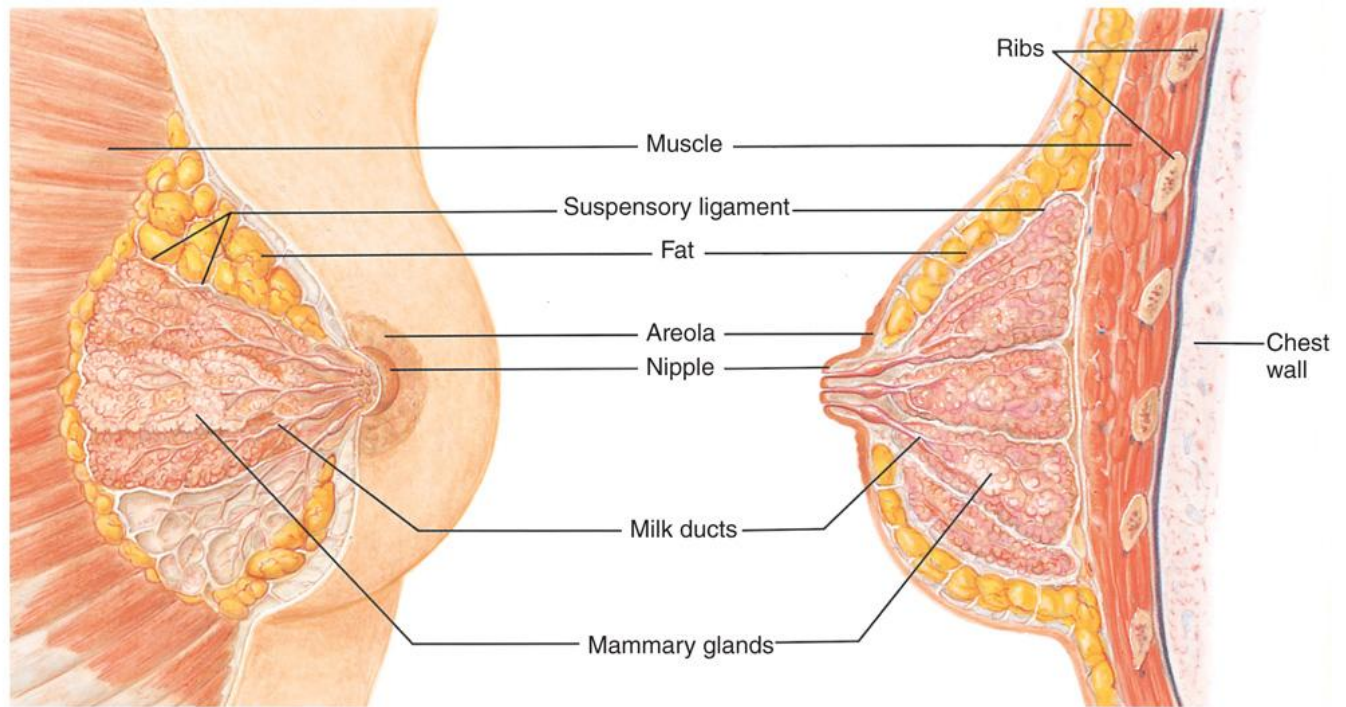


Female secondary sexual characteristics emerge after puberty:

Widening of Hips and Pelvis - Accommodates giving birth, but also results in downward shift in center of gravity.

Enlargement of Breasts - At puberty both the glandular and fatty tissues of the breasts develop considerably.

Differences in breast size between women are primarily due to differences in the amount of fatty tissue. It is also not uncommon for one of a woman's breasts to be slightly larger than the other. The glandular tissue of the breasts responds to sex hormones, and the breasts are involved in a woman's sexual arousal. The glandular tissue produces milk toward the end of pregnancy and after childbirth in response to hormone levels. Breast augmentation is common in the United States (200,000 women per year), but so are side effects (73%). Side effects include infection, painful scar tissue around the implant, and implant leakage (15% rupture within ten years). These side effects cause as many as 27% of those who get implants to have them removed within three years.



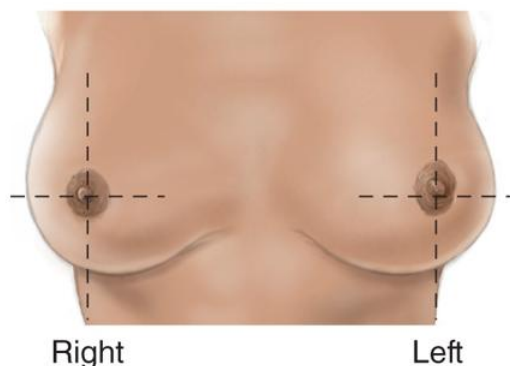
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Fill out a chart, like the one shown here, when you examine your breasts. For any lump you find, mark

1. its location
2. its size (BB, pea, raisin, grape)
3. its shape (rounded or elongated)

Compare each record with the last one, and consult your health practitioner regarding any changes. A new or changing lump should be checked as soon as possible. Most such lumps will prove to be benign.

Today's date _____



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Additional Female Characteristics:

Generally shorter than men.

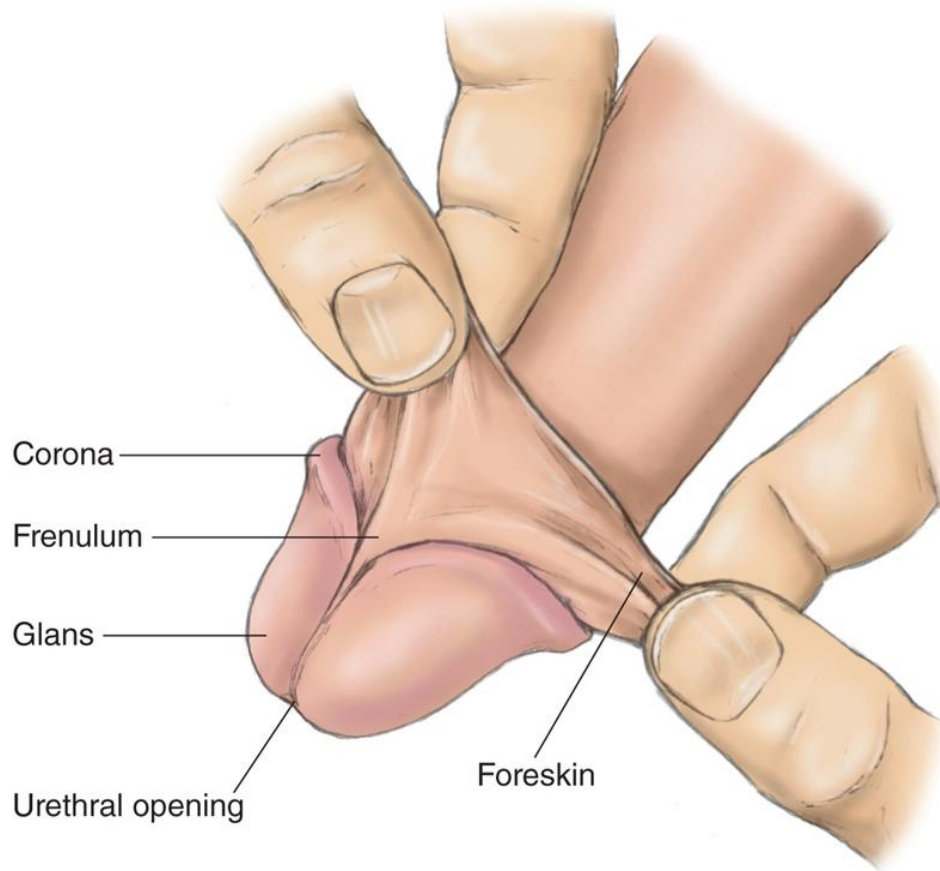
Greater proportion of body weight composed of fat than men.

Two X chromosomes reduces expression of many sex-linked conditions.

Lower mortality rate at every age, and longer projected lifespan than men.

Adult Male Sexual Anatomy and Physiology

Ultimately the male sexual anatomy is designed for the production and delivery of sperm for fertilization of the female's ovum. [Puberty](#) signals the final development of primary and accessory organs that support reproduction.



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The [male external genitalia](#) consist of the following:

Prepuce - Foreskin covering head of penis. Removed in male circumcision.

Penis - Glans (head), Shaft, and Root. The glans is particularly sensitive to stimulation. Running the length of the penis is the urethra surrounded by the spongy body, and two cylindrical chambers known as the cavernous bodies. During arousal these become engorged with blood, resulting in erection.

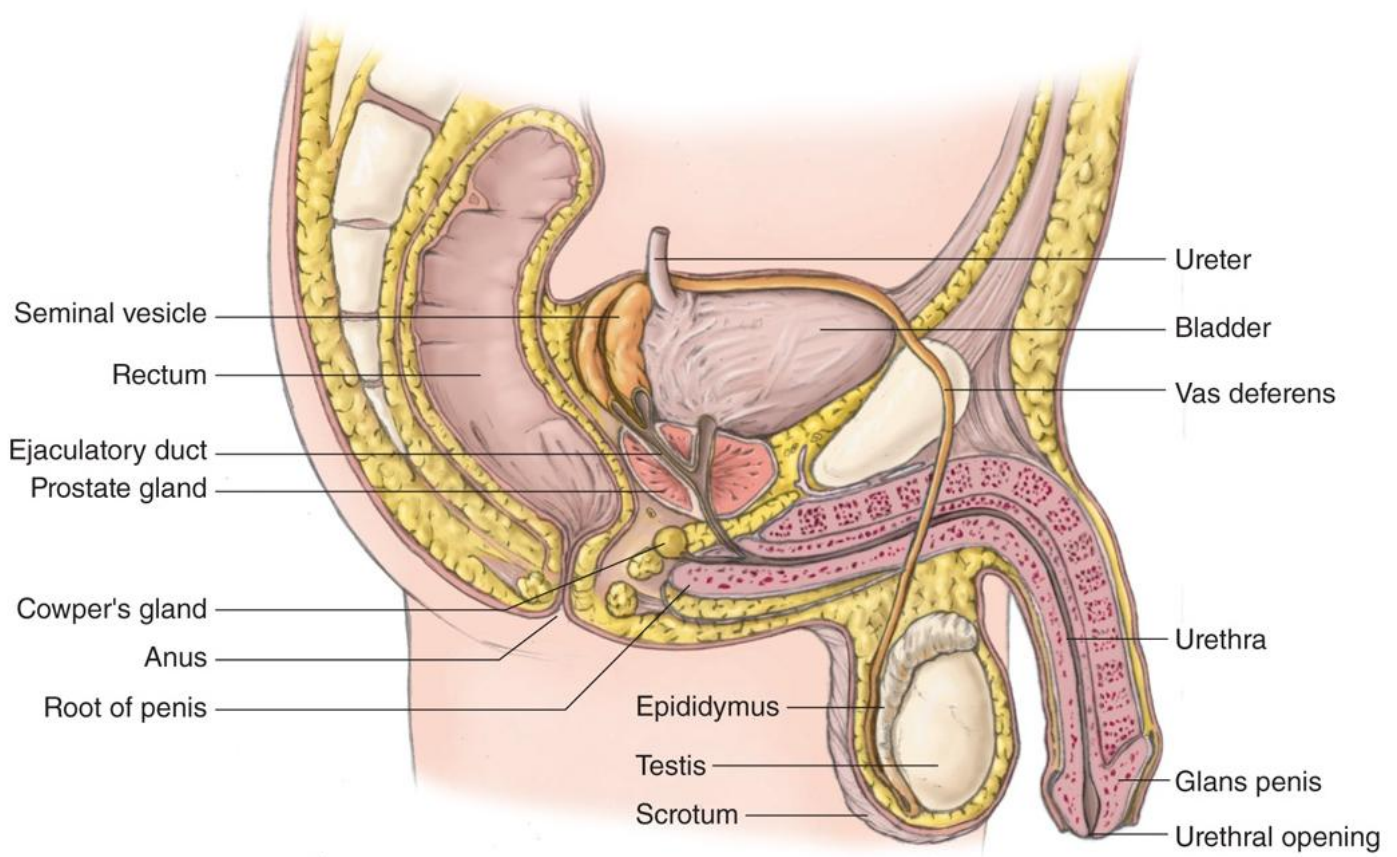
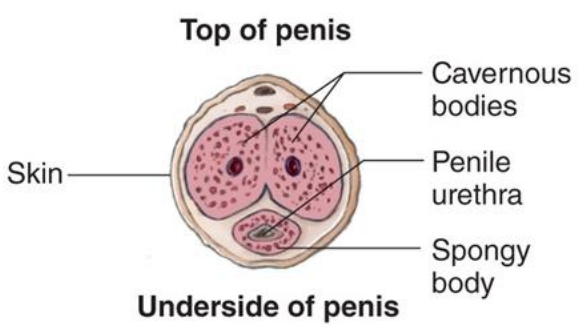
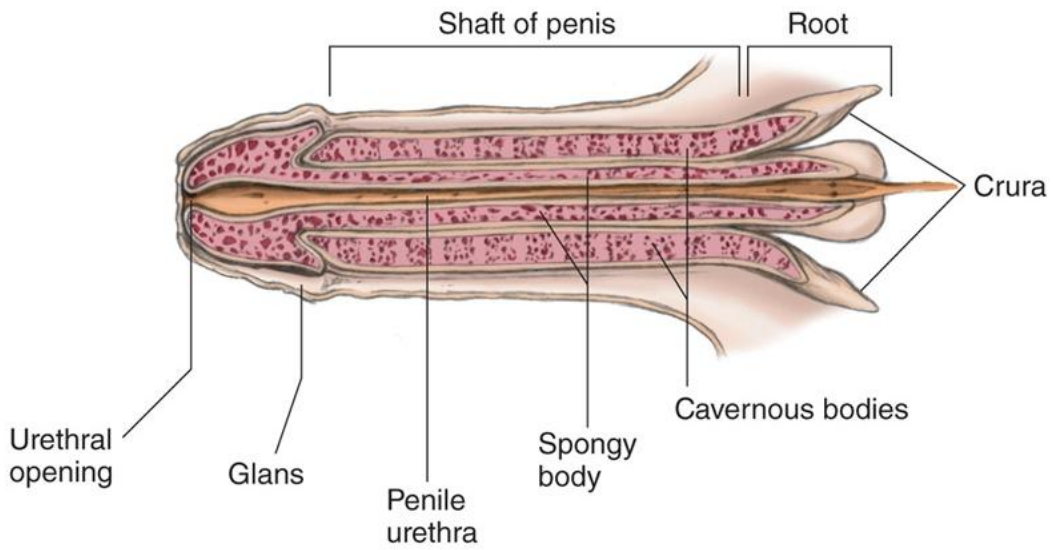
Corona - Rim of Glans where it arises from shaft.

Frenulum - Thin strip of skin connecting glans and shaft on underside of penis.

Scrotum - Sac that encloses the two compartments housing the testes.

Urethral Opening - Found on head of penis this is the end of tube connected to bladder and used for urination. It is also tube to which internal structures deliver semen by which male ejaculates.

Perineum - Area of skin separating the genitalia from the anus, distance is greater in males than females.



The [male internal reproductive structures](#) consist of the following:

Testes - Produce androgens, particularly large quantities of testosterone, which greatly influence male development and drive sexual motivation. Also produce sperm cells in virtually unlimited quantity over the entire course of the lifespan.

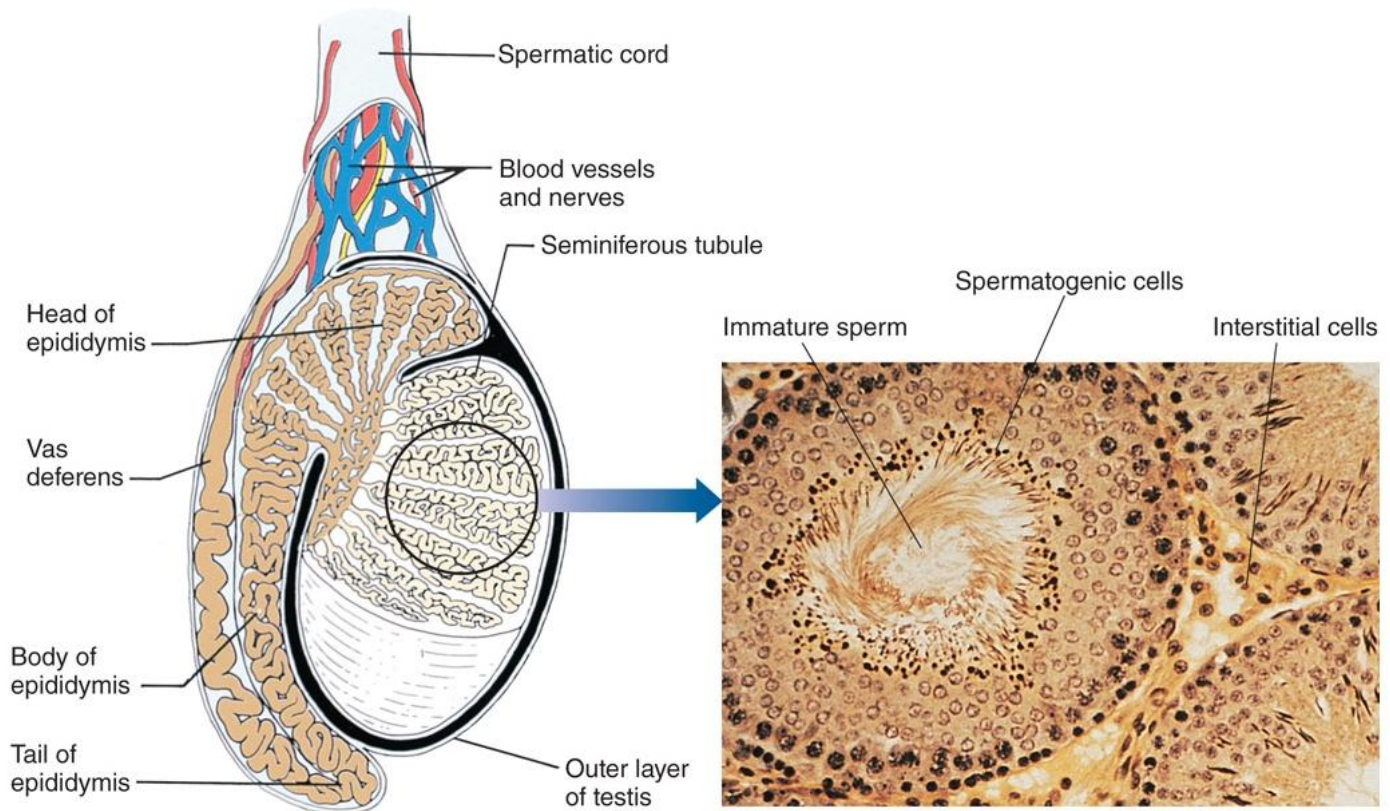
Vas Deferens - Travels from testicle toward urethra carrying sperm.

Seminal Vesicles - Two glands that produce alkaline fluid rich in fructose sugar, comprising some 70% of semen volume. Alkaline nature may stimulate sperm to start self-propulsion and sugar may provide sperm nutrients. Ducts carry fluid and connect with Vas Deferens forming Ejaculatory Ducts.

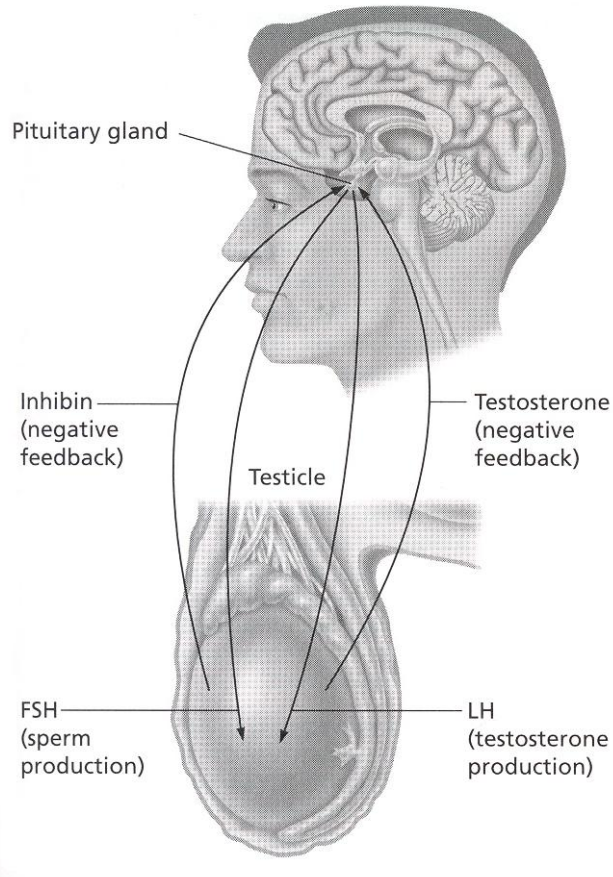
Ejaculatory Ducts - Connect Vas Deferens to Urethra.

Prostate - Gland producing alkaline secretions that account for about 30% of semen volume. Alkaline nature may help counteract otherwise acidic environment of urethra and vagina making them more hospitable for sperm. Fluid passes through series of ducts along wall of urethra.

Urethra - Tube within Penis that carries sperm and semen the rest of the way to the opening of the penis.



Male Brain-Pituitary-Gonad Negative Feedback Loop



Male secondary sexual characteristics emerge after puberty:

No monthly cycle (but evidence of seasonal fluctuations with lower levels of testosterone in spring), elongation of vocal cords (lower voice), broader shoulders and deeper chest cavity.

Additional Male Characteristics:

Generally taller and greater proportion of body weight composed of water.

Proportionately larger heart and lungs, presumably to handle greater blood fluid volume.

Exposure to greater levels of testosterone results in heavier body and facial hair, but also increased frequency and degree of baldness.

Single X chromosome results in sex-linked conditions such as colorblindness and hemophilia.

[Male Circumcision](#)

Phallic Myths

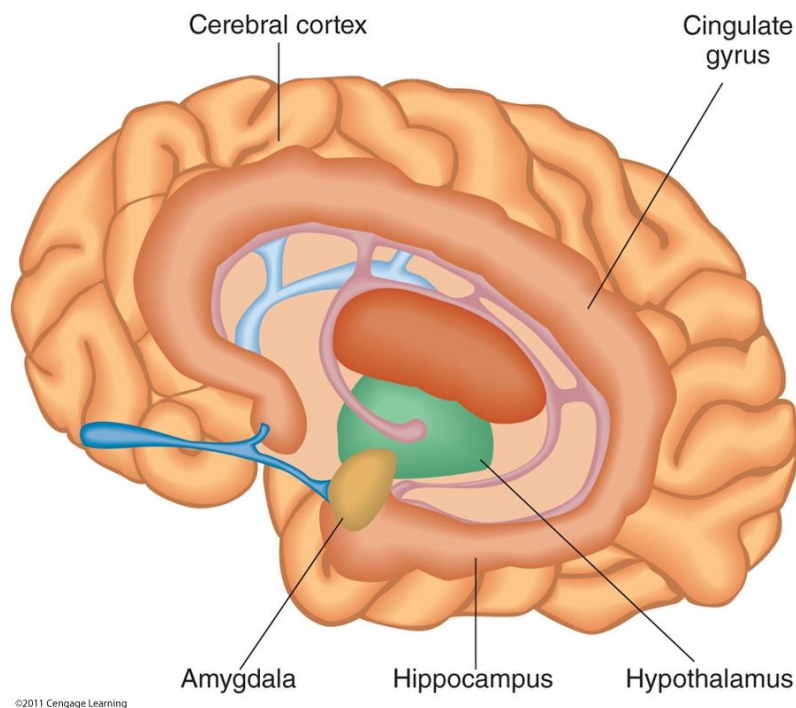
Table 2.1 PHALLIC FALLACIES: COMMON MYTHS ABOUT PENIS SIZE

FALLACY	FACT
Penis size increases with frequent sexual activity and decreases with lack of sex.	Penis size changes only temporarily with sexual activity, during erection.
Penis size can be increased with exercises, pumps, or surgery.	So far, no proven method exists for increasing penis size. Exercise of the penis (whatever that might be) does nothing for size; penis pumps simply draw blood into the penis, which makes it appear bigger temporarily as with an erection. No surgical technique has shown consistent enough results to be approved by any professional medical association (no matter what you see online), and some can cause serious deformities.
Erect human penises have been documented from 1 inch to 18 inches in length.	A rare congenital (inborn) disorder called <i>micropenis</i> , usually requiring surgical intervention, may cause a penis to be an inch or less in length. However, nothing close to a penis 18 inches long has ever been documented. Overall, erect penises are between 5 and 7 inches long, and average about 5 ¹ / ₂ inches.
A small flaccid (unerect) penis predicts a small erect penis.	Actually, the opposite is usually true. Research has shown that smaller flaccid penises tend to grow more than larger flaccid penises upon erection. There is a significantly greater range of lengths in flaccid penises than in erect penises, which is why some analysts have called erection "the great equalizer."
The size of a man's penis can be predicted from other physical characteristics.	This has no basis in scientific fact. Contrary to popular belief, penis size is not meaningfully related to overall build, height, nose size, foot size, middle finger size, race, or ethnicity. The only possible predictor of a man's penis size might be the size of his father's penis.
Large penises provide greater sexual satisfaction for a partner during intercourse.	In heterosexual intercourse, nearly all of the pleasure nerve endings in the vagina are located along the outer one-third of its length (the portion closest to the opening). Moreover, the vagina is a very elastic structure that can accommodate a penis of any size. Penises of any length are able to reach this part of the vagina. Also, for both gay and straight couples, depth of penetration depends more on sexual position than on penile length.
Most partners prefer larger penises.	Actually, most partners of men don't think or care very much about penis size. Men are much more concerned about their own penis size than their partners are. In fact, some people worry more about a partner with a very large penis than a smaller one in terms of comfort during penetration.

Sexual Arousal and Response

How and Where is the [Sexual Response](#) Experienced? The answer to this question is one of the central reasons why this is a psychology course. To have a conscious experience of anything the associated sensations, no matter how stimulated, must reach the brain. In that sense human sexuality is very much like any of a number of other forms of sensation and perception. Sensory receptors located in the skin of the genitals become stimulated and messages are sent to the somatosensory cortex of the brain and to various pleasure centers in the limbic system. Other associated sensory inputs also come into play (various sights, sounds, smells, tastes, and tactile stimulation of other areas of the body) and are registered in other regions of the brain and cortex. This combination of activity is interpreted and perceived first as sensual in nature, and ultimately as sexual pleasure. The brain responds by sending signals to the various glands and other organs associated with sexual activity, directing further changes in blood flow and release of various secretions. This sexual response feedback cycle gains strength and spirals until orgasm (or some other event) completes the cycle and the resolution phase is initiated. Thus, it is in the brain that the sexual response is actually experienced.

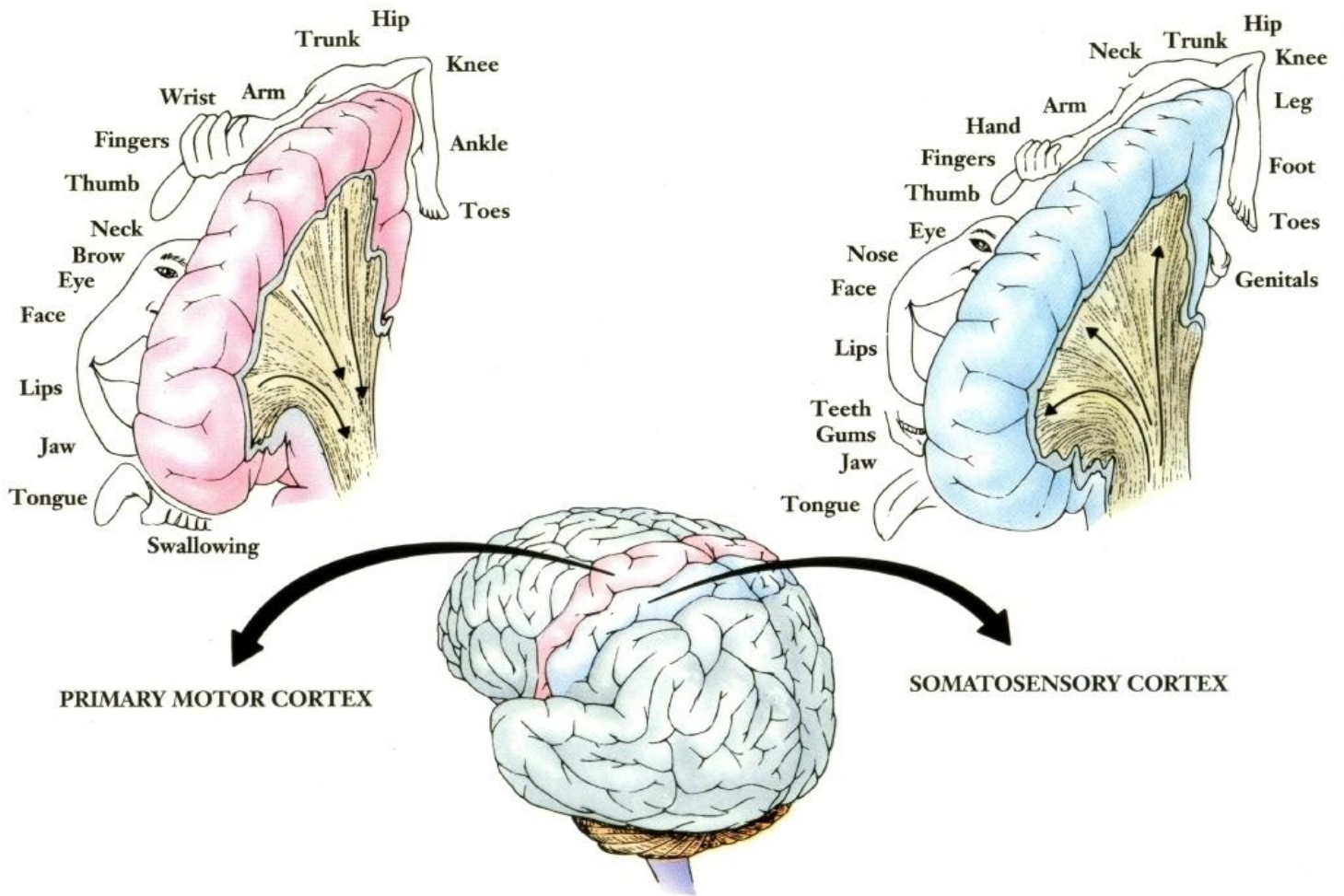
Hypothalamus - The medial pre-optic area (MPOA) of the hypothalamus in particular is implicated in sexual arousal and sexually motivated behaviors. The neurotransmitter dopamine induces neural activity in the MPOA and facilitates sexual arousal and response in males of numerous species. The neural transmitter serotonin tends to regulate dopamine activity. In this case it seems to inhibit sexual activity. Serotonin may also suppress arousal by blocking the action of oxytocin (a neuropeptide hormone produced in the hypothalamus) linked to sexual attraction, arousal, and other behaviors including 'bonding'.

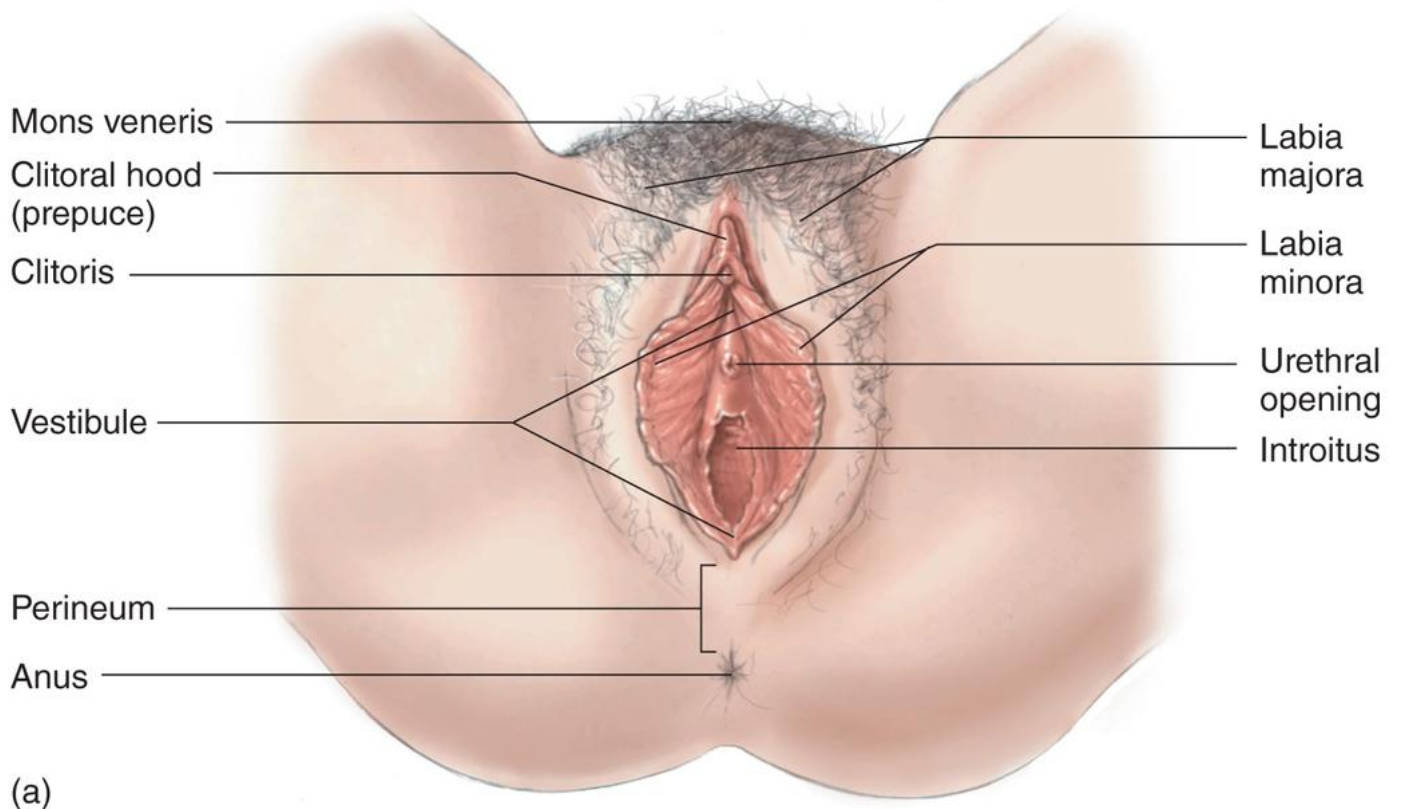


Adrenal Glands - The adrenal glands of both sexes also produce lesser amounts of the various sex hormones. A woman's ovaries and adrenal glands both produce an equal amount of androgens. In the male only 5% of the total amount of androgens are produced by the adrenal glands, the rest being produced by the testes. Overall, an average male produces somewhere between 20 to 40 times as much testosterone as an average female. In both sexes, levels of testosterone are involved in the initiation of sexual motivation.

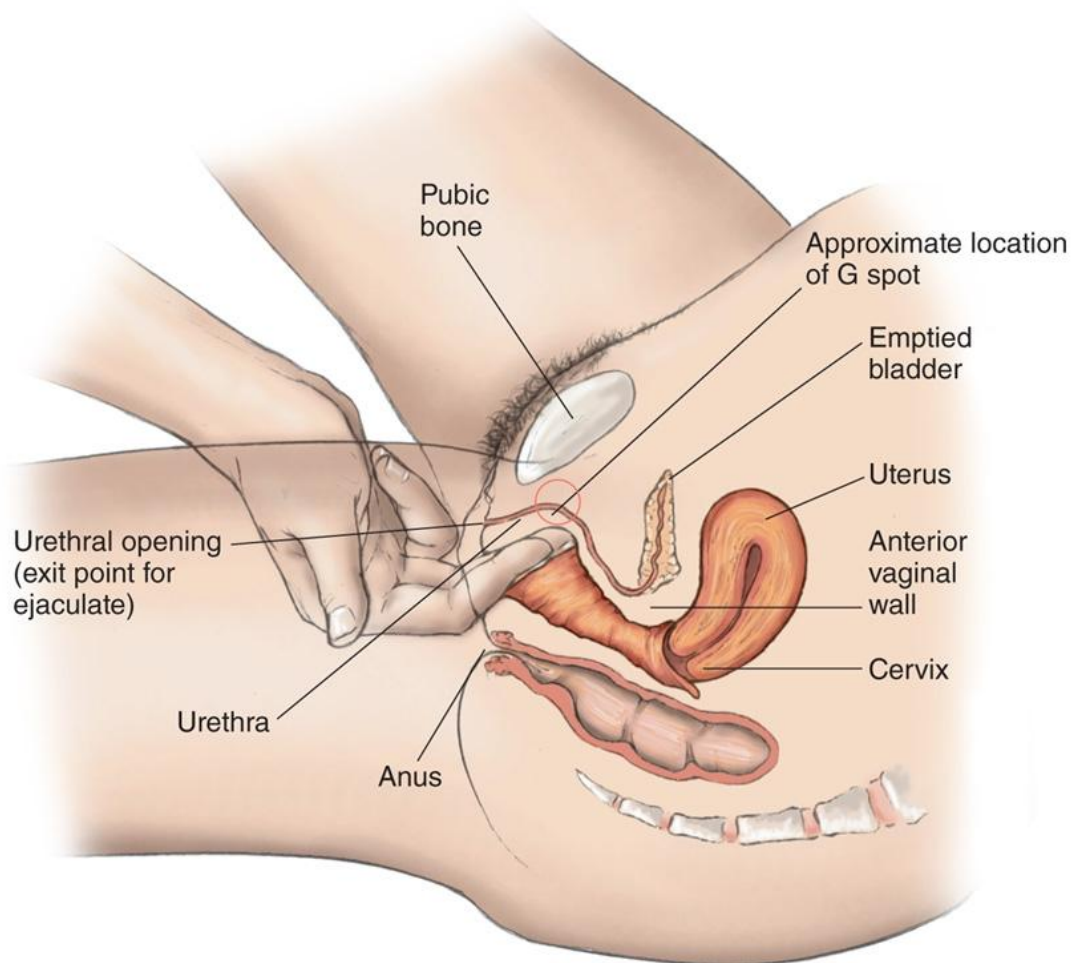
Sensation and Sexual Arousal: Although all of the senses can influence and facilitate sexual arousal, tactile stimulation seems to play a primary role.

Organization of the Primary Motor Cortex and Somatosensory Cortex





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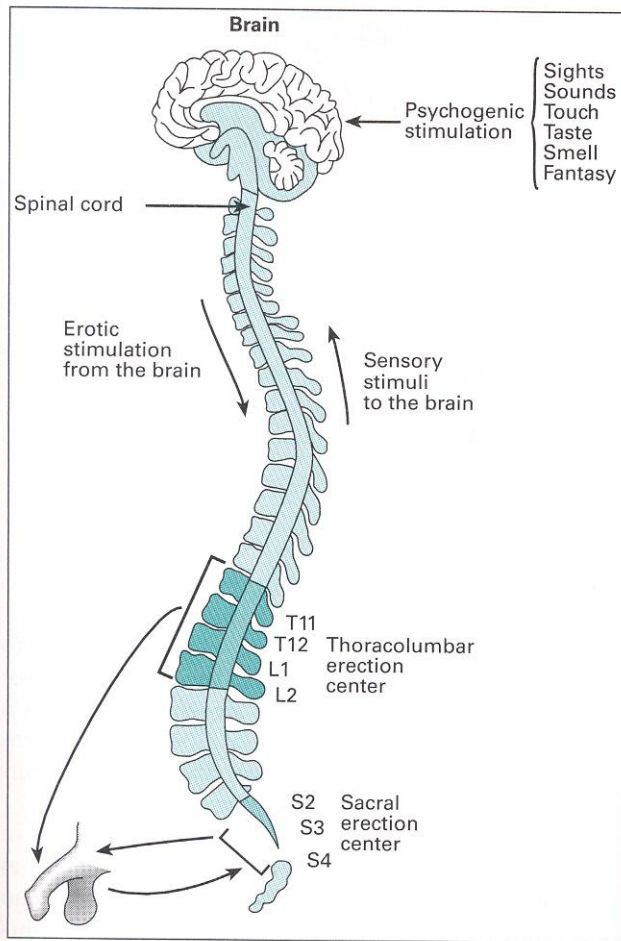
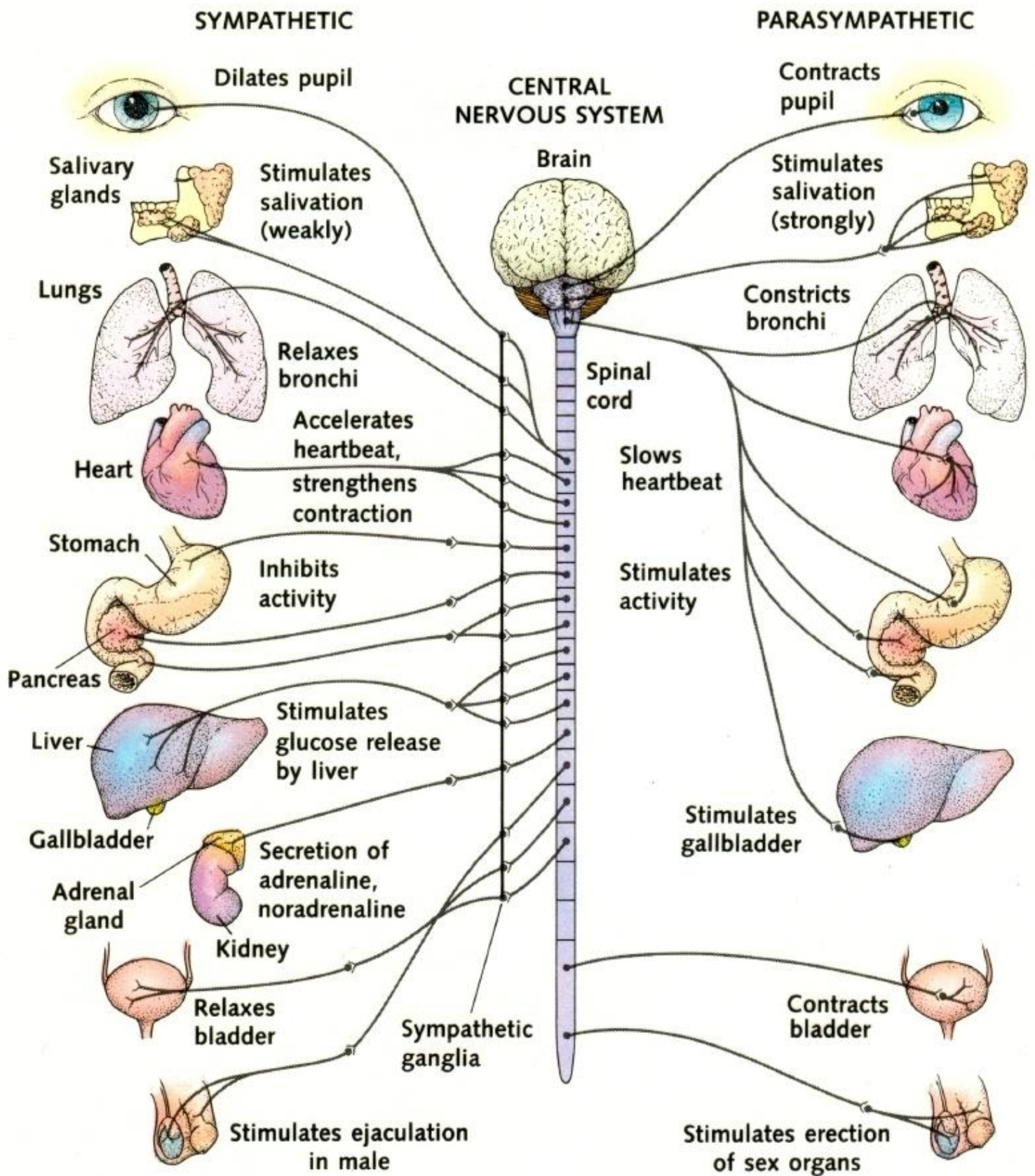


Figure 4-2 Neural mechanisms involved in an erection.

The Autonomic Nervous System



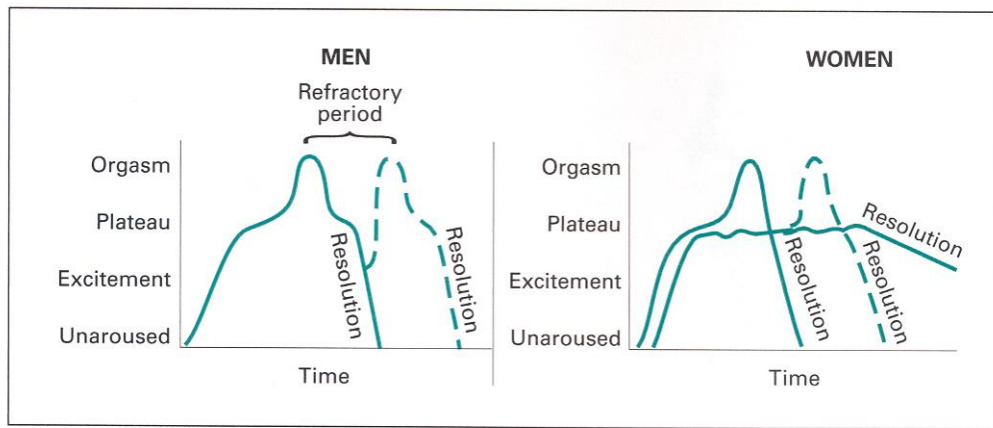


Figure 4-5 Variations in the male and female sexual response cycle.

Sexual Response Pattern: There are a number of differences between the female and male sexual response. *Females do not necessarily reach orgasm* during sexual intercourse or other sexual activity. However, females are capable of *multiple orgasms* in rapid succession. *Males almost always achieve orgasm* during intercourse, and usually as a result of other sexual activities as well. Males require a *refractory period* after orgasm before they're ready to resume sex. This male refractory period is common to virtually all species for which there is data. The exact mechanism is unknown. We do know that serotonin (which generally inhibits sexual arousal and activity) is released in the MPOA and lateral hypothalamus when a male ejaculates. And there is evidence that the ventral medial lemniscus, which lies along the neural pathway between the midbrain and the hypothalamus, may govern the male refractory period.

Sexual Difficulties and Treatments

There's a lot involved in sexual arousal, response, and performance both physically and psychologically. It's not surprising that a person may have difficulties with one or more aspects of his or her sexual activity. Those problems may be transient or long-term, situation specific or global, physical or psychological, and may or may not be age related. However, a sexual difficulty need not hinder an individual or ones' partner from [enjoying satisfying sexual activity](#). There are treatments for virtually every sexual disorder, and finding that ways to adjust sexual activity to minimize the impact of the problem. Higher education is correlated with fewer sexual difficulties (NHSLs, 1994). This may stem from a greater interest or capacity for learning that extends to all aspects of life, including sexuality. Perhaps it is because educated people are more likely to try to understand and deal with problems. When it comes to sexual difficulties, the more you know the better. Those who are better informed have a higher awareness of the options available to them. We'll examine the specific aspects of certain sexual difficulties, but also the factors that may cause or contribute to them, and the various treatments available.

Common Sexual Difficulties: NHSLs (1994) found 33% of women and 16% of men to have experienced periods of reduced sexual desire. These percentages are fairly consistent across the range of ages from 18 to 59. Quite simply some people are just not all that interested in sex. The most common functional problem cited for women was lack of orgasm (24%), while for men it was premature orgasm (29%). Yes, there does seem to be a certain logical relationship here, but it has not been directly investigated. Other common problems for women include lack of subjective psychological and emotional feelings of arousal, overall lack of physical arousal, lack of vaginal lubrication, and pain during intercourse. For men erectile dysfunction (ED) is also a fairly common problem, generally increasing with age. And for some men the inability to reach orgasm (ejaculation) is also a problem. However, inability to achieve orgasm affects roughly three times as many women as men. Problems hindering sexual functioning can be organic, cultural, individually based, or interpersonal in nature.

Organic Factors Affecting Sexuality: Sexual difficulties often are linked to disturbances in vascular, endocrine, or neurological systems. The addition of psychological stress can magnify any of these problems. In all of these cases it is important to accept one's limitations, then explore and develop options for sexual expression. Good communication between partners is essential for developing optional strategies.

Obesity - Healthy diet, exercise, and normal weight are essential for optimal physical function, including sexual activity. Body fat, especially belly fat, reduces testosterone levels in men. One study found obese men were 90% more likely than average to develop erectile dysfunction. Men who regularly exercised a good deal were 30% less likely to develop erectile dysfunction (Bacon, et al., 2006). On the other hand, exercise can have adverse effects. In general, if one hasn't been particularly active for a while it's advisable to ease into an exercise program. Otherwise one could risk injury or even cardiovascular problems. For men, [bicycle seats](#) can put pressure on the genitals and surrounding nerves affecting sensitivity and performance. For women excessive exercise resulting in below average weight can result in amenorrhea (disruption or absence of menstruation). It should also be noted that obesity is often linked to other conditions such as cardiovascular problems and adult onset diabetes, which also adversely affect sexual function.

Advanced Age - This in itself can decrease one's capacity for arousal, circulation, and stamina. A decrease in any of these can adversely affect sexual responses. In addition, age can increase the likelihood, and exacerbate the effects, of any other conditions that may already be affecting sexual responses. That's not to say the elderly can no longer have or enjoy sex, but that they may have to adjust their behavior to accommodate the limitations that come with age.

Hypertension and Arteriosclerosis - Both adversely affect circulation and may result in male erectile dysfunction. These conditions may lead to *strokes*, which often decrease sexual interest, arousal, and activity particularly if there is a loss of mobility or coordination (Monga & Kerrigin, 1997).

Diabetes is a leading cause of erectile problems in men due to nerve damage or circulatory problems (Hakim & Goldstein, 1996). Some also experience retrograde ejaculation into the bladder. Heavy or chronic alcohol abuse and poor blood sugar regulation increase the likelihood of these problems.

Arthritis pain and associated fatigue, depression, or body image problems can reduce interest in sexual behavior (Nadler, 1997). Joint impairment can interfere with certain sexual positions (Renshaw, 1995).

Cancer and its treatment can disrupt many bodily functions, cause body image problems, and reduce sexual interest or response (Incrocci, 2006; Waldman & Eliasof, 1997). Cancers of the reproductive organs often have the worst impact.

At least one half of *multiple sclerosis* patients have sexual problems (Stenager, et al., 1990), often related to sensory losses (Smeltzer & Kelly, 1997).

Those with *cerebral palsy* often have problems due to severe involuntary contractions of muscles that can interfere with the coordination of sexual activities.

Spinal cord injury does not necessarily affect desire or psychological arousal, but it may impair erectile function and ability to experience orgasm (Alexander & Rosen, 2008). For women it's possible that the vagus nerve (normally relays sensations from some internal organs including the uterus) may provide an alternate pathway from the vagina and cervix to the brain, bypassing the spinal cord route (Whipple & Komisaruk, 2006).

Medication and Drugs - Medications used to treat mental illness such as certain antidepressants, anti-psychotics, and minor tranquilizers (Valium and Xanax) have various effects on arousal and the sexual response. But the most common effect for both men and women is an inability to achieve orgasm. Antidepressants of the Selective Serotonin Reuptake Inhibitor (SSRI) class were developed in the late 1980s through the 1990s. Six are now available, with fluoxetine (Prozac) and sertraline (Zoloft) being the most well known. By inhibiting the reuptake of serotonin, more of the neurotransmitter remains active. Recall that the role of serotonin in the sexual response pattern is to inhibit arousal, especially after orgasm. These drugs may work on that mechanism by increasing serotonin levels thereby inhibiting arousal or delaying orgasm. Anti-psychotics typically work by blocking the action of dopamine, which normally plays a key role in sexual arousal. The minor tranquilizers increase activity of the inhibitory mechanisms (GABA receptors) within the brain, including those inhibiting sexual arousal and response. Other medications such as anti-cancer medications, anti-hypertensives, gastro-intestinal medications, antihistamines, and methadone can all adversely affect sexual functioning. Recreational drugs, most notably alcohol, [tobacco](#), marijuana, barbiturates, cocaine, and amphetamines can all affect sexual response. Generally, sedatives have greater effects on arousal, while stimulants have greater effects related to achieving orgasm. Chronic abuse of some drugs can lead to long-term dysfunction.

Cultural Factors:

Rigid and orthodox religious upbringing *equating sexuality with sin* can result in feelings of shame and guilt, while increasing sexual inhibitions. *Narrow definitions of sex* focusing on intercourse end up decreasing appreciation for other aspects of sensuality and sexual expression. Again the NHSLS (1994) found higher *education levels* to be correlated with fewer sexual problems. Those who are better informed have a higher awareness of the options available to them, and perhaps a greater openness to explore them.

The tradition of a *double standard* regarding the sexual practices of males and females, especially in the U.S., causes disproportionate *inhibitions in women* and over-emphasis on performance in men. *Performance anxiety in men* is even more of a problem in modern times, now that the woman's sexual satisfaction is considered to be as important as that of the male. So while males are allowed more freedom to have sex, they're now expected to also be good at it. Often a vicious cycle can develop, wherein performance anxiety diminishes appreciation of pleasurable sensations that would normally enhance performance (Rowland, et al., 1996). Patterns can become established from what would otherwise be only minor transitory problems due to occasional stress or fatigue. It is ironic that the double standard no longer works to anyone's advantage, yet it persists.

Individual Factors:

Knowledge, Attitudes, and Emotions - Accurate information, higher education level, higher self-esteem, communication skills, and the ability to focus attention on sexual sensations all serve to enhance one's sexual expression and experiences. A relaxed attitude, being comfortable during intimacy is beneficial. People who are uncomfortable with their bodies, either with their sensations or appearance, are likely to have sexual problems. Women seem to be more affected by negative feelings about their bodies. Consider what they see in the media. A typical female model weighs 23% less than the average American woman (Jeffrey, 2006). If that's the standard they judge themselves by, no wonder they have reservations about their appearance. If nothing else these concerns can distract one from experiencing the pleasurable aspects of sexual activity. People who are better at identifying and managing their emotions, can relax, be playful, and relinquish control tend to have more frequent and satisfying orgasms, better sex in general. *Emotional difficulties* often reduce self-esteem, or generate anxiety about intimacy, and so affect sexual functioning. And these difficulties need not be related to sexuality to have an effect on sexual activity and enjoyment. For instance lack of sexual interest and response is common with depression (again serotonin plays a role).

A *history of sexual abuse* is tied to a negative effect on adult sexuality more than any other childhood experience. Childhood sexual abuse accelerates sexual development beyond what victims are capable of dealing with and results in physical and emotional stimulus overload. As adults they experience sexual inhibition, fear, and avoidance. Those

committing the abuse are often within, or close to, the family. Because of this there are more far-reaching effects on trust and ability to form close or intimate relationships in general. NHSLS (1994) reports 12% of men and 17% of women in the United States had experienced childhood sexual abuse of some kind. That's more than the entire population of California.

Sexual assault in adulthood subsequently has a negative impact on desire and arousal, as well as generating fear responses to sex. More than one half of victims report persistent sexual problems (extending three or more years after the incident). Unfortunately, the availability of counseling is often tied to reporting the crime, which many are not inclined to do (especially because there is still a tendency to blame the victim).

Interpersonal Factors: Overall health of a relationship can greatly affect the expression of, and degree of satisfaction experienced from, the sexual aspects of that relationship.

Unresolved relationship problems are going to undermine feelings of trust, loyalty, attraction, and arousal. At the same time they may add feelings of resentment, dislike, or fear. Taken together, this mix of feelings is not going to make any interaction within the relationship very comfortable, and may be particularly disruptive to the sexual aspects of the relationship. *Manipulating sex to gain control* over other aspects of a relationship generally diminishes the pleasurable aspects for one or both parties. Withholding sex from one's partner, or forcing sex on one's partner, is going to lead to feelings of frustration and anxiety. Such practices may also establish patterns that lead to abuse.

Ineffective communication can lead to dissatisfaction, frustration, and resentment. The "If you really loved me, you'd know what I want." concept can be a real stumbling block. Along with this concept is the mistaken idea that part of the male role is to be the initiator and director of the sexual encounter (perhaps an offshoot of the double standard which would assume more previous sexual encounters on the part of the male). [After the fact criticisms](#) are generally not productive. Sex needs to be viewed as *a shared experience*. That means both parties are free to express wants and desires, and to do so openly *during* sexual encounters. Guessing games based on unfounded assumptions about the skill or experience of one's partner is simply not the way to go. Faking orgasm is just another form of poor communication. One survey found that 60% of heterosexual women faked orgasm on occasion. Although you may want to avoid disappointing or hurting your partner, you're providing misinformation. And the result is that your partner will continue to do what he or she was erroneously led to believe was effective. So it may become rather circular.

Concerns regarding pregnancy affect sexual arousal or satisfaction. Fear of getting pregnant, or getting someone pregnant, is one side of this. [Yes, there are some men who care enough to be concerned about getting the woman pregnant.] No temporary form of birth control is absolutely (100%) effective, but the realistic probability is very low for several forms and shouldn't be a major cause for anxiety. On the other side of this is the desire to conceive a child. Especially if there is some difficulty (infertility problems), sexual enjoyment may be curtailed. Necessary aspects of timing and positioning can interfere with spontaneity and arousal. It's advisable to avoid making every sexual encounter a part of "the mission."

Fears of sexually transmitted disease or AIDS are not conducive to enjoyment of sexual encounters. Both parties need to feel secure with regard to the real possibilities of this happening. This means agreeing on the number and nature of safeguards to be taken. It may also mean openly discussing past, and present, sexual encounters outside of the relationship. And it may also entail getting regular checkups to insure good health.

Sexual Orientation in and of itself is not a problem if one is expressing it. However, many attempt to hide, deny, or change their sexual orientation. Homosexuals are not going to get, and may not give, that much satisfaction in a heterosexual relationship. But they may well persist in trying to make such relationships work, rather than deal with some of the cultural artifacts still tied to homosexuality. The old adage, "*To thine own self be true*" has particular relevance in this regard.

Specific Sexual Difficulties: Some problems are fairly general and may affect men and women, though perhaps differently. Other sexual difficulties are rather specific to one sex or the other. In most cases therapy involves, at least in part, increasing awareness of one's own body and sexual response.

Hypoactive Sexual Desire Disorder (HSDD) - Defined as the absence or diminished experience of sexual thoughts, fantasies, and interest prior to sexual activity as well as lack of desire during sex. In other words, sex just isn't a major concern, nor much of a turn on. This is the extreme form, some people have little interest in sex, and seldom initiate it, but once engaged they are receptive. In either case, increasing awareness of one's own body can increase comfort with sexuality.

Desire Discrepancy - Bad timing and disagreements concerning preferred activities between partners. The Global

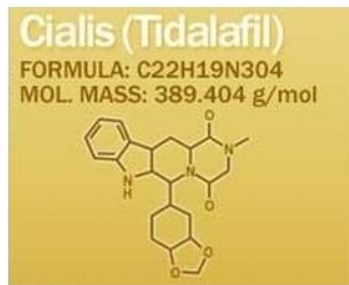
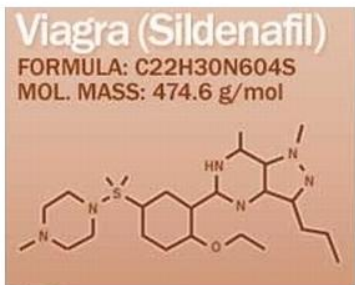
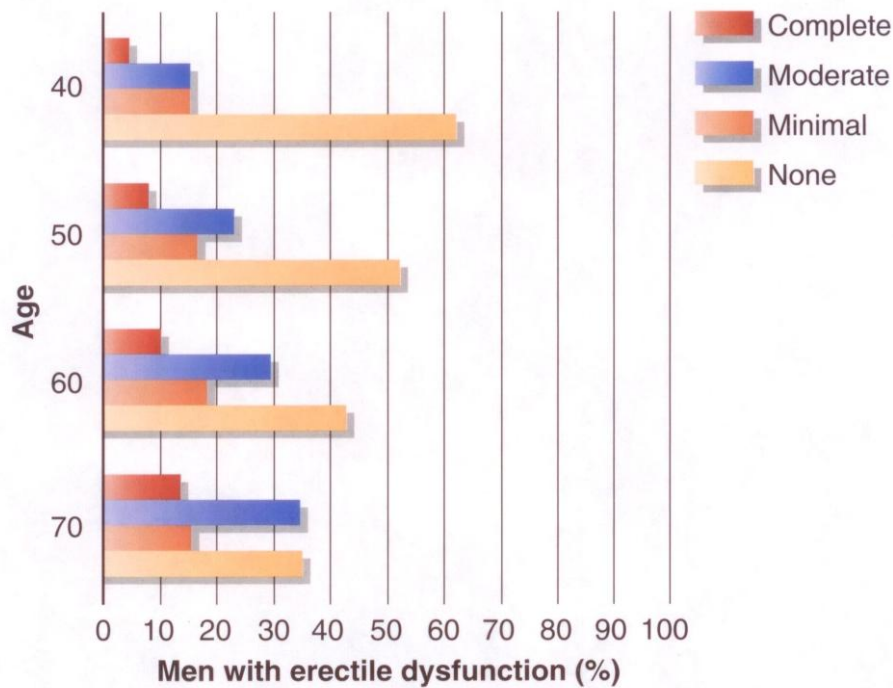
Sex Survey reported 41% of men and 29% of women want more frequent sex (Durex, 2006). Compromise is the best solution, not accusing and blaming the other person for being uninterested or overly demanding.

Sexual Aversion - A compelling desire to avoid sex due to feelings of discomfort, disgust, repulsion, or even an irrational fear of sexual activity. Like other phobic reactions it may be tied to some traumatic event, such as being scolded as a child for masturbation or related sex play, or perhaps stemming from sexual abuse or assault. A form of systematic desensitization therapy may be appropriate. This is not to be confused with normal levels of excitement and arousal that may be associated with sexual encounters.

Female Sexual Arousal Disorders - Female genital arousal may be impaired resulting in an inability to attain or maintain normal vaginal swelling and lubrication. The subjective experience of excitement or pleasure is absent despite the presence of physical arousal. So in the latter case they're responding physically, but not emotionally. And it's also possible for women to experience both forms of arousal disorder in combination. Therapy may again involve increasing awareness of one's own body so as to increase comfort with sexuality.

Male Erectile Disorder or Dysfunction (ED) - Consistent or recurrent inability to have or maintain an erection lasting three months or more. Tied to cardiovascular health, the incidence of [erectile dysfunction](#) increases with age.

Estimated Prevalence and Severity of Erectile Dysfunction Across Age Groups



Treatments for erectile dysfunction range from therapy to alleviate performance anxiety, to medications aimed at improving blood flow to the penis, to surgical treatment. Use of ED medications has become widespread since the introduction of Viagra in 1998, Levitra in 2003, and Cialis in 2004. Herbal supplements claiming to have similar effects are also available. All three drugs prolong the vasodilator effects of nitric oxide in the body, expanding the blood vessels of the penis, which increases blood flow and allows erection. All three also have side effects, the most serious of which are priapism (an erection that does not subside and may cause permanent damage) and adverse effects

on vision that may be irreversible. These drugs are also being used by those without ED to enhance sexual arousal and performance. And that includes women, after all these drugs can increase blood flow to female genitalia just as well as a male's. Surgical treatments entail insertion of either semi-rigid or inflatable rods into the cavernous bodies of the penis.

Premature Ejaculation - The most common male sexual difficulty, experienced by approximately 22% of sexually active men. Contributing factors include underestimating the intensity of arousal, rapid high arousal, or ejaculating before reaching full arousal. The result is an inability to delay ejaculation and a pattern of quick and rapid ejaculation. A number of treatments are behavioral. These include practice, as those who have more frequent orgasms by whatever means can learn to delay ejaculation. Another option is continuing sexual interaction after the first ejaculation, having intercourse again when the man regains an erection. Most men do not ejaculate as readily on subsequent attempts. Changing positions is also helpful, with the best control associated with the man lying relaxed with the women on top. It may also help to slow down or pause during intercourse to temporarily reduce stimulation. Finally, it may be useful to remember that intercourse is just one option. Thus, the male may bring his partner to orgasm by stimulation of the clitoris or G-Spot before intercourse, so it may not matter if it doesn't last all that long. Indeed, those other methods result in female orgasm more often than intercourse anyway. Finally, there are medical treatments. Reducing the sensitivity of the penis by applying a local anesthetic spray was found to extend time before ejaculation from an average of 36 seconds to nearly four minutes in one study (DeNoon, 2009). And small doses of Selective Serotonin Reuptake Inhibitors (SSRIs) may help to delay ejaculation by increasing available levels of serotonin.

Orgasmic Disorders - Absence, delayed, or diminished orgasm, despite subjective arousal and regardless of means of stimulation. About 5- 10% of women in the United States have never experienced orgasm. For many it's something they learn to do, perhaps trial and error until they hit upon what works for them. Nearly 62% of women in one study said they were 18 or older when they had their first orgasm (Ellison, 2000). It is also the case that more women actually experience orgasm from masturbation, manual stimulation by a partner, and oral sex than intercourse. For many, intercourse simply is not as effective as stimulation of the clitoris. Although orgasmic disorder happens to some men as well (retarded ejaculation), it is far less prevalent.

Dyspareunia - Painful intercourse. In uncircumcised males this can be due to tight foreskin, or an accumulation of smegma under the foreskin, or an infection beneath the foreskin. All of these can cause painful irritation during intercourse. Another problem affecting some men is Peyronie's disease. It is often initially caused by a traumatic bending of the penis, possibly fracturing the penis. Fibrous tissue and calcium deposits then develop in the space above and between the cavernous bodies of the penis. There is usually pain and curvature of the penis with erection.

In women dyspareunia can be due to inadequate arousal and lubrication of the vagina. Certain infections can inflame the walls of the vagina and produce pain during intercourse, as can certain chemical agents including condoms and contraceptive creams. *Vestibulodynia* may be the most common cause of painful intercourse affecting about 10% of women. It is due to a small reddened hypersensitive area near the entrance of the vaginal. Even light pressure may be painful. Topical anesthetics or surgical removal of the area is usually prescribed. Deep pain may be due to jarring the ovaries or stretching the uterine ligaments during particularly active sex. And infections in the uterus may cause pelvic pain (often the first physical symptom of gonorrhea). More generally, however, pain during sex usually decreases with age for most women. While one out of five women in their teens and early twenties report some pain during sex, less than one out of ten women at age fifty report pain during sex.








Vaginismus - Strong involuntary contraction of the muscles in the outer third of the vagina. This conditioned, involuntary response makes intercourse extremely uncomfortable. Most likely due to a history of painful intercourse this response is elicited by insertion of any thing into the vagina, including a finger. Note that having intercourse while trying to ignore the pain generally will not overcome the problem, but just make it worse as it simply strengthens the association between pain and anything inserted into the vagina. However, a woman can learn to override this response. Therapy usually involves the woman inserting subsequently larger objects into her vagina, one finger, then two, and then three while suppressing the response. This is followed by having her partner do the same. Once comfortable with that, intercourse may once again be attempted.



Therapy: For a number of these conditions behavioral therapy that increases self-awareness about one's body and sensuality is effective. Self-examination, masturbation, and various forms of touching and stimulation by one's partner can all be beneficial. However, keep in mind that certain behaviors may actually affect the sexual response adversely. In particular, certain forms of masturbation may reduce sensitivity. Men who masturbate too quickly or apply too much pressure, and women who routinely use vibrators may train their bodies to require that degree of stimulation in order to reach orgasm. It then becomes nearly impossible for intercourse, or anything else one's partner does, to

provide that degree of stimulation. So it's important to mimic conditions you're likely to experience with your partner in order to get the most out of those encounters.

Incidence rates for many forms of sexual dysfunction (e.g. lack of sexual interest, inability to achieve orgasm, erectile dysfunction, premature ejaculation, pain during sex) are all lower for those with higher levels of education. Presumably those with higher education are better at recognizing that there's a problem and figuring out the nature of the problem. And that may lead to open discussion and exploring ways of dealing with the problem.

Sexually Transmitted Infections

Common Infections	Cause	Symptoms	Effects/Frequency/Treatment	
AIDS/HIV	Human immunodeficiency virus (HIV)	May be asymptomatic for first 10 years; weakened immune system allows infection by opportunistic organisms; HIV remains in body for life; fatal	The most deadly STD: 5th leading cause of death in U.S. men and women ages 25-44. No cure or vaccine. AIDS, the disease caused by HIV, is virtually always fatal.	
Chlamydia	<i>Chlamydia trachomatis</i>	Within 5-10 days of infection, possible bleeding; pelvic pain; painful intercourse and urination; discharge. Up to 85% of infected women, 40% of infected men have no symptoms	The most common STD; serious threat to women for development of pelvic inflammatory disease (PID), leading to infertility, ectopic pregnancies. Easily treatable with antibiotics.	
Gonorrhea	Gonococcus bacterium	50% of infected men have symptoms, burning, discharge, swollen testicles; women often asymptomatic or symptoms mimic vaginal infection	Common and on the increase. In women, it can develop into pelvic inflammatory disease (PID). Treatment includes antibiotics and pain relievers.	
HPV	Human papillomavirus (HPV)	Most genital warts are not visible or symptomatic; can be uncomfortable and block vaginal, anal openings 2 to 3 weeks after infection	Each year 5.5 million new infections in U.S. Can be detected by specific medical tests. No cure, but can be treated with laser or cryosurgery or with interferon injection.	
Genital herpes	Herpes simplex virus (HSV)	Fever blisters, oral and genital; most of the time HSV inactive, then periodic outbreaks	Remain infected for life; no cure; antiviral drugs offer relief but not prevention.	
Syphilis	<i>Treponema pallidum</i> , a protist	After about 21 days after infection, sores (chancres) develop on genitals or mouth; develops through several stages to possible death if untreated	Bacterium remains in body, damages internal organs including brain, nerves, eyes; antibiotic therapy treats first two contagious stages.	
Trichomoniasis	<i>Trichomonas vaginalis</i>	In women, yellow-green malodorous discharge; vaginal irritation; men rarely have symptoms	A type of vaginitis, affects 3 to 5 million Americans each year; "trich" is the most curable STD in women; treatment of both partners with metronidazole, an antibiotic.	

Bacterial vaginosis (nonspecific vaginitis)	A change in balance of several bacteria, e.g. <i>Gardernella vaginalis</i> , lactobacillus	50% of infected people have no symptoms; others have fishy smelling discharge	Diagnosis based on presence of bacteria coating vagina walls; treat female with metronidazole or clindamycin.	
Pubic lice	Pubic lice	Severe itchiness in pubic area; fever; bluish rash	Highly contagious; lice cannot live more than 24 hours without a host; over-the-counter medications, repeated several times; clean all clothing, bedding.	
Scabies	Mites	Itchy rash with characteristic pencil-like lines; secondary skin infection can develop	Found worldwide, treatment with a mite-killing lotion (e.g., Kwell) and elimination of infestation in clothing, bedding.	