THEOLOGY I
HUMAN SEXUALITY SUPPLEMENT

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FEMALE PHYSIOLOGY

EXTERNAL GENITALIA AND SECONDARY SEX CHARACTERISTICS

PUBIC HAIR: A triangular mass of hair covering the mons pubis. The amount of and thickness of the pubic hair varies from person to person.

MONS PUBIS: A fatty pad at the top of the vulva; covered with pubic hair and susceptible to sexual stimulus.

VULVA: The word comes from the Latin root “covering”. The vulva is not one specific organ, but a collection of genital structures.

OUTER LIPS (Labia Majora)
   a. The outermost hair-covered folds of skin surrounding the genitals.
   b. They vary greatly in size.
   c. Like the scrotum, the outer lips swell slightly with stimulation; in their stimulated state they pull back and expose the Inner Lips.

INNER LIPS (Labia Minora)
   a) This is the second covering of the vaginal opening; they enclose the vaginal and urethral opening.
   b) They are a thin, moist, sensitive fold of skin containing many erotic nerve endings and blood vessels.
   c) They contain the same tissue as the shaft of the penis; as a result they too swell with sexual stimulus.

CLITORIS
   a) This is the most sexually sensitive part of the female body. It corresponds to the glans or head of the penis.
   b) Though there is no reproductive purpose, the clitoris is made of erectile tissue and contains a high concentration of erotic neural receptors and blood vessels.
   c) When flaccid or unaroused the tissue is c.1” long; when aroused, it swells to 2” to 3”.

HYMEN
   a) A thin membrane that partially covers the vaginal opening of most women.
   b) The thickness varies from female to female.
c) This tissue is often broken through non-sexual activity, such as biking, gymnastics, horseback riding, or inserting tampons.

d) Though it is a traditional symbol of virginity, it is a highly inaccurate measure.

**URETHRAL OPENING**

a) This is the opening of the urethral tube which comes from the bladder and allows urine to escape.

b) This is not part of the reproductive system.
INTERNAL FEMALE REPRODUCTIVE ORGANS

OVARIES
1) The ovaries are “gonads”, which is Greek for seed, in that it is the “seed” or sex cell producing organ.
2) Oval shaped organs the size and shape of almonds.
3) They are located at the curve of the fallopian tube.
4) The ovaries (female gonads) share the same function as the male gonads:
   a) To produce the sex cell – Ovum
   b) To produce the sex hormones – estrogen and progesterone (and a small amount of testosterone)
5) Each of the two ovaries contains 250,000 – 350,000 immature Ovum Follicles (immature Ovum).

FALLOPIAN TUBES
1) Each of the two tubes are 4” long and the diameter of a toothpick.
2) The ova (egg) travels from the Ovaries to the Uterus down this tube during a 3 to 5-day journey.
3) The ova are moved down the fallopian tube by CILIA, which are hair-like structures which sweep the released Ovum through the tube.

NOTE: Ectopic or Tubal Pregnancy: The fallopian tube can become blocked with inflammation or scar tissue as a result of a pelvic infection (often a result of an STD). This blockage may halt movement of the ovum through the fallopian tube but allow the much smaller sperm cells to reach and fertilize the ovum. Then the ovum will begin to replicate and swell within this small inflexible tube causing the mother pain. The section of the fallopian tube to which the baby is attached must be surgically removed or the fallopian tube will eventually burst, risking the life of the mother.

When an ectopic pregnancy does not resolve by itself, a morally acceptable approach would involve removal of the whole section of the tube on the side of the woman's body where the unborn child is lodged. Although this results in reduced fertility for the woman, the section of tube around the growing child has clearly become pathological, and constitutes a mounting threat with time. This threat is addressed by removal of the tube, with the secondary, and unintended, effect that the child within will then die.

In this situation, the intention of the surgeon is directed towards the good effect (removing the damaged tissue to save the mother's life) while only tolerating the
bad effect (death of the ectopic child). Importantly, the surgeon is choosing to act on the tube (a part of the mother’s body) rather than directly on the child.


UTERUS
1) A thick-walled muscular organ, the size and shape of a pear. (This organ expands to over 16” during pregnancy.)
2) During pregnancy, muscles hold the growing baby in the uterus; during labor, other muscles begin to push the baby out of the uterus at 30 pounds of pressure.
3) Some physiologists believe small contractions of these uterine muscles during menstruation cause the common cramping.
4) After conception, the fertilized ovum (zygote) normally implants on the nutrient-rich walls of the uterus, and soon are surrounded by the placenta.

VAGINAL CHANNEL
1) A thin-walled muscular organ which connects the uterus and the vaginal opening.
2) It is approximately three and one half inches long and rather insensitive, especially the upper two-thirds of the channel.
3) This organ is very flexible in order to accommodate the baby at birth.
4) The walls of the vaginal channel are filled with membranes which secrete lubrication with sexual stimulation.

CERVIX
1) Located at the end of the uterus near the vaginal channel.
2) This structure contains glands for lubrication; necessary at intercourse and to aid the sperm’s travel through the uterus.
MALE REPRODUCTIVE ORGANS

SCROTUM
1) A loose pouch of skin and thermostatic muscle which holds, protects, and maintains the temperature of the testes.
2) The thermostatic muscle reacts by contracting when cold and relaxing when warm, thereby moving the testes closer and further from the body.
3) The scrotal tissue is the same as the outer lips of the female anatomy.

TESTES
1) The term testes comes from the Latin word to testify or witness. It was a common legal practice to swear oaths or promises on the testes of another, instead of the Bible we use today. This practice was called a “Phallic Oath”.
2) Each male normally has two of these oval shaped gonads, about the size and shape of an unshelled pecan. These organs begin in the abdomen (near where the scrotum is and drop in to the scrotum at some time around birth).
3) The testes are gonads and therefore share the same functions as the ovaries:
   a. To produce the sex cell sperm
   b. To produce sex hormones – testosterone (and a small amount of estrogen and progesterone)
4) Sperm production takes place in the seminiferous tubules, consisting of @ 700 feet of tightly packed hair-like tubes, through which sperm move during production. 200 million – 300 million sperm are produced each day. It takes @ 60 days for sperm to be produced.
5) After the sperm are produced, they are stored and nourished in an area called the Epididymis.

DUCTUS (VAS) DEFERENS
1) The sperm is transferred from the testes to the penis at ejaculation via the ductus deferens.
2) Each testes has a ductus deferens which is 18” long and the diameter of sewing thread: the two connect near the base of the penis.
3) Cutting this ductus deferens is a form of sterilization called a vasectomy. The Catholic Church opposes vasectomies: “The regulation of births represents one of the aspects of responsible fatherhood and motherhood. Legitimate intentions on the part of the spouses do not justify recourse to morally unacceptable means (for example, direct sterilization or contraception).” (Catechism of the Catholic Church 2399)
SPERMATIC CORDS: Tubes or cords which nourish the testes with blood, contains nerves (they also include the vas deferens).

EJACULATORY DUCT: This duct is at the terminal end of the vas deferens; it stores an additional 250 million mature sperm.

SECRETARY GLANDS: Together there are seven (7) different secretory glands; together the fluid they produce is ejaculated at male orgasm in a fluid called semen. The male normally ejaculates 1-2 teaspoons of fluid.
1) Testes -- Produces sperm; about 1% of the total volume of an ejaculation.
2) Seminal Vesicles -- Produces an activating fluid which causes the sperm cells to begin swimming.
3) Prostate Gland -- Produces a necessary alkaline fluid which reduces the acidity of the vagina and uterus. This walnut-sized gland produces the largest amount of the total volume of ejaculated semen. (About 80% of men have some sort of medical problem with their prostate gland.)
4) Cowper’s Gland -- This pea-sized gland produces a lubricating fluid which aids the sperm’s travel through the vas deferens, vagina, cervix and uterus.

URETHRA: The tube which connects the bladder to the vas deferens; joins the vas deferens inside the prostate gland.

PENIS
1) Transports semen to the vaginal channel during intercourse and allows urine to leave the body.
2) The structure consists of three parallel tubes of erectile tissues. Blood flows into the penis through the upper two tubes and out the base of the penis through the lower tube. During an erection two things happen: (1) there is increased blood flow to the region, which fills the erectile tissue, (2) a valve at the base of the penis closes, restricting the amount of blood which leaves the penis.
3) When flaccid (non-erect) the penis averages 3”-4” in length, at which point it is soft and pliable. When erect, the penis averages 5”-7” inches in length and is normally firm and stiff. The length of the penis when flaccid does not correspond directly to its length at erection.
4) Only humans, whales and hoofed animals attain erections without the aid of cartilage or bone.

GLANS
1) Located at the tip or head of the penis is a structure which contains a highly concentrated amount of neural receptors sensitive to stimulus; it is the center of sexual pleasure for the male.
2. It corresponds to the female clitoris in the female anatomy.

NOTE: CIRCUMCISION

Many males have a small piece of skin (foreskin) removed at birth in a procedure called “circumcision”. This relatively painless operation removes the “sleeve” of skin which normally covers the glans. In the US, about 75% of males are circumcised; this number is much lower in other parts of the world.
The good news is that CHASTITY is 100% effective against pregnancy and STD’s.

Birth control cheapens the tremendous gift of being pro-creators with God in the life-giving aspect of human sexuality within the context of the sacrament of marriage.

Birth control is not the answer to the pregnancy problem; pregnancy is not a disease.

The pill can increase a woman’s chance of contracting a sexually transmitted disease (STD).

Birth control creates a false sense of security about many issues surrounding the act of sexual intercourse.

23% of unintended pregnancies occurred in couples who used birth control in every act of intercourse.

20% of U.S. couples who engage in intercourse while using birth control will get pregnant within the first month.

90% of couples will get pregnant within the year if no birth control is used.

21% of female STD patients at a Brooklyn Health Clinic reported using condoms regularly.

**CRITIQUES OF DIFFERENT TYPES OF BIRTH CONTROL**

**Withdrawal**

- What is withdrawal? The practice of withdrawing the penis from the vagina and away from a woman's external genitals before ejaculation to prevent pregnancy.
- Unnatural and difficult to perform.
- Very ineffective in preventing pregnancy.
- 30+% failure rate.
- May cause sexual frustration and anxiety.
- Ejaculation of sperm on the skin or pubic hair surrounding the vagina can cause pregnancy.
- Getting sperm on fingers or hands and placing them in or near the vagina can cause pregnancy.

**Condom**

Sheath made of thin latex, plastic, or animal tissue is placed over an erect penis; the ejaculated semen is trapped in the end of the condom. This is the most common form of birth control.
Failure Rate: studies vary from 3% to 36%; average effectiveness is 85%.
- Spermicidal lubricated latex condoms give a degree of protection from AIDS and other STD’s but fails to prevent the transmission of AIDS 17% of the time and STD’s 10% of the time.
- Animal tissue condoms are the least effective in preventing viruses such as HIV and hepatitis B.
- Spermicides increase the effectiveness of condoms.
- May cause an allergic reaction.
- Condoms may slip off, tear or puncture.
- May spill when removed from the vagina.
- The latex of condoms stored in places with temperature extremes is weakened and more likely to break.

**The Diaphragm**
A dome shaped round rubber cap with a flexible rim that fits over the cervix, preventing the sperm from entering the uterus.
Failure Rate: 10% to 20% when used without a spermicide; use of spermicide cuts the failure rate to 5% -- 10%.
- A woman must be fitted yearly by her doctor.
- Spermicide used with the diaphragm can be messy.
- Cannot be felt by either partner and can therefore slip out of place without their knowledge, leading to pregnancy.
- Many have allergies to latex or spermicide.
- Cannot be used during menstruation or vaginal infections.
- Increased risk of bladder infection.

**Spermicides**
Spermicides form a chemical barrier to the uterus.
Contraception foam, cream, jelly, film, or suppository is applied before intercourse to keep the sperm from joining the egg. Spermicides attempt to immobilize sperm.
Failure Rate: when used alone 25% - 30%.
- Spermicides can be messy.
- Spermicides may irritate vagina or penis; may set off allergies.

**The Birth Control Pill**
Introduced about 1960.
Used by more than 10.6 million women.
Each day a woman takes a pill that contains hormones to suppress ovulation.
Combination pills contain estrogen and progestin. Mini-pills contain only progestin and are considered to be less effective in preventing ovulation.
Failure Rate: 1% – 4%
- Both pills may prevent a fertilized egg from implanting on the uterine wall (can be an abortive means of birth control).
- The pill may cause periods to become more regular.
- May cause less: menstrual cramping, acne, iron deficiency anemia, premenstrual tension, menstrual flow.

Possible Problems:
- Must be taken daily. Missing one day a month increases the failure rate to 5+%.
- Serious health risks, including: blood clots, heart attack and stroke – women who are over 35 and smoke are at greater risk.
- Side effects may include irregular bleeding (spotting), loss of monthly bleeding, weight gain or loss, nausea, breast tenderness, depression, anxiety and fatigue, as well as other discomforts.

**The IUD (Intrauterine Device)**
A small plastic device is inserted into the uterus. The IUD contains copper or hormones that do the following:
1) Keep the sperm from joining the egg.
2) Prevent the fertilized egg from implanting in the uterus. This can be an abortive means of birth control.

**Failure Rate:** 1% – 2%
- May cause pain and discomfort.
- Can be expelled without knowledge of the user; more likely to happen to teens and women who have never had a baby.
- May cause heavier/longer periods; irregular periods; spotting.
- May cause the development of an infection; if not treated, could affect fertility.
- Possible pelvic inflammatory disease (PID).
- Increase in ectopic pregnancy.
- Women who have or may have a sexually transmitted disease should not use.

**Birth Control Implant**
Implanon/Nexplanon: match-stick-size rod is implanted in a woman’s upper arm to prevent pregnancy. The capsule releases small amounts of progestin, a hormone that:
1) Prevents the release of an egg.
2) Thickens cervical mucus to keep sperm from joining the egg.
3) Removal can be done at any time but must be done by her doctor.

Can be left in place for up to three years.

**Failure Rate:** 1% – 2%
- Protects against pregnancy for up to three years.
- Possible bone mass loss, especially in teens and young adults.
- Side effects include: irregular bleeding, periods may become longer/heavier or lighter/non-existent, headaches, weight gain, nausea, depression, nervousness.
- Possible scarring and/or discoloration at insertion site.
- Implant may be visible beneath the skin.
- Possible infection at insertion site.
- If pregnancy occurs, it is more likely to be an ectopic pregnancy.
**Depo-Provera**
A woman receives a shot of the hormone progestin in her arm or buttock every 12 weeks to:
1) Prevent ovulation.
2) Thicken cervical mucus to keep sperm from joining the egg.
3) Prevents fertilized egg from implanting in uterus. Can be an abortive means of birth control.
Failure Rate: 2% - 4%
- Protects against pregnancy for twelve (12) weeks.
- Reduces menstrual cramps.

Possible Problems:
- Side effects may include loss of monthly period, irregular bleeding (spotting), increased appetite, headaches, depression, abdominal pain and anxiety.
- Possible bone mass loss especially in young women.
- Side effects cannot be reversed until the hormone wears off (up to 12 weeks).
- May cause delay in getting pregnant after shots are stopped.
- If pregnancy does occur, it is more likely to be an ectopic pregnancy.

**Sterilization**
A man or woman undergoes a surgical procedure in order to permanently prevent the sperm from being able to unite with the egg.
Failure Rate: 1%
- Tubal ligation (the female): The doctor surgically cuts and ties the fallopian tubes so the egg will be unable to unite with the sperm.
- Vasectomy (the male): The doctor surgically cuts the vas deferens that transports the sperm out of the testes.
- A reversal is considered highly unlikely.
CONTRACEPTION COMPARISON CHART

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<th>METHOD</th>
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WHO’S WHO VOCABULARY WORKSHEET

DIRECTIONS: Read each word below and place an F if it is part of the female reproductive system, an M if it is part of the male reproductive systems, and a B if it is part of both systems.

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___ 1. Testosterone ___ 16. Fallopian tubes
___ 2. Labia ___ 17. Nocturnal emission
___ 3. Sperm ___ 18. Estrogen
___ 5. Pubic hair ___ 20. Ovulation
___ 6. Puberty ___ 21. Semen
___ 7. Ejaculation ___ 22. Erection
___ 8. Hormones ___ 23. Progesterone
___ 9. Ovaries ___ 24. Urethra
___ 10. Cervix ___ 25. Placenta
___ 11. Menstruation ___ 26. Foreskin
___ 12. Testes ___ 27. Hymen
___ 13. Vagina ___ 28. Prostate
___ 15. Uterus ___ 30. Seminal vesicles
FEMALE REPRODUCTIVE SYSTEM

External View

DIRECTIONS: Label the diagram using the words below:

PERINEUM       CLITORIS       VAGINA
INNER LABIA    OUTER LABIA    ANUS
URETHRA        HYMEN
MALE REPRODUCTIVE SYSTEM DIAGRAM

DIRECTIONS: Using the words below, label the parts of the male reproductive systems:

- PENIS
- RECTUM
- BLADDER
- TESTICLE
- URETHRA
- EPIDIDYMIS
- PROSTATE
- COWPER’S GLAND
- SCROTUM
- VAS DEFERENS
- SEMINAL VESICLE
THE MALE REPRODUCTIVE SYSTEM

DIRECTIONS: Using the fifteen words provided, fill in the blanks to make this explanation of the male reproductive system correct. Each will be used only one.

Cowper’s gland  semen
epididymis  seminal vesicle
erection  sperm
nocturnal emissions  testes
orgasm  urine
penis  urethra
prostate  vas deferens
scrotum

First, ________________________, are produced in the small seminiferous tubules of the ___________________________. These oval-shaped glands are protected by a sac called the _______________________. After the sperm cells are produced, they are stored in a large coiled tube on the outer surface of each testicle called the _________________. From this tube the sperm carries them to the external male reproductive organ, the ___________________________. Along the way sperm is nourished by a sugary fluid from the ____________________________, a chemical fluid from the ____________________________, which is the most common site of cancer in men, and fluid from the ____________________________, which are two small glands located near the bladder. These fluids plus the sperm cells combine to form ____________________________, the fluid ejaculated from the penis during ____________________________. Before a male can ejaculate, the spongy tissue surrounding the penis becomes engorged with blood causing the penis to become stiff and hard. This is known as an ____________________________. The tube that carries the semen from the body is the ____________________________. This tube also carries ___________________________ from the bladder. Males can also have uncontrolled ejaculation during sleep, which are called ____________________________ ____________________________.