

SUPPLEMENTAL INSTRUCTION FOR SURVEY OF BIOLOGY by Richard X. Thripp

Week 10, Fall 2009, Nov 3 / 4 / 5. Reproduction Ch. 26. daytonastate.org/biology

- 1.) Sperm cells are made in the Seminiferous tubules, which are part of the testes. This is called spermatogenesis. The testes are in the scrotum a.k.a. gonads.
- 2.) Sperm cells are stored and matured in the epididymis.
- 3.) The prostate contributes alkali to semen to neutralize the vagina's acidic pH.
- 4.) Cowper's gland produces lubricating fluid before ejaculation.
- 5.) Seminal vesicles feed sugar to the sperm ("last-bag lunch").
- 6.) Semen exits via the vas deferens during ejaculation (sterilization = vasectomy).
- 7.) In men, the urethra (starts with "u") serves both urination and ejaculation.
- 8.) During sexual intercourse sperm enters the vagina (birth canal).
- 9.) The cerix is the narrow neck at the end of the vagina / beginning of uterus.
- 10.) The site where a fertilized egg grows into a baby is the uterus (starts with "u").
- 11.) Fertilization of the woman's ovum (egg) takes place in the fallopian tube a.k.a. oviduct (sterilization = tubal ligation).
- 12.) The ovaries release an egg during ovulation. This is called oogenesis.
- 13.) A follicle grows in the ovary, which ruptures to release an egg during [Ans. 12].
- 14.) The [Ans. 13] then becomes the corpus luteum (body yellow), which secretes progesterone and estrogen (P&E) to stop more eggs from being released.
- 15.) The ovarian cycle begins with an increase in follicle-stimulating hormone (FSH) and luteinizing hormone (LH).
- 16.) If the egg is unfertilized, menstruation begins with the loss of the endometrium of the uterus, and the rest of the cycle rebuilds it.
- 17.) A sperm cell has 3 parts:

- 1.) a head with chromosomes and an acrosome, a modified lysosome with digestive enzymes to eat through the jellylike layer around the ovum.
- 2.) The middle piece with mitochondria to make ATP for energy.
- 3.) The tail with a flagellum for movement.
- 18.) The birth control pill uses synthetic P&E to prevent ovulation.
- 19.) A vasectomy is the cutting and tying of the vas deferens, sterilizing the man.
- 20.) A tubal ligation is the cutting and tying of the oviducts, sterilizing the woman.
- 21.) The rhythm method is avoiding sexual intercourse during ovulation.
- 22.) The withdrawal method (coitus interruptus) is when the man pulls out before ejaculating. Warning: this is hard to do and pre-ejaculate from Cowper's gland contains sperm.
- 23.) A condom (male) is a plastic sheath that covers the erect penis to catch semen, preventing it from entering the vagina.
- 24.) A diaphragm is a dome-shaped bowl made of thin, flexible rubber that sits over the cervix, blocking semen. It is normally coated with spermicide to kill sperm.
- 25.) Meiosis II is not completed until fertilization ($23 + 23 = 46$ chroms. in humans).
- 26.) What three STDs are bacterial and thus curable by antibiotics? Chlamydial infections, gonorrhea ("g"), and syphilis (chancres, fatal if untreated).
- 27.) What three diseases are viral and thus **incurable**? Genital herpes, genital warts (papillomaviruses), and HIV infection (human immunodeficiency → AIDS).
- 28.) Trichomoniasis ("trich," vaginitis) is a protozoan infection.
- 29.) A yeast infection (candidiasis) is a fungal infection common in women, frequently acquired without sex. Treatment is anti-fungal chemicals.
- 30.) Asexual reproduction is good for stable environments. It involves budding or fragmentation and regeneration (starfish, cacti, sponges).
- 31.) A hermaphrodite has both male and female sexual organs.