

## **Mastery Series: Male and Female Reproductive Anatomy**

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1. Why are the testes held in a sac that hangs slightly away from the body?
2. How long does it take from the time a sperm is produced until it is ready for ejaculation?
3. How do sperm get from the testes to the urethra?
4. Why are so many sperm needed in one ejaculate?
5. What is the purpose of the fluids in semen?
6. What is the connection between vascular problems and impotence?
7. Where are egg cells produced?
8. How many eggs are usually ovulated each month? What might happen if more than one egg were ovulated, and both were fertilized?
9. How does the egg get from the ovaries to the uterus?
10. What might happen if a fertilized egg implanted in the uterine tube?
11. How could scarring in the uterine tube increase the odds of an ectopic pregnancy?
12. Compare the tissue of the endometrium and myometrium.
13. What is the purpose of the cervix?
  - a. How does it change when a baby is ready to be born?
  - b. What might happen if it didn't stay tightly closed in earlier stages of pregnancy?
  - c. Compare infection risk with a tightly closed cervix and a dilated cervix.
14. In what way are the clitoris and penis similar during sexual arousal?

1. To keep them about 3 degrees cooler than body temperature for optimal sperm development. For infertility, one of the first and simplest suggestions made is for the male to wear boxers rather than briefs; and to cut down on long-distance cycling or other activities that hold the scrotum more tightly against the body.
2. ~3 weeks
3. Vas deferens (or ductus deferens)—this is the structure that is tied off during a vasectomy to prevent sperm from entering the vas deferens.
4. Many sperm are necessary because a) many will die before finding an egg; b) many will go up the wrong uterine tube; c) many sperm work together to trigger the egg to allow one sperm inside for fertilation.
5. Fructose provides an energy source—sperm can survive up to 5 days in the female reproductive tract; and alkaline substances neutralize acidity of the vagina so that the sperm aren't destroyed.
6. Erection requires robust blood flow to engorge the penis. Any time of blocked or over-constricted blood vessels will prevent or inhibit erection.
7. Ovaries
8. 1; fraternal twins
9. Uterine (fallopian) tubes
10. Ectopic pregnancy
11. The egg travels more slowly and so might implant before reaching the uterus.
12. The endometrium is highly vascularized epithelium; the myometrium is thick smooth muscle.
13. To prevent pathogens from entering the uterus; to prevent the baby from being born prematurely.
  - a. Effaces (thins) and dilates to 10 cm.
  - b. Premature delivery (incompetent cervix)
  - c. Higher with an open cervix
14. They both engorge with blood as part of sexual arousal leading to orgasm.