Sperm's Route

Connect reproductive structures to sperm production and release.

HAP.8.2 "Describe the male reproductive anatomy and relate structure to sperm production and release."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline the seminiferous tubules, epididymis, vas deferens, ejaculatory duct, and urethra, then number them in the order sperm travel through them. Circle a phrase near each structure that explains its role.

From Production to Release

1. A sperm cell begins its journey inside a testis, not in the penis. Each testis contains many tightly coiled seminiferous tubules where sperm are produced. These tubules are packed into a small organ that sits in the scrotum, a pouch outside the main body cavity. The scrotum helps keep the testes slightly cooler than core body temperature, a condition needed for normal sperm production. Cells between the tubules make testosterone, a hormone that helps support sperm production. The testes produce sperm continually after puberty, but freshly made sperm cannot yet swim effectively or fertilize an egg.

2. From each testis, sperm enter the epididymis, a long, coiled tube resting along the back of the testis. Here sperm gain the ability to swim and are stored until release. During ejaculation, muscular contractions push sperm from the epididymis into the vas deferens, a thick-walled tube that carries them toward the pelvis. The vas deferens joins a duct from a seminal vesicle, forming an ejaculatory duct that empties into the urethra. The urethra runs through the penis to an opening at its tip. This sequence explains why production and release happen in different structures.

3. Sperm do not travel alone. As they move toward the urethra, seminal vesicles add fluid containing nutrients, including fructose, that can fuel sperm. The prostate adds fluid that helps sperm function; bulbourethral glands release mucus into the urethra, helping lubricate the passage. Together, sperm and these fluids form semen. During ejaculation, muscles propel semen through the urethra and out of the penis. The urethra also carries urine, but the bladder outlet closes during ejaculation, helping prevent urine from mixing with semen. This coordination lets the same exit passage serve two different systems at different times.

2 ANSWER WITH EVIDENCE

Use the passage

1. How do the seminiferous tubules and scrotum each support sperm production?

2. How does the epididymis prepare sperm for release, and what does the vas deferens do next?

3. How do fluids from the seminal vesicles, prostate, and bulbourethral glands support sperm as semen forms?

4. How does the urethra allow semen to leave the body while helping keep urine out of it?

3 YOUR TURN

Your own words

Imagine both vas deferens are blocked while all other structures keep working. In four or five sentences, explain what happens to sperm production, sperm travel, and the semen released from the penis; name at least three structures and explain their roles.

Sperm's Route

PART 1 · READ AND MARK

Underline the seminiferous tubules, epididymis, vas deferens, ejaculatory duct, and urethra, then number them in the order sperm travel through them. Circle a phrase near each structure that explains its role. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	How do the seminiferous tubules and scrotum each support sperm production?	**The seminiferous tubules produce sperm. The scrotum keeps the testes slightly cooler than core body temperature, which is needed for normal sperm production.**
2	How does the epididymis prepare sperm for release, and what does the vas deferens do next?	**In the epididymis, sperm gain the ability to swim and are stored. During ejaculation, the vas deferens carries them toward the pelvis.**
3	How do fluids from the seminal vesicles, prostate, and bulbourethral glands support sperm as semen forms?	**Seminal vesicles add nutrient-rich fluid that can fuel sperm. The prostate adds fluid that helps sperm function, and the bulbourethral glands add mucus that lubricates the urethra.**
4	How does the urethra allow semen to leave the body while helping keep urine out of it?	**The urethra carries semen through the penis and out of the body. During ejaculation, the bladder outlet closes, helping prevent urine from mixing with semen.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

The seminiferous tubules in the testes still make sperm, and the epididymides still store them. Blocked vas deferens prevent sperm from reaching the ejaculatory ducts and urethra. The seminal vesicles and prostate still add fluid to semen. That fluid can pass through the urethra and leave the penis, but the released semen contains no sperm from the testes.

Accept responses that distinguish continued sperm production from blocked sperm transport. The student should explain that gland fluids can still leave through the urethra without sperm.