

Micturition Reflex

[DEPTH OF BIOLOGY]

- In Male and female around the internal urethral orifice the **detrusor muscle** thickens to form the internal sphincter.
- This involuntary sphincter is controlled by ANS and keeps the urethra close when the bladder is not full.

Micturition reflex → starts with normal micturition.

↓
urinary bladder
↓
urine.

- By contracting the skeletal muscle around the ext. sphincter [DEPTH OF BIOLOGY]

urination can be stopped voluntarily.

* The active urination involves close coordination b/w N.S. and muscle of the bladder.

- When bladder is half filled (300-400 ml) micturition signal send to micturition center (pons) [located in the spinal cord located S₂ and S₃].

↓ lead to
contraction in bladder relaxation of int. ext. sphincter.

* when you can't find the toilet

↓
tries to hold urine [DEPTH OF BIOLOGY]

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you activate pontine storage center

↓
and stop micturition reflex.

Involuntary muscle contraction

voluntary muscle contraction.

→ The floor of the bladder has smooth Triangular region called the trigone region with 2 corners at the ureter-vesical Junction and third corner being the Internal urethral orifice where the bladder meets the urethra.

→ Trigone region is very sensitive to expansion and once it stretched to a certain point the bladder send signal to brain to ~~pee~~ pee.

Urethra → The muscular tube that carries urine from the bladder. [DEPTH OF BIOLOGY]

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starting from the internal urethral orifice to the ext. opening.

* In males urethra first passes the prostate where it is called as prostatic urethra.

then it passes through deep muscles of the peritonium where it is called Intermediate urethra.

Finally passes through penis where it is called as spongy urethra. [DEPTH OF BIOLOGY]

→ In males urethra is also used during ejaculation. Except there → Semen enters into the urethra via the ejaculatory duct.

→ In women the urethra runs from the perineal floor of the pelvis and exits between the labia minora and above the vaginal opening and below the clitoris in an area called the vulval vestibule. [DEPTH OF BIOLOGY]