

Name: ikumogunniyi Anita jibola

Department: pharmacology

Matric number: 18/mhs07/025

Title: Renal Physiology

Course Title: Renal Physiology, Body fluid & Temperature Regulation and Autonomic Nervous System

Course Code: PHS 212

Question

Write a short note on Micturition

Micturition is the process of releasing urine from the bladder. This act is also known as voiding of the bladder. The process of micturition is regulated by the nervous system and the muscles of the bladder and urethra. The urinary bladder can store around 350-400ml of urine before it expels it out.

The urinary bladder has two stages in micturition:

1. Resting or Filling Stage

It is in this phase of the bladder that the urine is transported from the kidneys through the ureters into the bladder. The ureters are thin muscular tubes that arise from each of the kidneys and extend downwards where they enter the bladder obliquely. The oblique placement of the ureters in the bladder wall serves a very important function. The opening of the ureter into the urinary bladder is not guarded by any muscle. Therefore, this oblique nature of opening prevents the urine from re-entering the ureters. At the same time, the main muscle of the urinary bladder, the detrusor muscle, is relaxing allowing the bladder to distend and accommodate more urine.

2. Voiding Stage

During this stage, both the urinary bladder and the urethra come into play together. The detrusor muscle of the urinary bladder which was relaxing so far starts to contract once the bladder's storage capacity is reached. The urethra is controlled by two sets of muscles: The internal and external urethral sphincters. The internal sphincter is a smooth muscle whereas the external one is skeletal. Both these sphincters are in a contracted state during the filling stage.