

Vagus control

Under resting conditions, both autonomic divisions continuously send impulses to the SA node of the heart, but the dominant influence is inhibitory. For this reason the heart is said to have vagal tone, and heart rate is generally slower than it would be is the vagal non-es were not innervating it. Cutting vagal nerves results in an almost immediat impress in heart rate.

Chapter 19-Blood Vessels

Tunica intima- intimate contact with the lumen. Tunica media- arran e dynooth muscle cells are sheets of elastin. Tunica externa- butermost layer the cell oventitia) composed largely of loosely woven collagen fibers that protect and reinforce the vessel and anchor it to surrounding structures.

Notes

Arteries

Elastic (Conducting) Arteries- thick walled; aorta and its major branches. Has large lumen that allows low- resistance conduction of blood.

Muscular Arteries-deliver blood to specific body organs. (distributing arteries). Have thickest tunica media of all vessels. More active in vasoconstriction and less distensible (capable of streetching).

Veins

Capacitance vessels and **blood reservoirs** because they can hold up to 65% of the body's bloody supply. Carry blood from capillary beds toward heart.

Vessels of Capillary Bed Vascular shunt (metarteriole thoroughfare channel)- short vessel directly connects arteriole and venule at opposite ends of bed. True capillaries- actual exchange vessels. Terminal arteriole- leads into the metarteriole Thoroughfare channel- immediate between capillary and venule.

Postcapillary venule- drains the bed

- Tunica vaginalis-outer layer 0
- Tunica albuginea- fibrous capsule of the testis 0
- Seminiferous tubules- produce sperm •
- Rete testis- tubular network on posterior side of the testis •
- Penis-copulatory organ designed to deliver sperm to female reproduction tract •
- Glans penis- enlarged tip of penis
- Prepuce/foreskin- skin covering penis •
- Copus spongiosum- erectile tissue surrounds urethra keep it open during erection •
- Corpora cavernosa- erectile tissue that makes up most of penis
- Epididymus- absorb testicular fluid and pass nutrients to sperm •
- Urethra- conveys urine and sperm

Female parts:

- Ovaries- primary reproductive organ
- Ovarian ligament- anchors ovary medially to uterus
- Suspersory ligament-anchors laterally to pelvic wall
- Uterine tubes/ fallopian tubes- initial part of female duct system
- Uterus- hollow thick-walled muscular organ that receives, retains, and nourishes a fertilized ovum
- Vagina-often called birth canal allows passageway for birth and menstrual flow Receives • le.co. penis during sexual intercourse

rea and loss of heat Dartos- smooth muscle wrinkles scrotal skin, reduce the Cremaster muscle- bands of skeletal muscle that a vate the test Fertilization Upper 1/3 of utering the Page

Estrogen

- Promote oogensis and follicle growth in the ovary
- Exert anabolic effects on the female reproductive tract
- Promotes growth spurt in puberty
- Secondary sex characteristic in females (breast development, increase in fat in breasts and hips, wider and lighter pelvis to adapt for childbirth)
- Maintain low total blood cholesterol levels
- Facilitate calcium uptake
- Progesterone helps with estrogen to establish uterine cycle and changes in cervical mucus Testosterone
 - Maintains libido, muscle strength and bone density •
 - Secondary sex characteristics in males (pubic, axillary, and facial hair, skin thickens and becomes oily, enhanced growth of chest and voice deepening, bones grow and increase in density)
 - Spermatogenesis and Oogenesis •
 - Meiosis, the process by which gametes are formed, can also be called **gametogenesis**, literally "creation of gametes." The specific type of meiosis that forms sperm is called spermatogenesis, while the formation of egg cells, or ova, is called oogenesis. The most important thing you need to remember about both processes is that they occur through meiosis, but there are a few specific distinctions between them.
 - Spermatogenesis

increase in number and endometrium becomes velvety, thick and well vascularized. Cervical mucus thins due to rising estrogen levels and forms channels to allow sperm into uterus 15-28 secretory (postovulatory) endometrium prepares for an embryo to implant. Rising levels of progesterone from the corpus luteum act on the estrogen-primed endometrium. Progesterone levels rise cervical mucus becomes viscous again forming cervical plug and plays role inkeeping uterus private in even embryo has begun to implant.

Mammary Glands Modified sweat glands 15-25 lobes radiate around nipple Areola (pigmented skin around nipple) Suspensory ligaments attach breast underlying muscle fascia Compound alveolar glands pass milk to lactiferous ducts (prolactin)

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