

## UCE Review Anatomy 2

### Reproductive System

#### Male

-The location and function of the following:

testes, seminiferous tubules, epididymis, ductus deferens, urethra, seminal vesicles, prostate gland, bulbourethral glands, scrotum, penis

-Composition of semen and parts of the penis (shaft glans penis, prepuce etc)

-The process of spermatogenesis

(spermatogonia has 46 chromosomes, undergoes mitosis. Produces one primary spermatocyte and one spermatogonium, both with 46 chromosomes. Primary spermatocyte undergoes meiosis I to make a secondary spermatocyte, with 23 chromosomes. Secondary spermatocyte undergoes meiosis II to make an early spermatid, with 23 chromosomes. Early spermatid undergoes spermiogenesis to become a late spermatid and eventually become a mature sperm cell)

-The structure of sperm (acrosome, head, nucleus, tail, centriole, midpiece etc)

-Four secondary sex characteristics of males (Gaston)

#### Female

-The location and function of the following:

ovaries, fallopian tubes, fimbriae, uterus (body, fundus, cervix, endometrium), vagina, hymen, mons pubis, labia majora, labia minora, vestibule, clitoris.

-Structure of the ovary (ovarian follicles, oocyte, follicle cells, graffian follicle, corpus luteum)

-Process of oogenesis

(Before birth, oogonia with 46 chromosomes undergo mitosis to produce primary oocyte with 46 chromosomes. At puberty, follicle stimulating hormone comes in and makes primary oocyte undergo meiosis I to become a secondary oocyte with 23 chromosomes. A polar body is also produced. Secondary oocyte with either be ovulated during metaphase II, or fertilized. If fertilized, meiosis II is completed and a mature ovum is produced, along with another polar body, giving an end product of 3 polar bodies and 1 ovum.)

-Menstrual cycle

menses, proliferative, secretory

-Structure of the mammary glands (areola, nipple, alveolar glands, lactiferous ducts)

#### Pregnancy

-Fertilization, zygote, cleavage, embryo, blastocyst, placenta, fetus

-Anatomical and physiological effects of pregnancy on mother

-Childbirth (parturition)-dilation, expulsion, placental

## **Respiratory System**

-Location and function of respiratory structures

(nasal cavity, sinuses, conchae, external nares, naso, oro, laryngopharynx, larynx, epiglottis, trachea, thyroid cartilage, cartilaginous rings, glottis, bronchi, lungs, pleura)

-Four events of respiration and what happens in each-

(pulmonary ventilation mechanical process, diaphragm and muscles contract, thoracic cavity enlarges, air is pulled in. Diaphragm and intercostal muscles contract, thoracic cavity shrinks, air is pushed out.

external respiration- O<sub>2</sub> moves from the alveoli to the pulmonary capillaries, CO<sub>2</sub> moves from the capillaries to the alveoli

gas transport- O<sub>2</sub> travels through blood stream by hemoglobin, CO<sub>2</sub> as bicarbonate ion in the plasma

internal respiration- O<sub>2</sub> moves from capillaries to body tissues, CO<sub>2</sub> moves from tissues to capillaries)

-Air volumes- IRV, ERV, TV, RV, Dead space volume, Vital capacity, Functional capacity

## **Integumentary**

-3 epithelial membranes and one connective membrane (cutaneous, mucosa, serous, and synovial)

-Location and function of each

-Epidermis, dermis, hypodermis and structures associated with each.

(hair follicle, sweat gland, sebaceous gland, nails, etc)

-Layers of the epidermis and dermis

-Infections and allergies of skin (contact dermatitis, athlete's foot, carbuncles and boils, impetigo, psoriasis, cold sores)

-Differentiate between 1st, 2nd, and 3rd degree burns

-Rule of 9s

-Differentiate between 3 types of skin cancer, Basal cell, squamous cell, and melanoma.

-ABCD rule

## **Lymphatic system**

-Nodes and Vessels

-Lymphoid organs

spleen, thymus, tonsils, peyers patches

-Nonspecific body defenses

physical barriers- skin, stomach mucosa, saliva and tears, mucus

defensive cells-phagocytes, natural killer cells

inflammatory response (4 signs of inflammation, 3 steps to inflammatory response)

interferon and complement

-Specific Defenses

Immune System-antigens, cells of immune system ( B-T lymphocytes, macrophages)

active and passive immunity