**NAME: SIFO BLESSING OGHENEMARO**

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**DEPARTMENT: NURSING**

**COURSE CODE: ANA 210**

1. Describe the importance of vasculature in relation to immune system and outbreak of pandemic covid-19 on the human body
   * Until a vaccine is available, our immune system will need to adapt unaided to covid-19.
   * The immune system is the body’s multi-level defense network against potentially harmful bacteria, viruses and other organisms
   * A healthy lifestyle helps one’s immune system to be in the best shape possible to tackle pathogens, but it’s better to stop them entering the body in the first place

The corona virus pandemic has turned the world’s attention to the immune system, the body’s defense force against disease-causing bacteria, viruses and other organisms that we touch, ingest and inhale everyday

The body system has two types of response: innate and adaptive

The body’s natural barriers against disease-causing Intruders for example our skin, the muccous and hair in our nose and the acid in our stomach-are part of our innate immune systems

Adaptive immunity develops over a lifetime of contact with pathogens and vaccines, preparation which helps our immune systems to distinguish friend from foe.

1. Subsartorial canal is an important area in the lower limb, discuss.

The adductor canal (subsartorial or Hunter’s canal) is an aponeurotic tunnel in the middle third of the thigh, extending from the Apex of the femoral triangle to the opening in the adductor Magnus, the adductor hiatus.

The canal contains the subsartorial artery (superficial femoral artery), subsartorial vein (superficial femoral vein), and branches of the femoral nerve (specifically, the saphenous nerve, and the nerve to the vastus medialis ). The femoral vein with it’s artery and the saphenous nerve enter this canal through the superior foramen. Then, the saphenous nerve and artery and vein of genus descedens exit through the anterior foramen, piercing the vastoadductor intermuscular septum. Finally, the femoral artery and vein exit via the inferior space between the oblique and medial heads of adductor Magnus

1. Describe the extraocular and intraocular muscles with their nerve supply

The muscle of the eye are integral to it’s function and motion. Muscles directly associated with the eye include the extraocular muscles which control the external movement of the eye; the intraocular muscles, which are responsible for pupil accomodation and reaction to light; and the protractor and retractors of the eyelids. Deficits in the muscles or the nerves innervating these muscles can result in functional impairment of the involved structures

* + Nerve supply

The extraocular muscles are innervated by nerves that enter the orbit through the superior orbital fissure. The occulomotor nerve (CN III) divides into superior and inferior branches and innervated the superior, medial, and inferior recti, the levator palpebrae superior is, and the inferior oblique. It also carries presynaptic parasympathetic fibers to the ciliary ganglion. Sympathetic fibers of CN III contribute to upper eyelid retraction by innervation of the superior tarsal muscle (Muller’s muscle). The trochlear nerve ( CN IV) innervated the superior oblique, and the lateral rectus is innervated by the abducens nerve (CN VI). The orbicularis oculi is innervated by the temporal and zygomatic branches of the facial nerve (CN VII). The ophthalmic nerve (CN V: VI) branches into the frontal, nasociliary, and lacrimal nerves. The ciliary ganglion is made up of postsynaptic parasympathetic nerve cell bodies associated with the ophthalmic nerve. The short ciliary nerves originated from the ciliary ganglion and carry parasympathetic and sympathetic fibers to the Iris and ciliary body. The long ciliary nerves branch off of the nasociliary nerve and carry postsynaptic sympathetic fibers to the dilator pupillae and afferent fibers from the cornea and Iris. The sphincter pupillae is parasympathetically stimulated