Academic Report: Personal Reflection Of Anatomy Study

Introduction

Anatomy focuses on the study of the structures that makes up the human body. My understanding and mentality about the human body have intensified and upgraded my knowledge. However, as I continue with the academic report of anatomy. I will be reflecting on what I have learnt and studied during my science topics.

The structural organisation of the human body

There are five levels that comprise the structural organisation of the human body. Cells, tissue, organs, organ systems, and organisms. All living things are made up of cells. Cells are the basic building blocks of all organisms. Even though cells are made of smaller parts, none of those parts could survive on their own with cells. Many cells working together form tissue. The cells involved are specialised to initiate with each other to perform.

Tissues types in our body

When there are layers of tissue working together, they form an organ. In fact, your body can not survive without vital organs like kidneys, lungs, liver, heart, and brain.

When organs work together, they form organ systems. Organ systems keep the body adjusted and in a stable state. These systems often work together and hardly ever work in isolation.

Organisms are technically any form that can carry out its own functions such as takes material in and push material out. Some fully functioning organisms are just one cell.

The 11 organ systems

Circulatory system: As the name implies its circulates blood around the body through the heart, arteries, veins, delivering oxygen, nutrients to organs, to help eliminate waste products from the system.

- Digestive system and Excretory system: System to absorbs nutrients to remove waste through the gastrointestinal tract.
- Endocrine system: Influences the function of the body using hormones.
- Integumentary system: This includes the skin, hair, nails, sweat and other exocrine glands.
- Lymphatic system: Is an organ system in vertebrates that is part of the circulatory system.
- Muscular system: Enables the body to move using muscles.
- Nervous system: Collects and processes information from the senses through the use of nerves and the brain to tell the muscles to contract.
- Urinary system: The system where the kidneys filter blood to produce urine, and get rid

of waste.
- Reproductive system: The reproductive organs required for the production of offspring.
- Respiratory system: Brings air into and out of the lungs to absorb oxygen and remove carbon dioxide.
- Skeletal system: Bone maintain the body structure and its organs.

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Anatomical terms

The anatomical term is a form of scientific terminology used by anatomists, zoologists, doctors and health care professionals.

Medial, lateral, anterior, posterior, superior, inferior, proximal and distal. According to Keith B, 27 sep. 2011 ‘Anatomical Planes of the body’ I have learnt that It is important to use anatomical terms in medical field because it makes doctors to have a common systematic form of communication and to ensure there is no confusion when identifying or analysing structures. Anatomy terms Its helpful when used in front of a patient in order to prevent shock and undue anxiety. Using the terms has also made it simple, clear and time saving.

The body also have different departments that contain and protect delicate internal organs. Although dorsal and ventral cavities are the largest body compartments, they have some distinguishing factors. Ventral cavity can allow for significant changes in the size and shape of the organs as they perform their functions, and include the thoracic and abdominopelvic cavities. The thoracic contains the heart and the abdominopelvic contains other organs in the stomach for instance Kidney, liver and lungs. Cavity is more rigid and include the cranial and spinal cavities which house the brain and spinal cord respectively.

The relationships within the organ system of the human body

As a student I have acquired some knowledge on how the human body works and several relationships exist in the main organ. Such as the cell, tissue, organ, atom,organelle, organ system and compound of molecules.

A cell is a membrane enclosed chamber that holds molecular materials committed to carrying out metabolic reactions and caring for the genetic material. Each of the cells have a specific role they play within the body. Red blood cells carry oxygen through our bloodstream. Muscle in the cells initiate to power our movements and the brain cells helps process and pass information concerning our environment and our body. Just to name a few.

A tissue is a particular type of cell and their products to work together. There are four tissue types in the human body. Epithelial, muscle, nervous, and connective tissue. Epithelial tissue is made up of cells that line inner and outer body surfaces, such as the skin. Muscle tissue is made up of cells that can contract and move. Nervous tissue is made up of neurons connected together to carry out electrical massages. Connective tissue is made up of cells that forms the body’s structure such as bone and cartilage to provide support within the body.

Organ system is a type of organ that are connected to perform as team to help carry out complicated tasks.

From digestive system to the immune system, the organs such as mouth, liver, stomach, intestines, etc. Each play a very vital role in digesting our food and allowing the food we eat to absorb the nutrients to fuel metabolism. The rest organ system are lymphatic, endocrine, nervous, cardiovascular, integumentary, muscular, reproduction, respiratory, urinary, immune, and skeletal.

Posture and Movement

Posture is the alignment of body parts in relationship to one another at any given moment. Posture involves complex interactions between bones, joints, connective tissue, skeletal muscles and the nervous system, both central and peripheral

The body uses the brain, nerves, sense organs and its musculo-skeletal system, (i.e. bones, muscles, tendons and ligaments) to be able to either move or keep joints still.

The combination of movement and stabilisation enables us to:

Adopt static positions, e.g. standing, sitting, lying, kneeling, Balance, e.g. To be able to stay fairly still by using very small movements. To be able to get back to the position we were in if we are put slightly off balance, to step or reach to ‘save’ ourselves if we are put more off balance, move in order to do something, e.g. Reaching to pick up a cup, turning our head to look at something, walking to the toilet, transferring from bed into a wheelchair, move to avoid harm to ourselves, e.g. Moving our hand automatically if it touches something hot, moving our foot away automatically if it stands on something sharp, automatic bending of our knee if our calf muscle is being overstretched.

The structure of the skeleton.

There are 206 bones in the human body that gives shape, provide support and protection to other systems and organs, provide attachments for muscles, movement and red blood cells.

The major bones of the skeleton are cranium and mandible (skull); scapula (shoulder); humerus, radius and ulna (arm); carpals, metacarpals and phalanges (hand); sternum and ribs (chest); ilium, pubis and ischium (pelvic); spine bones; femur, patella, tibia and fibula (leg); tarsals, metatarsals and phalanges (foot). From a radiograph, a fracture can be complete as in transverse, oblique, spiral or comminuted; incomplete as in bowing, buckle or greenstick; and salter-harris.

The structure of the skeleton and its function in terms of protection, posture and movement.

Two common injuries and two common diseases.

Sprains and Strains

The most common soft tissue injuries are muscles, tendons, and ligaments. These injuries often

occur during sports and exercise activities, but sometimes simple everyday activities can cause an injury.

A sprain is a stretch or tear of a ligament, a strong band of connective tissue that connect the end of one bone with another. The areas of your body that are most vulnerable to sprains are your ankles, knees, and wrists. A sprained ankle can occur when your foot turns inward, placing extreme tension on the ligaments of your outer ankle. A sprained knee can be the result of a sudden twist, and a wrist sprain can occur when falling on an outstretched hand.

A strain is an injury to a muscle and/or tendon. Tendons are fibrous cords of tissue that attach muscles to the bones. Strains often occur in your foot, leg or back.

Hepatitis B. According to current statistics, hepatitis B is the most common infectious disease in the world, affecting some 2 billion people -- that is more than one quarter of the world's population.

Stroke occurs when an artery in the brain is blocked or leaks, its then causes the brain cells to begin dying within seconds. According to findings, every year, more than 895,000 people in the Uk suffers stroke. The risk of stroke varies with race, ethnicity, and age.

Techniques for diagnosing injuries and diseases

Taking of an adequate history of the patient’s health condition and provided the patient with the opportunity to express his or her current health concerns If the patient is unable to provide a history due to language barrier, capacity issue, etc you can consult those who may be able to assist in obtaining the history, by assessing any relevant risk factors, including family history, which might help in diagnosis and also reading the notes taken by other healthcare professionals e.g. nurses, paramedics such as medical records, test results, and consultation reports.

Physical examination

This is involve performing an appropriate physical examination. which is necessary to look out for any vital signs and abnormalities because many serious disorders are challenging to diagnose, physical examination is important to help rule out the worst case scenario.

Ordering investigations

This involves carrying out laboratory tests, such as biopsy, diagnostic imaging or other investigations for any possible clue.

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