Types of cells in blood:

1. red blood cells (erythrocytes)
2. white blood cells (leukocytes)
3. platelets (thrombocytes)

What is haematocrit?

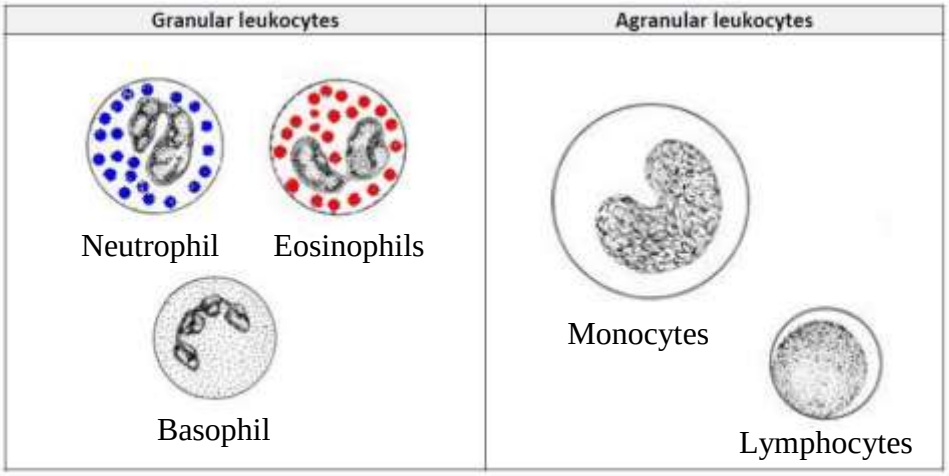
Indicates the percentage of whole blood contributed by formed elements. Because whole blood contains roughly 1000 red blood cells for each white blood cell, the haematocrit closely approximates the volumes of red blood cells.

Red blood cells (erythrocytes):

- are the most abundant cells in the blood
- contain oxygen-binding protein called haemoglobin
- lack cell organelles
- main function is to transport both oxygen and carbon dioxide within the blood stream
- Do not contain a nuclei
- **Anaemia** – when the body is deficient in red blood cells ○ Iron deficiency leads to anaemia because the Iron ion is what the oxygen molecule attaches to before being sported around the body. Therefore an iron deficiency can lead to a reduction in the oxygen carrying capacity of the blood.

White blood cells (leukocytes):

- are part of the immune system
- use the blood stream for purposes of transit (leukocytes are mostly located outside the blood, e.g. in lymphatic tissue)
- contain all necessary cell organelles
- can be divided into **granular** and **agranular leukocytes**



Lymphocytes are divided into B and T cells. B cells are produced in the bone marrow; T cells are produced in the thymus. Main function of B-cells is to produces antibodies against antigens whereas the T-cells provide cell-mediated immunity.

PLATELETS (thrombocytes):

- are involved in blood clotting
- are formed in the red bone marrow
- lack cell organelles

Respiratory System

Pharynx

- The pharynx is a cylindrical shaped muscular structure that links the oral and nasal cavities in the head to the larynx and oesophagus and has three subdivisions:
  - nasopharynx (epipharynx): contains auditory tube & pharyngeal tonsil
    - superior portion of pharynx, connected to posterior portion of nasal cavity
  - oropharynx (mesopharynx): contains palatine & lingual tonsils at its oral cavity junction
    - between soft palate and bas of tongue
  - laryngopharynx (hypopharynx): located just posterior to the larynx
    - most inferior region

Larynx

- The larynx is a hollow musculoligamentous structure with a cartilaginous framework that caps the lower respiratory tract
- opens from the pharynx above and is continuous with the trachea below
- **Functions** as an airway to the lungs as well as providing us with a way of communicating (vocalizing)

Tracheal cartilage comprises the posterior wall of the trachea

Heart and Lungs are the main contents of the mediastinum

Muscles that assist in inspiration

- Scalenes, Sternocleidomastoid, Pec minor, Abdominal muscles

Week 12 – Digestive System

- Broader term that includes structures that stretch as a long muscular tube between the oral cavity and the anal canal
- Also includes accessory organs of digestion such as the salivary glands, pancreas and the liver
- The digestive system functions to mechanically and chemically digest the food we eat
- Important to this digestive function are glandular secretions which chemically assist the breakdown and absorption of nutrients

Major structures of the digestive system are:

- **The oral cavity** (including the teeth, tongue, salivary glands, & muscles of mastication)
- **Digestive tract** (a series of hollow organs joined in a long tube, e.g. oral cavity, pharynx, oesophagus, stomach, small intestine, large intestine [colon + rectum], and anal canal). Note that the gastrointestinal tract (GI) includes normally the stomach and intestines.
- **Accessory digestion organs** (salivary glands, pancreas and the liver)

Location of the organs:

Organ	Location
Pharynx (throat)	areas of the head and neck (see previous prac manual)
Esophagus	mediastinum
Stomach	intraperitoneal cavity (part of abdominal cavity)
Duodenum (part of small intestine)	most part of it in retroperitoneal region
Jejunum (part of small intestine)	intraperitoneal cavity (part of abdominal cavity)
Ileum (part of small intestine)	intraperitoneal cavity (part of abdominal cavity)
Caecum (part of large intestine)	mostly in intraperitoneal cavity (part of abdominal cavity)
Appendix vermiformis	intraperitoneal cavity (part of abdominal cavity)
Colon ascendens	in retroperitoneal region
Transverse colon	intraperitoneal cavity (part of abdominal cavity)
Colon descendens	in retroperitoneal region
Sigmoid colon	intraperitoneal cavity (part of abdominal cavity)
rectum	in retroperitoneal region
Pancreas	in retroperitoneal region
Liver	intraperitoneal cavity (part of abdominal cavity)

Mediastinum

- located in the thoracic cavity and is the potential space between the two pleural cavities, bordered by the right & left mediastinal pleura laterally, and lying between the sternum and thoracic vertebrae (in anterior-posterior direction)
- contains the thoracic organs other than the lungs (e.g. esophagus, trachea, thoracic aorta, and heart)
- divided into superior and inferior regions
- The inferior region is again divided into anterior, middle, and posterior regions. For instance the heart is located in the inferior middle part of the mediastinum

Peritoneum is the serous membrane that lines the peritoneal cavity. **Parietal** is the outer layer while **visceral** is the inner layer.

Dorsal alveoli are the sockets where adult teeth sit, in mandible and maxilla

Dental formula: *Adult* = 8x4 *Child* = 5x4

Salivary glands release saliva which lubricates the mouth and moistens foods. Is dissolves chemicals which stimulate taste buds.

By this stage I was really over typing. So maybe if you guys have time before Kie leaves tomorrow, go through add anything I have missed, ie a lot. Go over lecture notes you may have etc.