Friday, 18 January 2019

Active transport in absorption: Na ions are actively transported out of epithelial cells into the blood via the Na/K pump. This takes place in one type of protein carrier. Maintains much higher gradient of Na ions in the lumen of the intestine than inside the cells. Na diffuses into the epithelial cells through a co-transport protein. They diffuse with glucose/amino acids.

Adaptations off membrane for rapid transport:

- external membranes
- More protein channels/protein carriers

3.2.4 Cell recognition and the

immune system

Defence mechanisms: Two responses cell-mediated process involving T lymphocytes and humeral response involving B lymphocytes.

Recognising our own cells: Cells have specific molecules on their surface. These proteins allow the immune system to identify:

- Pathogens release toxins/kill cells
- Non-self material

Abnumil Edy cells - cance cells ge 7 of nagocytosis: Two types of n' Phagocytosis: Two types of phagocytes - Neutrophils (made in bone marrow and travel in blood) and Macrophages (made in bone marrow and travel in blood/settle in lymph nodes)

Neutrophils have a multi lobed nucleus and Macrophages have one.

Non-specific process - attacks anything foreign

- 1) Phagocyte attracted to the antigen a pathogen by chemoattractants.
- 2) Binds to pathogen
- 3) Pathogen engulfed and isolated in a vesicle.
- 4) Lysosome fuses to vesicle (phagosome) and releases hydrolytic enzymes
- 5) Pathogen digested
- 6) In a macrophage the break down products would be presented on the surface via exocytosis.

