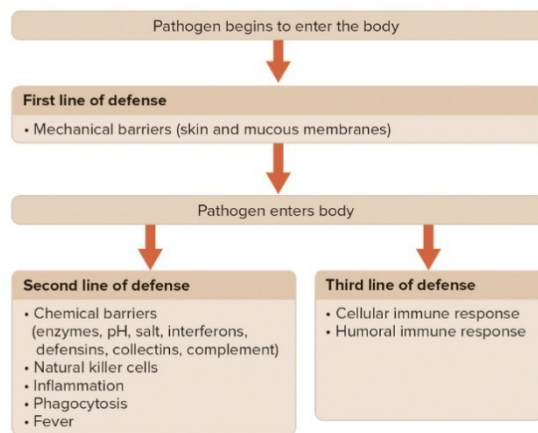


BIOS255 Exam 3 Review

Introduction to immune system

- Functions of the immune system
 - Protect the body from and fight off pathogens
- Two major forms of immunity with three lines of defense
 - Non-specific Resistance (Innate Immunity) – Immune defense mechanisms you are born with
 - ☞ Physical and Chemical barriers – first line of defense
 - Skin
 - Mucous membranes
 - Sebum
 - Perspiration
 - ☞ Internal defenses - Second line of defense
 - Inflammation
 - Interferon
 - Compliment
 - Fever
 - NK cells (Immunological surveillance)
 - Phagocytosis
 - Specific Resistance (Adaptive Immunity; Third line of defense)
 - ☞ Cell mediated immunity
 - ☞ Antibody mediated

immunity Overview of Innate (non-specific) defenses



- Non-phagocyte killing
 - Granulocytes release chemical granzymes to attack local pathogens
 - ☞ Neutrophils – bacteria
 - ☞ Eosinophils – parasitic worms, allergies, and inflammation
 - NK cells
 - ☞ Recognition and attachment
 - ☞ Secretion of perforins and granzymes
 - ☞ Lysis and detachment
- Phagocytosis