**Defence Against Infectious Disease**

- The skin and mucous membranes form a primary defense against pathogens that cause infectious disease.

- Cuts in the skin are sealed by blood clotting.

- Clotting factors are released from platelets; the cascade results in the rapid conversion of fibrinogen to fibrin by thrombrin.

- Ingestion of pathogens by phagocytic white blood cells gives non-specific immunity to diseases.

- Production of antibodies by lymphocytes in response to particular pathogens gives specific immunity to diseases.

- Antibiotic blocks processes that occur in prokaryotic cells but not in eukaryotic cells.

- Viruses lack a metabolism and cannot therefore be treated with antibiotics.

- Some strains of bacteria have evolved with genes that confer resistance to antibiotics, and some strains of bacteria have multiple resistance.

**Application**

| Causes and consequences of blood clot formation in coronary arteries |
| Florey and Chain’s experiments to test |

**Questions on this?**
penicillin on bacterial infections in mice

Effects of HIV on the immune system and methods of transmission

NOS

Risks associated with scientific research- Florey and Chain's tests on the safety of penicillin would not be compliant with current protocol on testing (4.8)

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Q/A

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