ATHEROSCLEROSIS

- progressive disease of ARTERIES, accumulation of LIPIDS and FIBROUS TISSUE in tunica intima of vessels
- primary cause of CORONARY HEART DISEASE and STROKE
- leads to MYOCARDIAL ISCHAEMIA

1. Mechanism of Atherogenesis
- Endothelial dysfunction leading to reduced NO synthesis
- Damaged endothelial express adhesion molecules (VCAM1), cause inflammatory cells to attach
- Inflammatory cells move into intima, attracted by chemotactic stimuli eg MCP1 & differentiate into macrophages
- Macrophages ingest oxidised LDL (levels high in blood) via scavenger receptors and form foam cells.
- Foam cells accumulate, apoptosis explode and leave lipid core
- Proliferation & matrix formation by intimal “synthetic” smooth muscle cells forms fibrous cap
- Thrombosis caused by rupture of fibrous cap (eg by proteolytic enzymes released by inflammatory cells)