

Stable Angina



AcePhysio

acephysio.org



@Acephysio

Stable Angina: Ischaemic chest pain which is experienced during exertion and resolves with rest.

Risk factors:

- Smoking
- Type2 Diabetes Mellitus
- Hypercholesterolemia
- Hypertension
- Sedentary lifestyle
- Personal/Family history of cardiac disease

Pathophysiology:

- Development of **atherosclerotic plaque** in the coronary arterial wall → reduced blood flow to the myocardium (heart muscle) due to narrowing of the lumen of the artery
- Atherosclerotic plaque is protected with an unruptured **fibrous cap** → prevents clot formation and further **stenosis** (narrowing) of the coronary artery lumen
- Ischaemic pain occurs if the metabolic demand of the myocardium exceeds the delivery of oxygen by the coronary arteries eg. during exercise

Presentation

- Chest pressure or squeezing lasting 2-5 minutes
- Chest pain aggravated by exercise or emotional stress
- Chest pain relieved by rest or **glyceryl trinitrate (GTN)**
- **Levine's sign** - a clenched fist held in front of the chest
- Shortness of breath on exertion
- Increased sweating
- Fatigue
- Nausea/vomiting
- Upper abdomen pain

Assessment

- Typically a **clinical diagnosis** is made based on the patient's signs & symptoms
- ECG at rest - may show ST segment depression & T wave inversion
- Blood test - check haemoglobin (severe anaemia can exacerbate stable angina), lipid (elevated lipid is a strong risk factor for acute coronary syndrome), blood glucose or HbA1c (diabetes is a strong risk factor for acute coronary syndrome)

Management

- **Cardiac rehabilitation** - involves a circuit of aerobic and resistance training stations. Also includes pre- and post-exercise vital signs monitoring, a warm-up & cool-down. Normally completed bi-weekly and exercise is combined with education on physical activity, food intake, self-efficacy, and health literacy
- Important to warm up slowly for a few minutes before aerobic exercise & gradually slow down for 10 minutes during the cool-down until breathing rate and heart rate return to normal
- **Patient education** - provide recommendations to help patients achieve optimal weight management, increased physical activity, dietary modifications, reduce blood lipids, and smoking cessation. Also important to ensure patients comply with their medication regime
- Medical: Sublingual GTN (coronary vasodilator), daily aspirin (prevents clot formation), statins (lowers blood lipid concentration), beta blockers (reduce heart rate and contractile force)



Want to learn more?

With AcePhysio the learning journey doesn't stop here! Take a look at our further reading recommendations below to become an expert in Stable Angina:

1. Fihn SD, Gardin JM, Abrams J, et al; American College of Cardiology Foundation/American Heart Association Task Force. 2012 ACCF/AHA/ACP/AATS/PCNA/SCAI/STS guideline for the diagnosis and management of patients with stable ischemic heart disease. *Circulation*. 2012 Dec 18;126(25):e354-471.
2. Dibben G, Faulkner J, Oldridge N, et al. Exercise-based cardiac rehabilitation for coronary heart disease. *Cochrane Database Syst Rev*. 2021 Nov 6;11:CD001800.
3. Anderson L, Sharp GA, Norton RJ, et al. Home-based versus centre-based cardiac rehabilitation. *Cochrane Database Syst Rev*. 2017 Jun 30;(6):CD007130.
4. Anderson L, Brown JP, Clark AM, et al. Patient education in the management of coronary heart disease. *Cochrane Database Syst Rev*. 2017 Jun 28;(6):CD008895.