

Liverpool John Moores University

Title: PATHOPHYSIOLOGY OF CARDIOVASCULAR DISEASE
Status: Definitive
Code: **7100SPOSCI** (124274)
Version Start Date: 01-08-2021

Owning School/Faculty: Sport and Exercise Sciences
Teaching School/Faculty: Sport and Exercise Sciences

| Team | Leader |
|---------------|--------|
| Ellen Dawson | Y |
| Dick Thijssen | |

Academic Level: FHEQ7 **Credit Value:** 20 **Total Delivered Hours:** 38

Total Learning Hours: 200 **Private Study:** 162

Delivery Options

Course typically offered: Semester 2

| Component | Contact Hours |
|-----------|---------------|
| Lecture | 12 |
| Practical | 10 |
| Tutorial | 10 |
| Workshop | 4 |

Grading Basis: 50 %

Assessment Details

| Category | Short Description | Description | Weighting (%) | Exam Duration |
|----------|-------------------|-------------|---------------|---------------|
| Exam | Exam | Unseen exam | 100 | 2 |

Aims

This module will primarily focus on the causes of atherosclerotic vascular disease in humans. Detailed consideration will be given to the pathophysiology of macrovascular manifestations of atherosclerosis including heart disease and stroke, the largest causes of mortality and morbidity in developed and developing countries. Microvascular disease and associated morbidities such as retinopathy, nephropathy

and neuropathy will also be considered. Finally, the role of exercise in amelioration of cardiovascular diseases and risk factors will be considered.

Learning Outcomes

After completing the module the student should be able to:

- 1 Evaluate the data describing pathological basis for major cardiac diseases (myocardial infarction, heart failure).
- 2 Synthesise the data describing the incidence, diagnosis, treatment and prevention of major cardiac diseases.
- 3 Analyse the data examining the effects of exercise on physiological responses and pathophysiological processes in patients with cardiovascular diseases.
- 4 Critically evaluate the research evidence concerning exercise in the secondary prevention of cardiovascular diseases.

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

| | | | | |
|-------------|---|---|---|---|
| Examination | 1 | 2 | 3 | 4 |
|-------------|---|---|---|---|

Outline Syllabus

*Incidence of CV disease and pathophysiological basis of atherosclerotic diseases.
Impact or risk factors on cardiovascular disease
Impact of exercise training on primary and secondary cardiovascular disease development
Effects of exercise training on physiological and pathophysiological mechanisms.
Exercise and interventional management of cardiovascular diseases.*

Learning Activities

Students are expected to attend timetabled lectures. Analysis of current theory in the pathophysiology of cardiovascular disease will be central to this module and application of theory to practice will be debated. Students will be required to think critically and integrate multiple disciplines when evaluating the role of exercise in a variety of cardiovascular diseases. Students should complete the required work related learning tasks as well as the recommended reading to widen their critical knowledge and understanding. The integration of theoretical and practical knowledge should be evidenced in the assessment tasks.

Notes

This module will focus on cardiovascular disease examining the role of exercise in their treatment and the interactive effect of the disease and pharmacotherapy on exercise capacity and prescription. The module will draw together current theory and

practice to provide the student with a broad understanding of cardiovascular disease for the clinical exercise physiologist.