

### Objectives

- Outline the development of key anatomic & functional features of the fetal and neonatal cardiovascular system
- Recall the main features of the fetal circulatory pattern including their importance to normal fetal and neonatal development
- List the critical points in cardiovascular transition that occur in the first 72 hours of life
- Explain neonatal myocardial performance
- Relate clinical assessments to physiologic findings in the neonatal period
- Identify common congenital heart defects by classification and clinical findings
- Describe maturational changes impacting the cardiovascular system during infancy and childhood

### Content Outline

1. Fetal Cardiovascular System Development
  - 1.1 Anatomic development including heart and blood vessels
  - 1.2 Developmental basis for common anomalies
  - 1.3 Functional development of the fetal myocardium
  - 1.4 Fetal circulation
2. Neonatal Physiology
  - 2.1 Transitional Events
    - 2.1.1 Impact of change from parallel to series circulatory pattern
    - 2.1.2 Changes in oxygen and hormone levels
    - 2.1.3 Closure of fetal shunts
  - 2.2 Neonatal Structure & Performance Changes
    - 2.2.1 Myocardium
    - 2.2.2 Pulmonary vasculature
    - 2.2.3 Metabolism
  - 2.3 Clinical Implications
    - 2.3.1 Assessment (including heart sound and presence of cyanosis)
    - 2.3.2 Congenital defects by category (severe, mild and acyanotic)
    - 2.3.3 Maturational changes

### Reading Material Resources

This self assessment module is based on the resources listed below.

The reading materials are in the form of a PDF file and can be accessed from the online testing center once the module is purchased.

Chapter 9, The Cardiovascular System, Maternal, Fetal & Physiology: A Clinical Perspective, Blackburn, et al., Saunders, Elsevier, St. Louis, 2007, pages 288-310