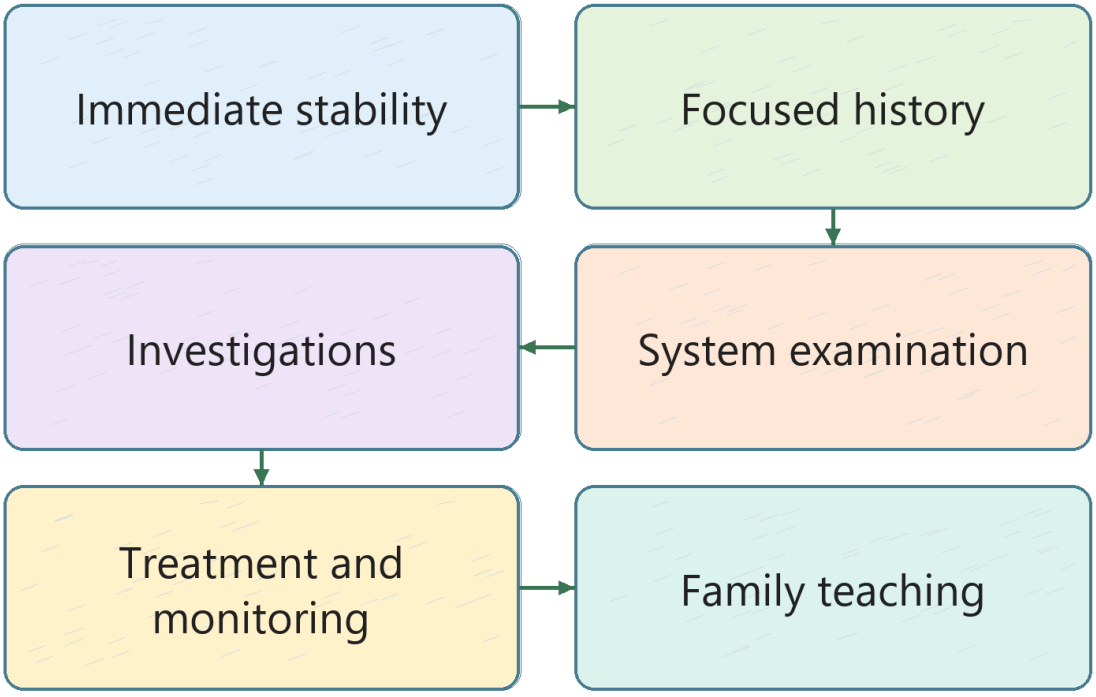
Child Health Nursing II — Unit 1: Cardiovascular, gastrointestinal, genitourinary and neurological disorders

Assessment of a Child with a System Disorder

Overview

- Congenital disorders are present at birth, although their effects may become apparent later.
- Acquired disorders develop after birth and may result from infection, inflammation, nutritional deficiency, injury or other disease.
- This unit covers cardiovascular, blood, digestive, urinary and neurological disorders and the care needed before, during and after treatment.



Assessment priorities for an unwell child

General Assessment

- Establish the child's age, growth pattern, feeding, development, immunization, medical history and family concerns.
- Assess breathing, circulation, hydration, consciousness, pain and age-appropriate vital signs before a detailed system examination.
- Record current weight in kilograms because medicine doses and fluid plans commonly depend on weight.
- Poor feeding, cyanosis, shock, bilious vomiting, severe breathing difficulty or reduced responsiveness requires urgent assessment.

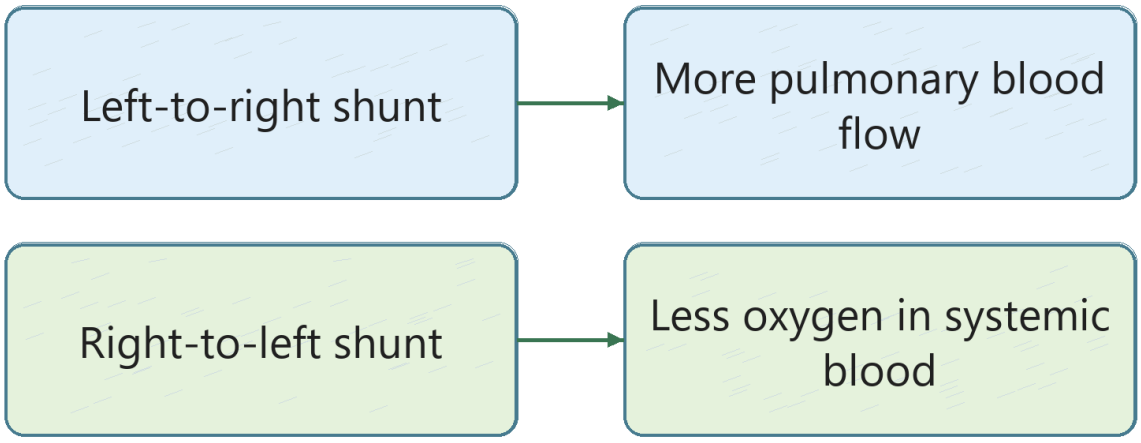
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- Explain care to the child and caregiver, provide comfort and involve the family without transferring professional responsibility to them.

Congenital Heart Disease

Definition

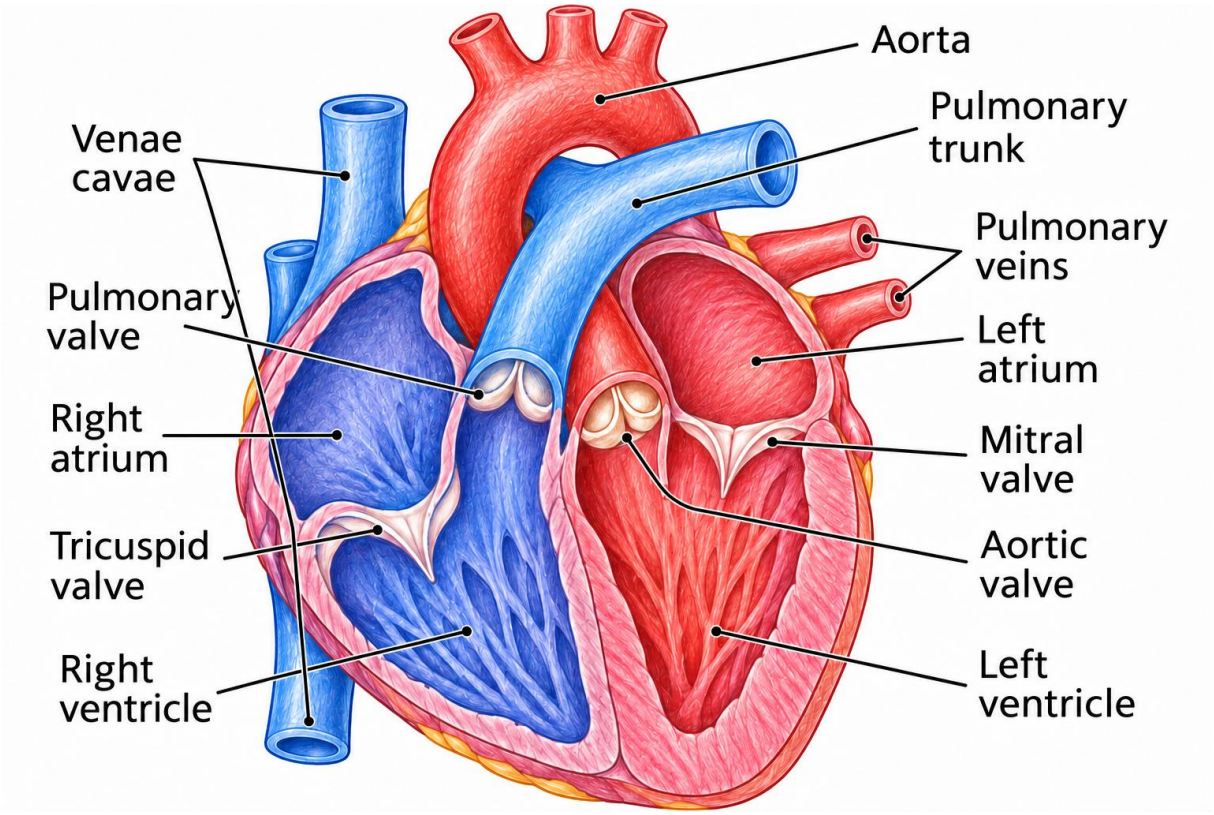
- **Congenital heart disease** is a structural abnormality of the heart or great vessels present at birth.



Main circulatory patterns in congenital heart disease

Effects on Circulation

- The defect changes blood flow and may cause increased lung blood flow, reduced oxygen delivery, obstruction or heart failure.



Cardiac chambers and the normal circulation

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Classification

A. Acyanotic Defects

- Acyanotic defects usually do not initially cause central cyanosis.
- Left-to-right shunts such as ASD, VSD and PDA send additional blood towards the lungs, while other defects obstruct flow.
- Longstanding severe pulmonary vascular disease can eventually reverse a shunt and produce cyanosis.

B. Cyanotic Defects

- Cyanotic defects allow insufficiently oxygenated blood to reach the systemic circulation or markedly reduce effective lung blood flow.
- Tetralogy of Fallot is an important example, but cyanosis has other cardiac and respiratory causes that require assessment.

Identification

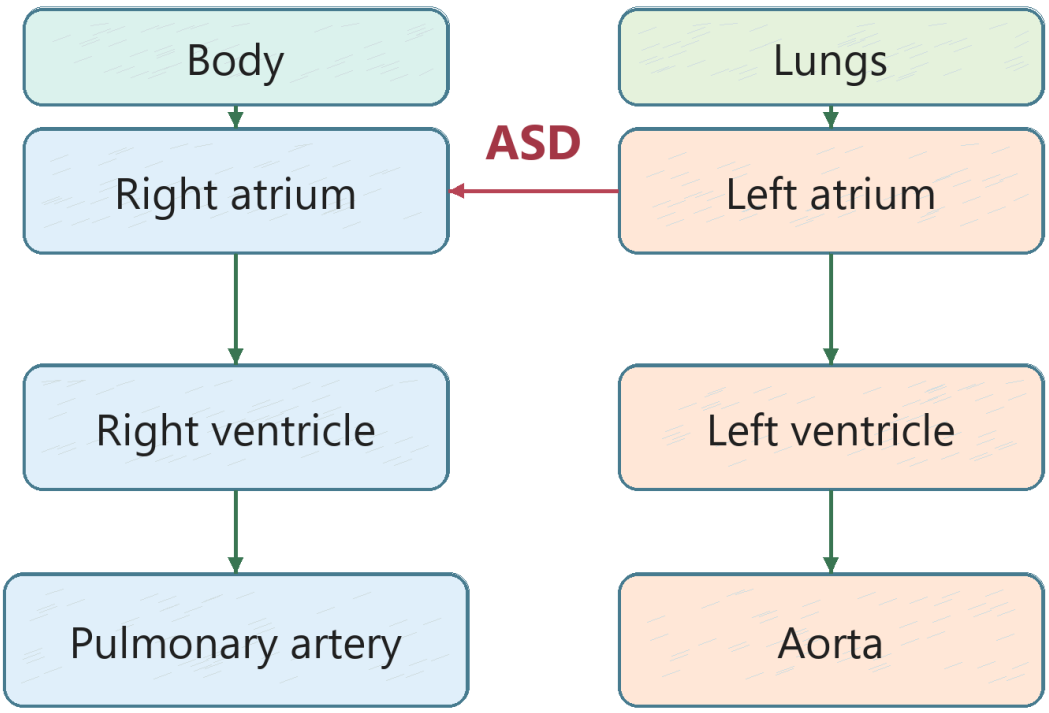
- Assess central colour, oxygen saturation, respiratory effort, pulses, perfusion, feeding and weight gain.
- A murmur may suggest a defect, but absence of a murmur does not exclude critical congenital heart disease.
- Echocardiography defines structure and blood flow, while ECG, chest imaging and other tests support assessment as indicated.

Atrial Septal Defect

Definition

- An **ASD** is an opening in the septum between the atria.

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Usual left-to-right shunt; direction can change with pulmonary vascular disease

Atrial septal defect and usual shunt direction

Mechanism

- Blood usually passes from the left atrium to the right atrium, increasing right-sided volume and pulmonary blood flow.

Clinical Features

- A small defect may cause no symptoms and be identified during examination.
- Larger defects can cause exercise intolerance, recurrent respiratory symptoms or poor growth.
- A systolic flow murmur and fixed splitting of the second heart sound may be present.

Diagnosis

- Echocardiography confirms the site, size, shunt and effect on the right heart.

Management

- Small defects may be monitored, while significant defects may require catheter closure or surgery according to anatomy.

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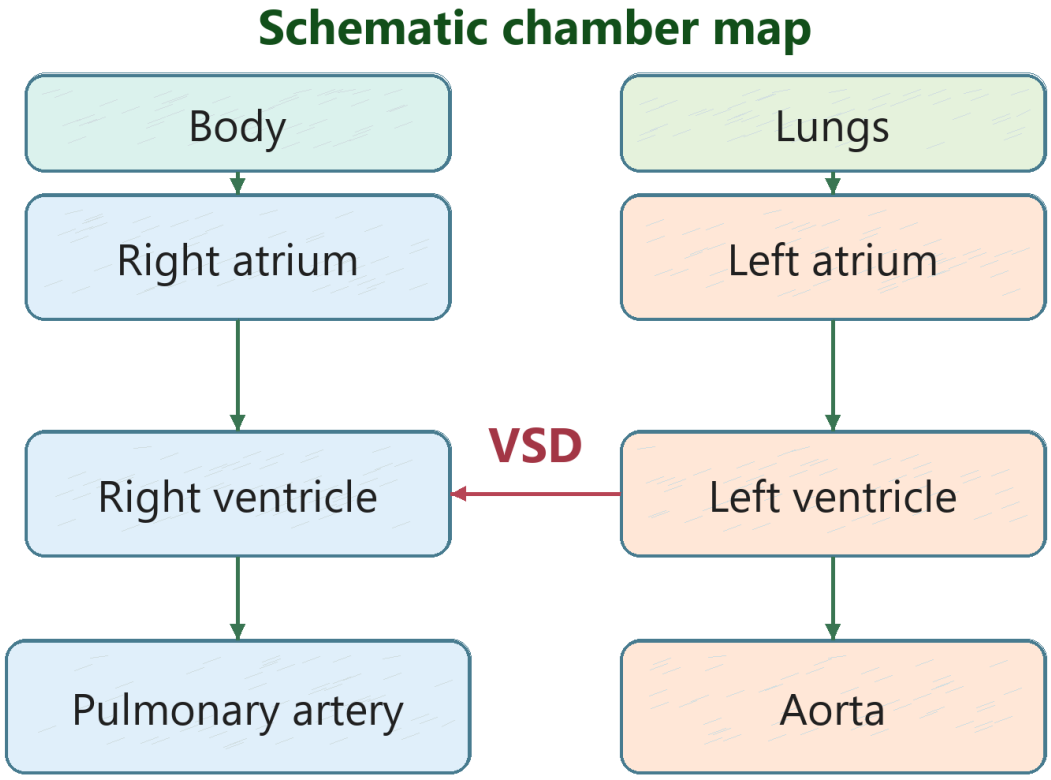
Nursing Care

- Monitor growth, activity tolerance and signs of heart failure while awaiting treatment.
- Prepare the child and family for investigations and explain the reason for continuing follow-up even when symptoms are mild.
- After closure, observe circulation, rhythm, bleeding and the catheter or surgical site and teach activity and review instructions.

Ventricular Septal Defect

Definition

- A **VSD** is an opening between the ventricles.



Usual left-to-right shunt; direction can change with pulmonary vascular disease

Ventricular septal defect and usual shunt direction

Mechanism

- A significant left-to-right shunt increases pulmonary flow and can overload the heart as pulmonary resistance falls after birth.

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