



# Patent Ductus Arteriosus

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## Characteristics

- A persistent open connection beyond 3 months of age between the pulmonary artery and the aorta with blood flow from the aorta to the pulmonary artery.
- An open ductus may lead to:
  - Congestive heart failure.
  - Pulmonary hypertension.
  - Increased risk of bacterial endocarditis.

## Followup

- A high rate of spontaneous closure occurs during the first 2 years of life.
- If the ductus is open at the time of hospital discharge, followup with a cardiologist should occur within 2 months of discharge to assess well-being and the presence/absence of congestive heart failure.
  - Earlier followup should occur if poor weight gain, difficulty feeding, and tachypnea develop.
  - Generally do not need a followup echocardiogram, as anatomy is already known.

## Management

- If spontaneous closure does not occur, closure should be performed to:
  - Eliminate pulmonary overcirculation.
  - Eliminate risk of endocarditis.
- If symptomatic:
  - Initially, try diuretics and maximize caloric intake to 140 kcal/kg/day.
  - If still symptomatic despite optimal medical management and:
    - >2.4 kg, surgical ligation or percutaneous closure should be considered.
    - <2.4 kg, surgical ligation should be considered.
- If asymptomatic:
  - Wait until patient weighs between 10-12 kg, or is close to 2 years of age, then attempt percutaneous closure with Amplatzer occlude or coils.
  - Surgery if percutaneous attempt is unsuccessful.