

Randall Children's Hospital

Co-Management and Referral Guidelines

Chest Pain in the Pediatric Population

Pediatric Cardiology

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Introduction

- Chest pain in infants, children, and adolescents is extremely common.
- **But:** Cardiac chest pain in infants, children, and adolescents is extremely rare.
- With the exception of myocarditis and pericarditis, cardiac chest pain almost never occurs at rest.

Evaluation and Management

A careful history distinguishes most causes of chest pain

- Chest pain that occurs only during peak exertion is most concerning for cardiac chest pain.
 - If any pain occurs at rest, non-cardiac causes are likely.
 - Cardiac chest pain is usually described as a deep, achy, heavy pain and does not vary much with respirations. There is often radiation of pain down the left arm or up the left neck or jaw.
 - Syncope or near-syncope are common features.
- Musculoskeletal chest pain and costochondritis are often reproducible with gentle pressure to the affected area.
 - They usually follow a new activity or sport, trauma, recent viral illness or prolonged coughing.
 - Symptomatic care, including rest and ibuprofen, is usually sufficient.
- Precordial catch syndrome is characterized by a sharp, stabbing, sudden onset of pain, usually over the left precordium.
 - It can last for a few seconds, rarely up to an hour. The pain comes and goes suddenly.
 - Breathing or deep inspiration often exacerbate the pain, which gives the sensation of being unable to catch a breath. The pain can lead to anxiety, hyperventilation and syncope or near-syncope.
 - It is believed to be caused by spastic or irritated innervation of the pleura or pericardium.
 - Treatment is usually comprised of reassurance, as this is not a dangerous health issue and resolves over time. Better fluid intake can be helpful. If the history suggests a recent inflammatory process, or the chest pain occurs frequently (a few times a week), scheduled ibuprofen for a few days may be helpful.
- Exercise-induced asthma is bronchospasm during exercise.
 - Deep inspiration can cause shortness of breath, chest tightness and pain. The athlete may experience coughing, wheezing (not always present), fatigue with exercise or impaired athletic performance.
 - There is often a family history of asthma.
 - The treatment is a trial of albuterol MDI with spacer, 20–30 minutes before activities. Response to albuterol may help diagnose exercise-induced asthma.

When to refer

- Refer any child who has chest pain with exertion that is not thought to be caused by exercise-induced asthma to pediatric cardiology. *(continued)*



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Referral process

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For possible admissions or to reach a different sub-specialist at Randall Children’s Hospital, call **Legacy One Call Consult & Transfer: 1-800-500-9111**.

Additional Resources

Additional causes of chest pain in children:

Non-cardiac causes	Cardiac causes
Foreign body	Aortic dissection/aneurysm
Gastroesophageal reflux	Aortic/pulmonary stenosis
Ingestion/toxin	Arrhythmias
Pneumonia/pleuritis	Cardiomyopathy
Pneumothorax	Coronary artery disease
Psychogenic	Pericarditis/myocarditis

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Find this and other co-management/referral guidelines online at: www.legacyhealth.org/randallguidelines



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