

WOMEN'S HEALTH AND PAEDIATRICS  
 PAEDIATRIC DEPT

<b>Chest Pain</b>
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Amendments			
Date	Page(s)	Comments	Approved by
July 2008	New Guideline		
March 2018		Whole document review – no changes	Paediatric Guideline Group

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**In Consultation with:**

**Ratified by:** Paediatric Guidelines Group

**Date Ratified:** July 2008

**Date Reviewed:** December 2019

**Next Review Date:** December 2023

**Target Audience:** Doctors, nurses and support staff working in Paediatrics

**Impact Assessment Carried Out By:**

**Comment on this**

**Document to:** Dr A Groves, Consultant Paediatrician

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## Chest Pain

### **Background**

Chest pain is a common presentation in childhood, especially teenagers.  
It is rarely cardiac in origin.

History is very important – almost never angina and careful targeted examination is essential

Establish what they mean by pain – it may be palpitations/ discomfort

Causes:

- Chest wall pain commonest (64%)
- Pulmonary (13%)
- Psychological (9%)
- Cardiac (5%)
- Traumatic (5%)
- Gastrointestinal problem (4%)

Organic causes can be identified or suspected by history and physical examination –  
Crucial!

- Over 12 years - Psychological/idiopathic, but like non organic abdominal pain should not be dismissed out of hand.
- Under 12 years - Most likely respiratory (occasional cardiac)
- 80% think it is “Their heart” - 30% still think this given another diagnosis!

### **Scope of guideline**

The principle aim is to consider all possible causes of chest pain and keys how to differentiate between them.

It also aims to identify less common conditions such as cardiac causes.

Prompt identification of children with serious causes in whom a delay in treatment and mismanagement can have devastating consequences.

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Date: \_\_\_ / \_\_\_ / \_\_\_ Time : \_\_\_\_\_ :  
 \_\_\_\_\_

Consultant \_\_\_\_\_  
 \_\_\_\_\_

Hospital number:  
 Name:  
 Address:  
 Date of Birth:  
 Male     Female  
 School:  
 \_\_\_\_\_

**History**

- 1) *Description of pain e.g. Stabbing + duration*
- 2) *Trauma/ extreme muscle use*
- 3) *Association with breathing e.g. Pleuritic*
- 4) *Respiratory symptoms e.g. cough, wheeze, dyspnoea + fever*
- 5) *Aggravating/relieving factors e.g. exercise, meals, supine position, NSAIDS, antacids*
- 6) *History of palpitations*
- 7) *Position/radiation*
- 8) *Past Hx: e.g. Coagulopathy, haemoglobinopathy, Kawasaki, Connective tissue disease, Marfan's*
- 9) *Family Hx e.g. Cardiac history->*
- 10) *Family events/ life stress, anxiety, depression, hyperventilation, headaches*
- 11) *Drug misuse e.g. Cocaine, Marijuna, amphetamines*

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## **Examination**

A complete examination is required with the patient, but in particular looking for:

### **Respiratory**

- 1) *Tachypnoea?*
- 2) *Oxygen saturation*
- 3) *Fever?*
- 4) *Pleuritic pain – worse on inspiration lying down?*
- 5) *Pneumothorax – Marfan's?*
- 6) *PE – bilateral Chest pain*
- 7) *Chest crisis in Sickle cell Disease*

### **Cardiovascular**

- 1) *Significant tachycardia & pain worse on lying down - pericarditis, myocarditis?*
- 2) *Arrhythmias, Blood pressure?*
- 3) *Murmurs*  
*Left outflow tract - upper right sternal edge – (LVOTO) – ejection systolic murmur*

### **Musculoskeletal/Local**

- 1) *Costochondritis, 4-6<sup>th</sup> CC – Local tenderness?*
- 2) *Teitze's syndrome, 2<sup>nd</sup> CC junction on the right with palpable swelling?*
- 3) *Breast problems – Mastalgia,?*
- 4) *Shingles?*

### **Abdomen**

- 1) *Pneumonia chest &/or abdominal pain*
- 2) *Epigastric pain/ tenderness with gastritis*

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**Investigations**

Not always necessary in a number of cases & the following are true indications for ordering them:

*(Please circle relevant indication)*

**ECG**

Arrhythmia / LVOTO / Family history of HOCM or any cardiac sudden death / Marfan's

**Chest X-ray**

Cardiac/Respiratory problems/ or no other cause found

**ECHO (Always to be discussed with the Paediatric registrar)**

Evidence of Congenital Heart Disease on examination / Significant arrhythmia /?  
Myocarditis /? Pericarditis – especially connective tissue disease

***Diagnosis/Impression:***

***Management Plan:***  
***(Discuss with Paediatric registrar –If necessary)***

**Name of Doctor:**.....**Grade**.....

**Signed:**.....**Date**.....