

**S Determine the PQRST of the pain**

**P = Place of the pain.** Determine its exact location.

**Q = Quality of the pain.** Rate it on a scale of 1 to 10 (10 being the worst), and ask the pt to describe it (e.g., sharp, dull, pressure, burning).

**R = Radiation.** Does the pain radiate to the jaw, shoulder, stomach, or back?

- Pain radiating to jaw or left shoulder is common with cardiac ischemia.
- Pain radiating to back should increase suspicion for aortic dissection.

**S = associated Symptoms.** What makes the pain worse or better (e.g., bending over, walking up stairs, lying down, resting, eating, etc.)?

**T = Timing.** How long has the pain been present, or how long does it last when it occurs?

- Fleeting pain that lasts seconds is typically musculoskeletal in origin.

**Does the pt have any risk factors for myocardial infarction?**

See Myocardial Infarction p. 16

**Has the pt experienced any symptoms consistent with angina?**

Exertional shortness of breath or chest pain

**Has there been any trauma, heavy lifting, or heavy exertion?**

More consistent with musculoskeletal chest wall pain

**Determine the presence of cough, fever, or upper respiratory symptoms**

More consistent with pneumonia, pleurisy, or costochondritis

**Does the pt have a history of gastroesophageal reflux disease (GERD) or esophageal spasm?**

Esophageal irritation from GERD or spasm can present as severe chest pain. Typically, pain is either exacerbated or relieved by eating.

**Does the pt have a history of chronic obstructive pulmonary disease/asthma?**

Chest pain can be associated with acute exacerbations.

**Obtain a social history**

Document any recent drug or alcohol use. Cocaine use can cause acute chest pain.

**Perform a general review of systems**

This may help elicit any potential medical problems complicating the chest pain.

**O Perform a physical exam**

**Lungs:** Note egophony, pleural rub, wheezing, or absent or decreased breath sounds.

**Cardiac:** Listen for murmurs, pericardial rub, irregular pulse, and S3 or S4 as signs of congestive heart failure.

**Chest:** Palpate the sternum, ribs, and chest wall for reproducible pain.

- Reproducible pain is more consistent with chest wall pain or costochondritis, but it does *NOT* exclude a myocardial infarction.

**Extremities:** Note pedal edema, pain with range of motion of arm/shoulders.

**Check the ECG**

If there are signs of a myocardial infarction (e.g., t-wave inversions, ST-segment elevation), see Myocardial Infarction p. 16.

**Obtain a CXR**

Look for signs of infiltrate, pulmonary edema, pleural effusion, fractured ribs, or masses.

**Check oxygen saturation**

Low oxygen saturation on room air suggests pulmonary embolism, pulmonary edema, or pneumonia.

**If there are multiple risk factors and/or an abnormal ECG, check cardiac enzymes**

Approximately 10% to 25% of pts presenting to the ED can have a nondiagnostic ECG despite having a myocardial infarction.

**A Musculoskeletal Chest Wall Pain -or- Pleurisy**

Inflammation of the pleura, usually occurring as a complication of a disease (e.g., pneumonia, viral illness)

**Costochondritis**

Anterior chest wall pain caused by an irritated joint between the rib and the sternum

**Differential Diagnosis**

- |                         |                         |
|-------------------------|-------------------------|
| - Myocardial infarction | - GERD/esophageal spasm |
| - Pneumonia             | - Pulmonary embolism    |
| - Pneumothorax          | - Aortic dissection     |

**P Provide effective pain relief**

NSAIDs work well on pain and the inflammatory response.

Narcotics pain relievers may be needed initially to control symptoms.

**Encourage coughing and deep breathing exercises**

Prevents atelectasis and secondary pneumonia when pts are splinting.

**Musculoskeletal pain may respond to heat and stretching exercises****Educate pt**

On the diagnosis and expected duration of illness

**Ensure adequate follow-up with their primary care provider in the next week****Instruct pt to return to the ED for**

Increased shortness of breath or chest pain

Fever greater than 102°F

Any other concerns or complaints