

## Top 10 differential diagnoses in family medicine: Chest pain

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### 9. CHEST PAIN

**The diagnosis of prolonged, severe chest pain in an ill-appearing patient will be confirmed in the emergency room, but management should begin in the community. There is no reason not to give oxygen, aspirin (except in the rare case of allergy or suspected dissection) and nitroglycerin (if the patient is hemodynamically stable).**

Recurrent chest pain in the community setting is a diagnostic challenge, but as always, a good history is key. In most cases, one would never rule out ischemia based on history alone however, unless the patient is very low risk (young), the patient has a clear cause precipitating musculoskeletal injury, or other symptoms clearly pointing towards another diagnosis (e.g. waterbrash for GERD). The following also argue *against* angina:

- Duration of pain less than 30 seconds or more than 30 minutes;
- if the pain can be localized with one finger;
- if the pain is immediately severe with no crescendo pattern; and
- in the case of a recurrent pain, if it occurs exclusively at rest (through Prinzmetal's variant angina needs to be considered).

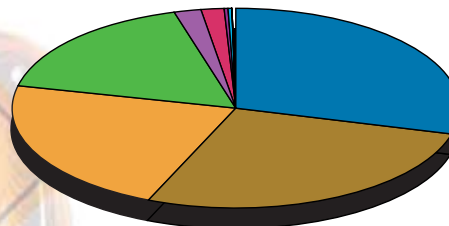
Asking about nitroglycerin's effect on the pain can also be helpful, with the caveat that it also classically relieves esophageal spasm. The timing of relief for angina is typically under 3 minutes. A relief occurring after 10 minutes since administration actually argues against angina.

Remember that a normal resting EKG does not rule out ischemia. If you think the chest pain is worrisome enough to warrant an EKG in the office, it probably

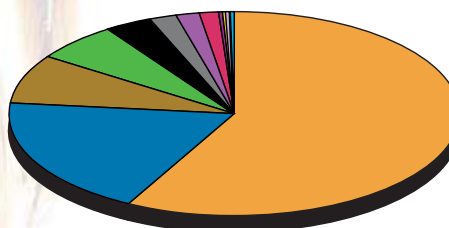
CHF—congestive heart failure; COPD—chronic obstructive pulmonary disease; EKG—electrocardiogram; GERD—gastroesophageal reflux disease; HTN—hypertension; NYD—not yet diagnosed; PE—pulmonary embolism.

warrants a period of observation in the emergency room, including cardiac markers.

The Levine sign has been studied and really does seem to be helpful. If a patient clenches a fist during assessment, take that seriously.



Under 45



45 and Over

	AGE	
	Under 45	45 and Over
Ischemic Heart Disease	22.2 %	58.0 %
Chest Pain NYD	16.9	6.0
Anxiety	27.2	7.9
CHF	0.0	3.4
Atrial Fibrillation	0.1	1.9
HTN	1.7	1.4
GERD	2.0	1.7
Pneumonia	0.2	0.4
Acute Bronchitis	0.2	0.2
COPD	0.1	0.2
PE	0.0	0.2
Other	29.3	18.8

For a pdf of the Top Ten Differential Diagnoses in Family Medicine pamphlet or to access the slide show on-line, go to <http://www.familymedicine.uottawa.ca/eng/TopTenDifferentialDiagnosisInPrimaryCare.aspx>.

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