Cardiac Related Conditions

Gator Emergency Medical Response Unit
Madison Hull
Jacky He

What are some causes of chest pain that are non-cardiac in origin?

Chest Pain: Non-Cardiac

- Conditions related to chest pain, but not related to the heart in general
  - Sucking chest wound
  - Flail chest
  - Tension pneumothorax
  - General indigestion/heartburn
  - stressed/torn muscles in thorax area
  - Anxiety/psychological
  - Pulmonary embolism

BLS Assessment

Always request ALS agency if not already done.

General impression, AVPU, XCAB

Maintain patent airway with BLS skills, use suction if needed.

Assess lung sounds

Assess for edema (swelling from fluid buildup)

Administer O2 if less than 94%

Vital signs and a detailed SAMPLE history, OPQRST assessment.

Non-cardiac assessment/treatment

Always attempt to rule out cardiac related pain.

If pain is not cardiac in origin, perform a focused physical exam for chest injuries.

“Ascertain if movement, drinking fluids, eating, deep inspiration, or other changes pain”

Continually re-evaluate for cardiac or respiratory distress

Patients may develop shortness of breath (SOB)

If patient deteriorates to cardiac arrest, **CPR.**

Chest Pain: Suspected Cardiac

- Patients whose pain you suspect is cardiac related.
- You can't diagnose chest pain as cardiac, or non-cardiac in nature
- Always contact an ALS agency FIRST.
- Example conditions:
  - Myocardial infarction
  - Aortic aneurysm/dissection.
    - Cardiac tamponade
  - Pericarditis
  - Angina
- **Detailed BLS assessment (previous slides)**


KFC BACON SANDWICH
No words can decribe the level of awesome
CARDIAC ARREST
I think that sums it up
VERY DEMOTIVATIONAL.com

Cardiac assessment/treatment

Administer oxygen if patient is exhibiting signs of heart failure. Give enough based on pulse oximeter monitoring/breathing conditions.

Administer Aspiring; total 324 mg. One baby Aspirin is 81 mg, so 4 tablets.

Make sure patient is NOT allergic and has NOT consumed aspirin in past 6 hrs, AND
No indicated risk of severe bleeding, AND
No traces of blood in vomitus or stool, AND
Patient's vitals are within normal range.

You may give a person aspirin even if they've consumed 1 baby aspirin already. Give the patient an equivalent dose for 1 adult.

If patient deteriorates to cardiac arrest, CPR.

Congestive Heart Failure (CHF)/Pulmonary Edema

CHF is the condition where the heart is unable to pump enough blood to meet body's needs. This leads to pulmonary edema (fluid in lungs) and respiratory distress.

CHF may stem from coronary artery disease (CAD), patients who've experienced heart attacks, or patients who generally overwork their heart such as from chronic hypertension, thyroid disease, diabetes, or other heart defects.

Late sign of CHF is JVD; Jugular Venous Distention
Usually only occurs with right sided heart failure

CHF assessment/treatment

Initiate BLS care, and again monitor lung sounds, and assess for edema.

If wheezing is present, contact ALS immediately if you haven't done so.

MDI may be administered if patient possesses one.

Patients may exhibit symptoms of shock as well, treat the shock.

Patients with CHF/pulmonary edema may want to sit upright, so sit them up at 30-45 degrees.

Dysrhythmias: Bradycardia

- Bradycardia is defined by a HR of less than 60 bpm
  - Bradycardia can be present in healthy individuals such as well-trained athletes or very petite females
- Bradycardia is only concerning when serious signs and symptoms are present OR if the patient has unexplained bradycardia and has an average baseline heart rate over 60
- An ALS agency needs to be contacted immediately if a patient displays serious signs and symptoms or has unexplained, abnormal bradycardia

Bradycardia Assessment/Treatment

- Request a responding ALS agency as soon as the criteria mentioned in the last slide has been met
- Establish an airway using BLS skills (jaw thrust, bag-valve-mask ventilation, oral or nasal adjuncts) and initiate basic medical care
- Use suction to clear airway and assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain O2

How to assess cardiac patients

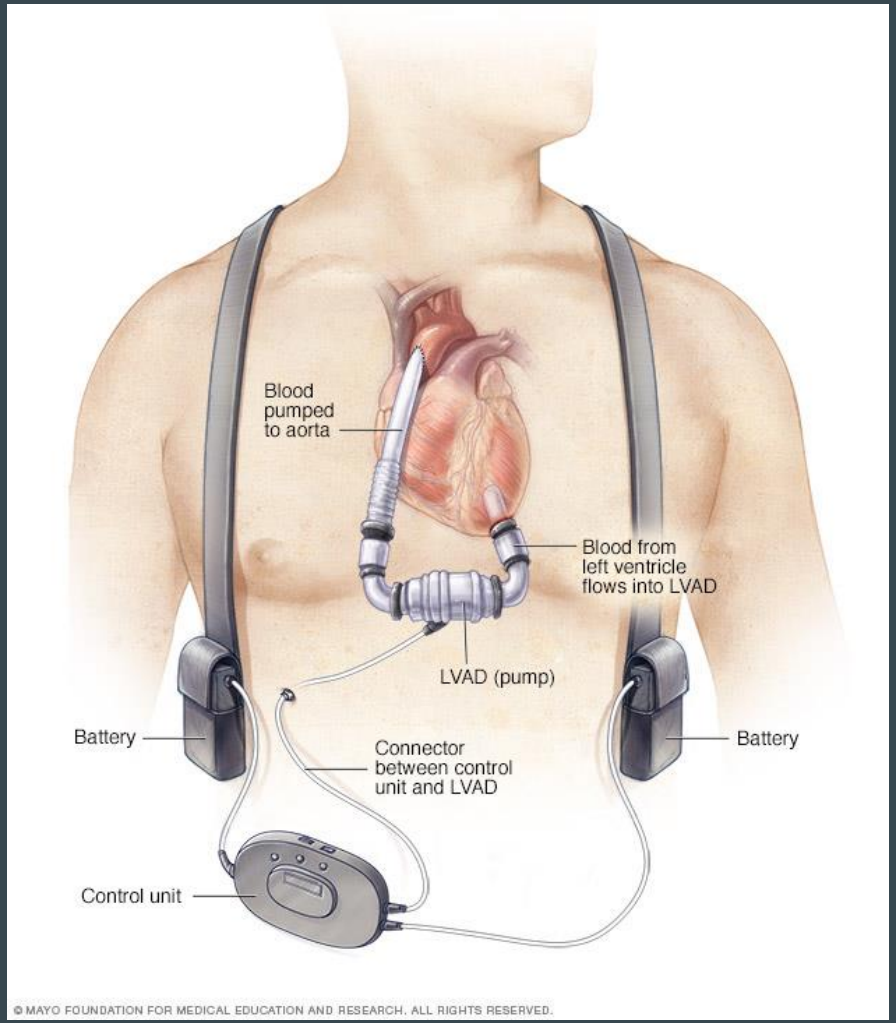
AVPU, XCAB always first. Call ALS immediately since we cannot provide drugs to patient.

Pain will always be assessed with OPQRST, followed by detailed questions regarding cardiac history

Monitor O2 saturation of patient,

We’re not cleared to give nitroglycerin

LEARN HOW TO PLACE EKGs, 4 lead, 12 lead.



Extra info: Do you know how to place an EKG?

This is useful information to know in regards to possibly assisting paramedics with their cardiac assessments.

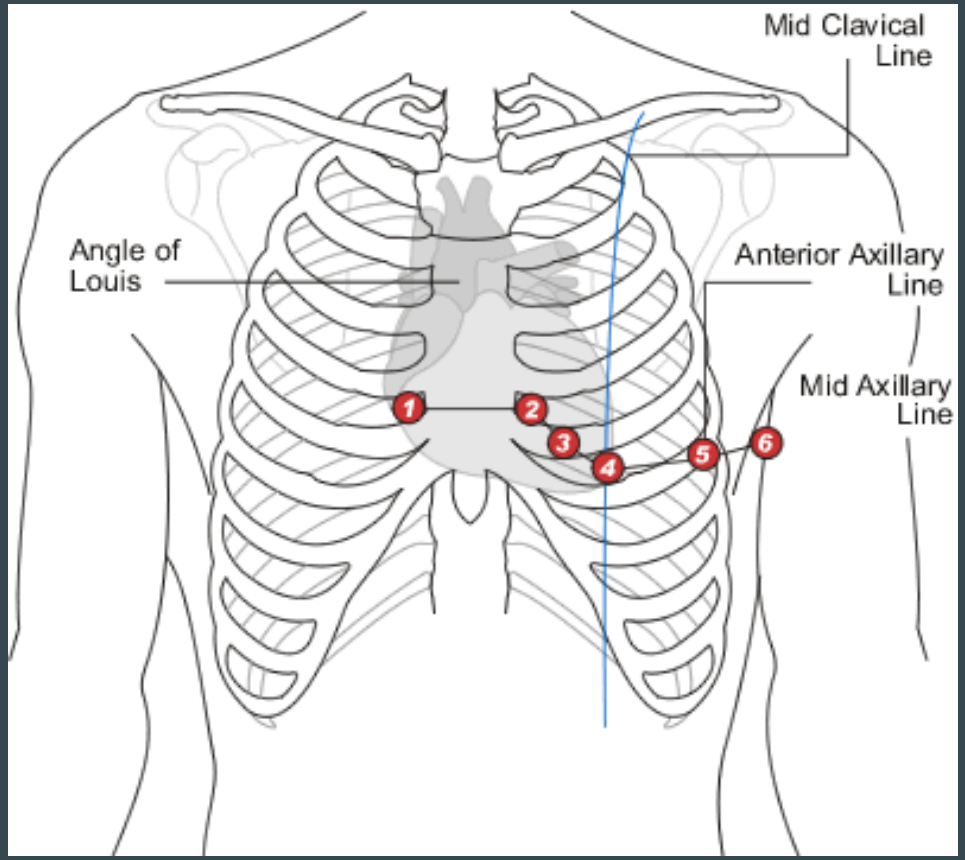
Maker of EKG Pads Now Recommends 230-Lead EKGs for Patients

By **Lord Lockwell** - October 21, 2016

13K SHARES

FRIDLEY, MN – New studies are demonstrating that the more EKG leads a patient has, the more accurate the EKG is. Previously, only 12 leads were utilized to produce EKG printouts, but physicists at Medtronic, the world's largest EKG pad provider, have discovered that the more leads placed on the patient, the more detailed the EKG is.

"Our findings are quite simple, the more EKG leads hooked up, the better the EKG," stated EKG maker Medtronic CEO Samantha Purkinje. "Our limiting factor is now available space on a body to physically place more EKG leads. That is how we came to 230 as that is a good compromise between quality and functionality."


Mid Clavical Line
Angle of Louis
Anterior Axillary Line
Mid Axillary Line
1
2
3
4
5
6

Scenario time!