

# Hypoxemia (@ the bedside!)

first check...  
is the pulse ox on correctly?



1st clinical clue:  
does the O<sub>2</sub> sat dramatically improve with minimal O<sub>2</sub>?

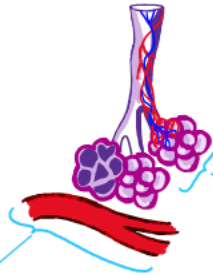
yes  
nl A-a gradient  
(alveolus and vessel are communicating)



- ↑ P<sub>a</sub>CO<sub>2</sub> drives ↓ P<sub>a</sub>O<sub>2</sub>
- COPD
- asthma
- opioid overdose

no  
↑ A-a gradient  
(alveolus and vessel are not communicating)

Listen: what do the lungs say?



abnormal breath sounds

nl breath sounds  
vessel problem is the way

blocked?

- pulmonary embolism



get: CTPE

bypassed?

- Pulm**
- pulmonary AVMs

**Cardiac**

- PFO
- ASD/VSD



get: TTE w/ bubble

alveolar problem

(+) imaging findings on CXR or chest CT

pleural space  
(alveoli closed)

air?  
pneumothorax

collapsed?  
atelectasis

fluid?  
pleural effusion  
\* see full schema

Transudative

- CHF
- liver dz
- ESRD

Light's Criteria



Exudative

- infection
- cancer
- autoimmune

parenchyma  
(alveoli filled)

blood?  
• malignancy

pus?  
• PNA

water?  
• pulmonary edema