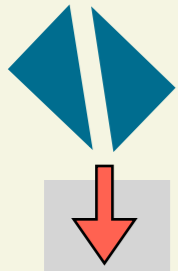


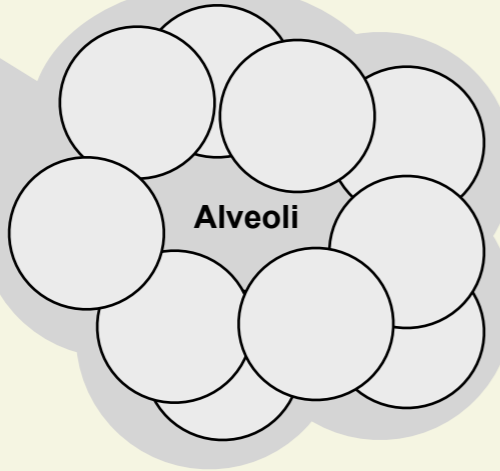
	Disorder	Tracheal Deviation	Breath Sounds	Rales	Percussion	Vocal/Tactile Fremitus (Say 99 -> Palpate)	Egophony (E -> A) (Say E -> Auscultate)	Whispered Pectorilouy (Whisper 99 -> Auscultate)	Other
6	Atelectasis with Endobronchial Obstruction	Toward Ipsilateral Side	Absent	Absent	Dull	Decreased	Absent	Absent	
	Consolidation with Endobronchial Obstruction	Absent	Decreased/Absent	Absent	Dull	Decreased	Absent	Decreased/ Absent	
2	Small Consolidation	Absent	Bronchovesicular/ Bronchial	Usually Present	Slightly Dull	Normal/Increased	Present	Variable	
	Massive Consolidation	Absent	Bronchial	Present	Dull	Increased	Present	Increased	
	Thick-Walled Cavity	Absent	Bronchovesicular/ Amphoric (Hollow, Low-Pitched)	Present	Slightly Dull	Normal/Increased	Present	Increased	
	Small Pleural Effusion	Absent	Decreased	Absent	Dull	Decreased	Absent	Decreased	
1	Large Pleural Effusion	Toward Contralateral Side	Decreased (May Be Bronchial if Atelectasis is Also Present)	Absent	Dull (Hyperresonant Above Level of Fluid)	Decreased	Absent (May Be Present If Atelectasis is Also Present)	Absent (May Be Increased If Atelectasis is Also Present)	
7	Pleural Thickening (Fibrothorax)	Absent (Toward Ipsilateral Side in Severe Cases)	Decreased	Absent	Dull	Decreased	Absent	Decreased	
3	Emphysema	Absent	Decreased/Absent	Variable	Hyperresonant	Decreased	Absent	Decreased/ Absent	
4	Pneumothorax	Toward Ipsilateral Side	Decreased/Absent	Absent	Hyperresonant	Absent	Absent	Decreased/ Absent	Coin Sound (Bell Tympany)
5	Tension Pneumothorax	Toward Contralateral Side	Decreased/Absent	Absent	Hyperresonant	Absent	Absent	Decreased/ Absent	Coin Sound (Bell Tympany)
	Hydropneumothorax	Toward Contralateral Side	Absent	Absent	Hyperresonant Above Fluid Level/ Dull Below Fluid Level	Absent	Absent (May Be Present If Atelectasis is Also Present)	Absent	Succussion Splash/ Shifting Dullness/ Coin Sound (Bell Tympany)

Normal

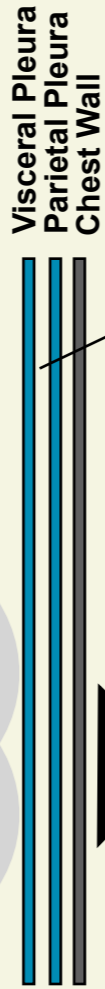
Vocal Cords



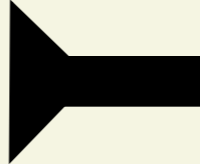
Principles
*Sound Travels Faster Through Higher Density Materials (Speed of Sound is 4x Faster Through Water Than Through Air)
*Consolidated Lung Acts as a Low-Pass Frequency Filter (Stiff Barrier Attenuates High Frequencies and Allows Low Frequencies to Pass Through)



Alveoli

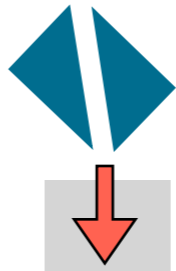


Pleural Space

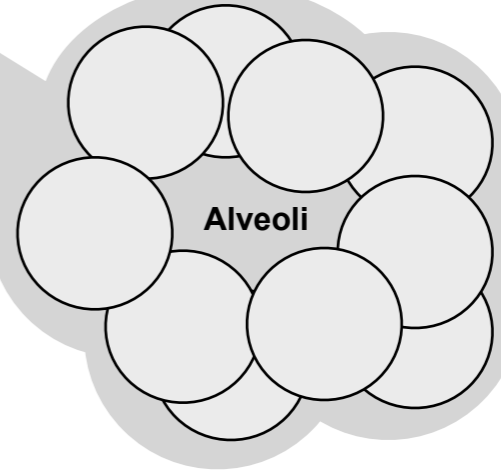


Pleural Effusion

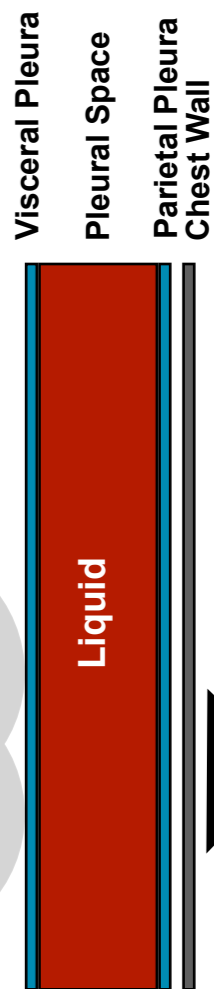
Vocal Cords



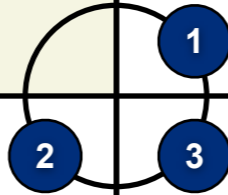
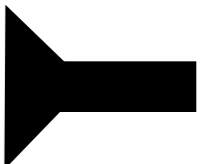
***Tracheal Deviation:** Toward Contralateral Side (With Acute, Large Effusion + Without Associated Atelectasis)
***Breath Sounds:** Decreased
***Percussion:** Dull
***Tactile Fremitus:** Decreased
***Egophony:** Absent



Alveoli

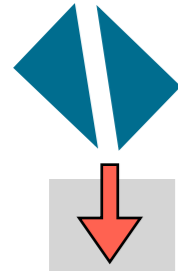


Liquid

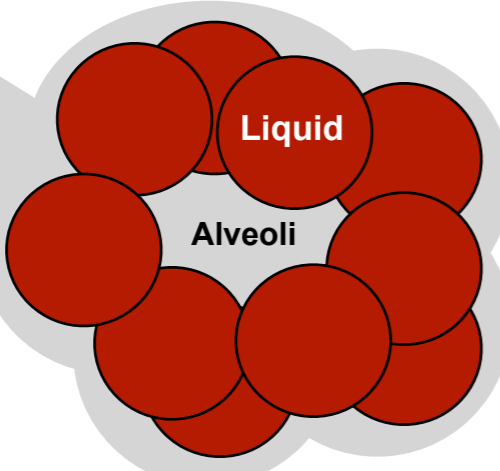


Consolidation

Vocal Cords

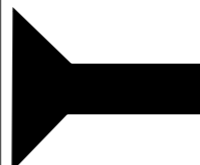
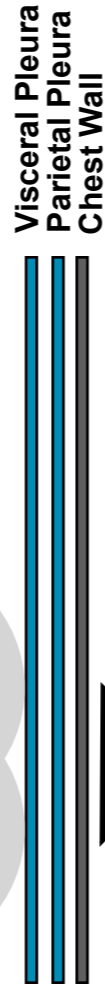


***Breath Sounds:** Bronchial
***Percussion:** Dull
***Tactile Fremitus:** Increased
***Egophony:** Present (Due to Low-Pass Frequency Filter Effect)



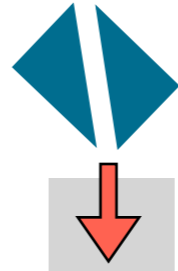
Liquid

Alveoli

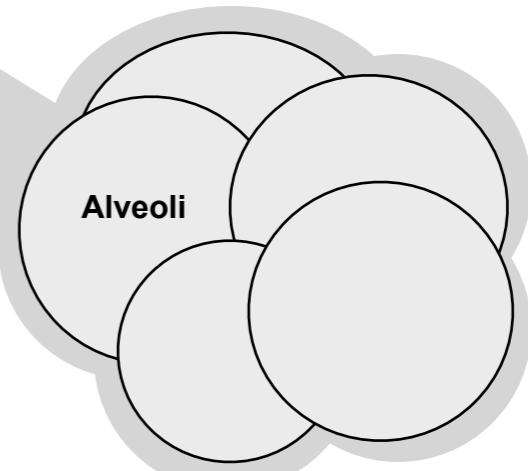


Emphysema

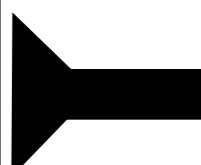
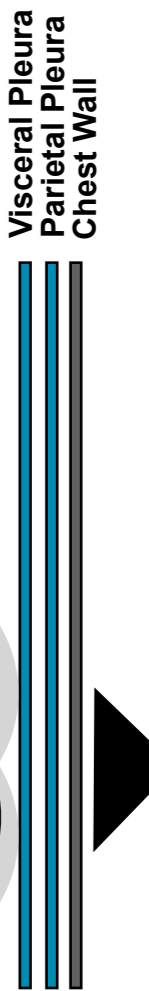
Vocal Cords



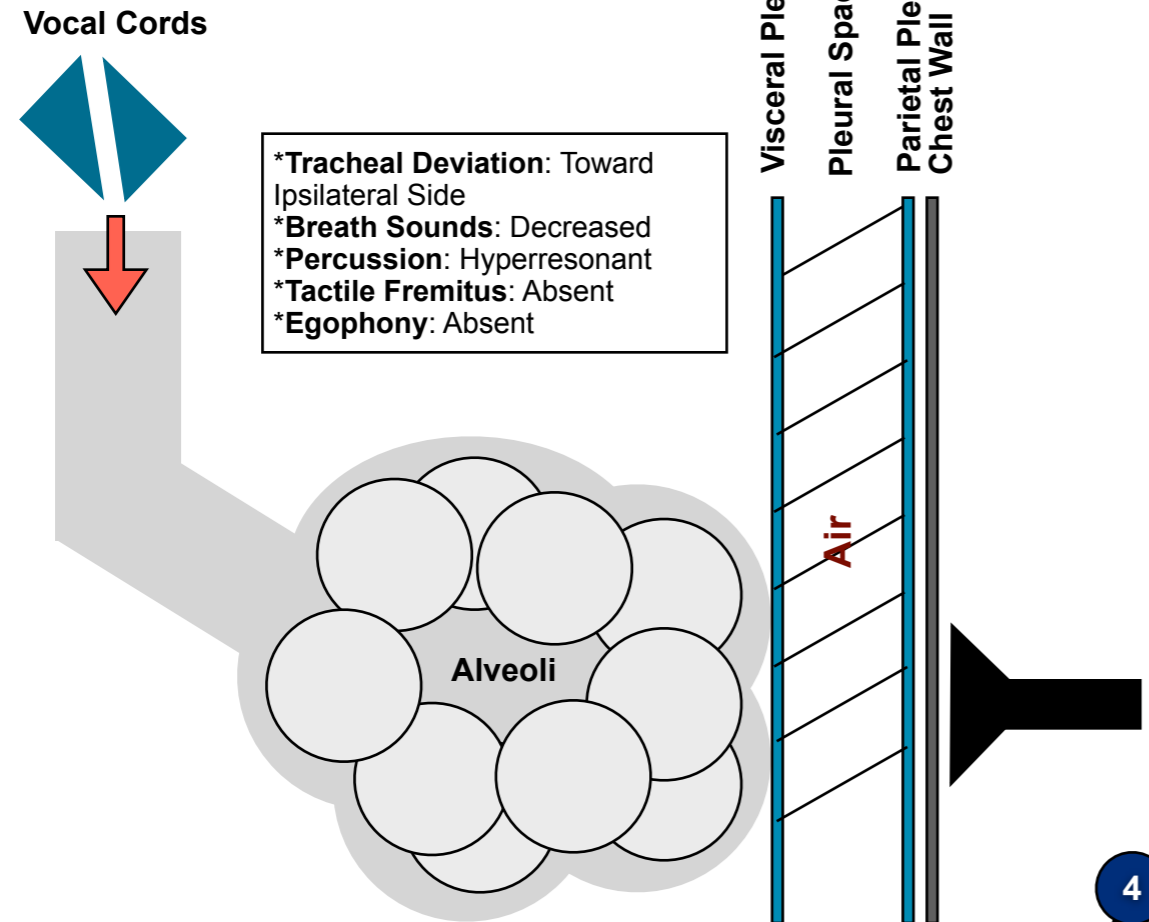
***Breath Sounds:** Decreased
***Percussion:** Hyperresonant
***Tactile Fremitus:** Decreased
***Egophony:** Absent



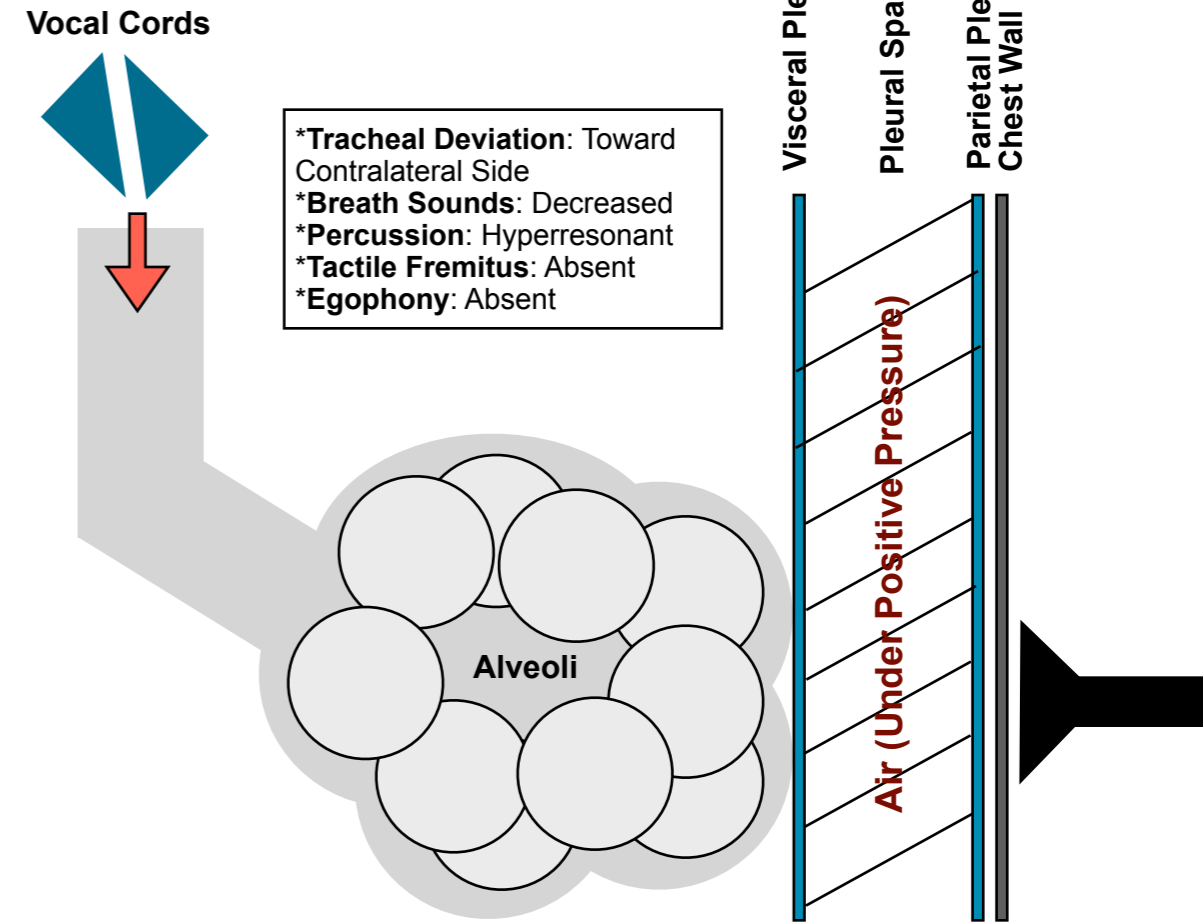
Alveoli



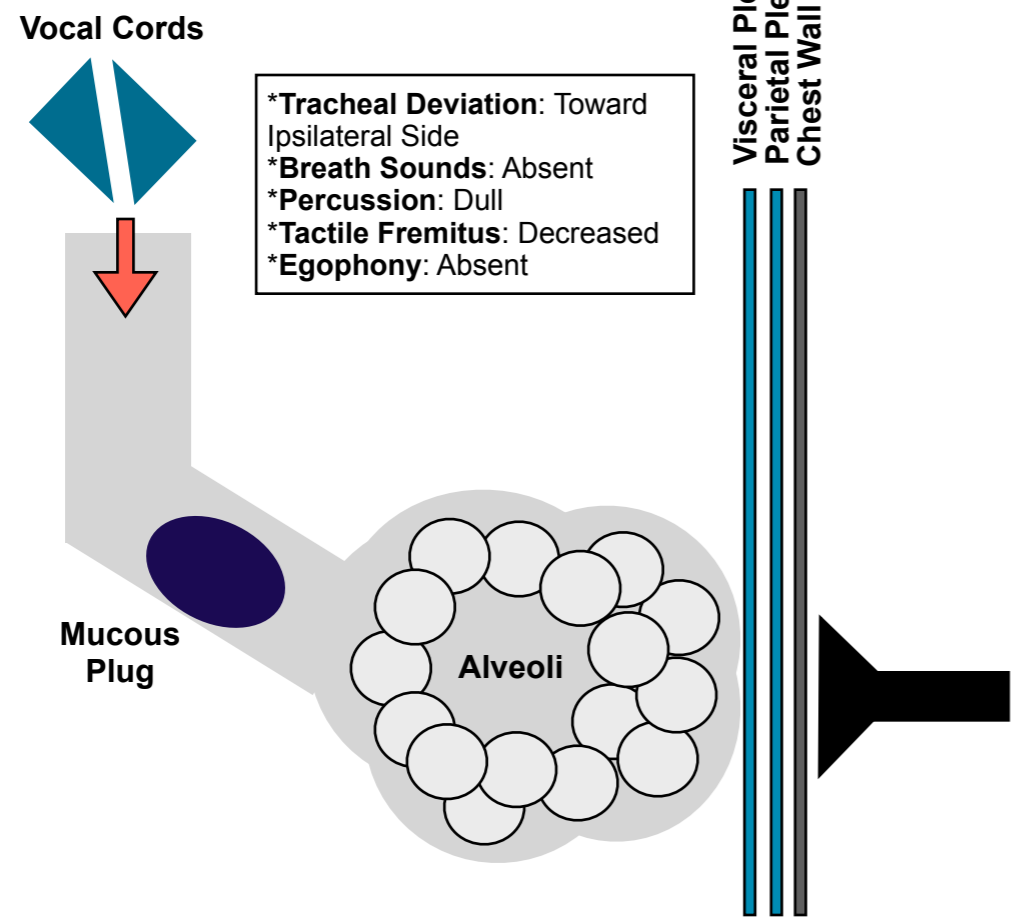
Pneumothorax



Tension Pneumothorax



Atelectasis with Endobronchial Obstruction



Fibrothorax

