

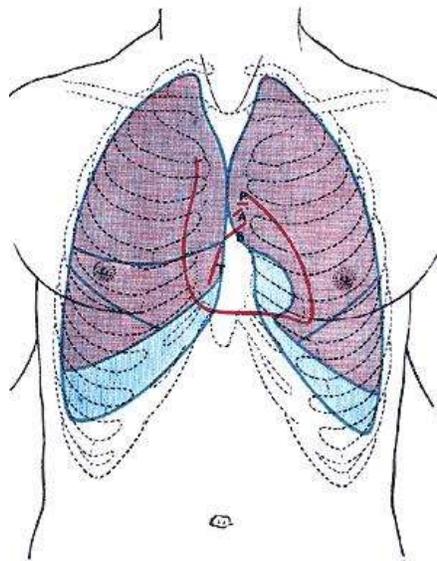
# Chest Radiography Anatomy

Merrill's Volume I

Chapter 3

Taryn Smith B.S. RT(R)

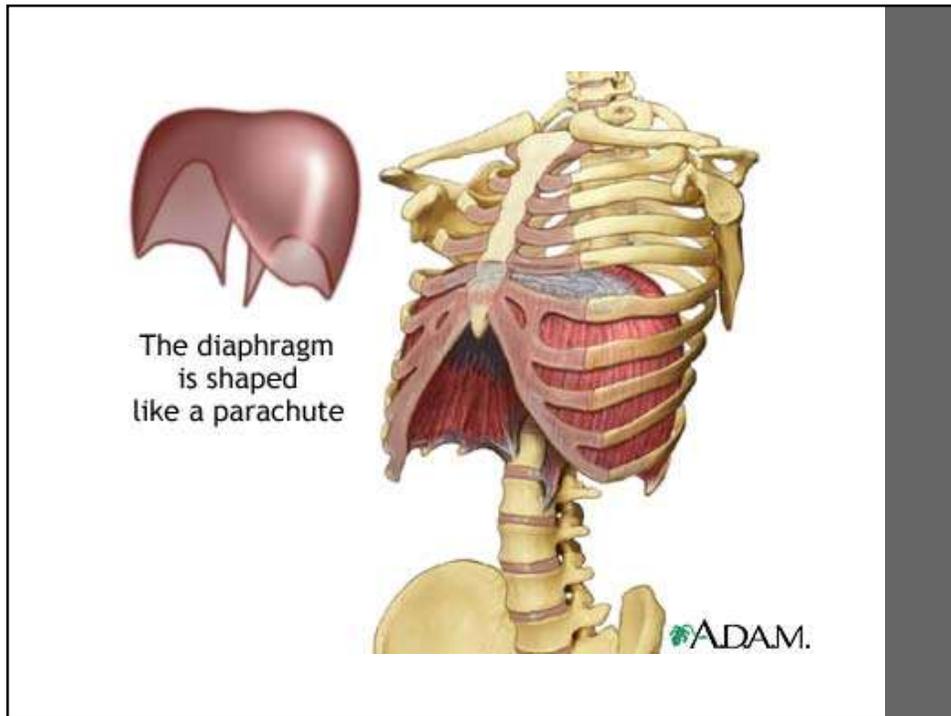
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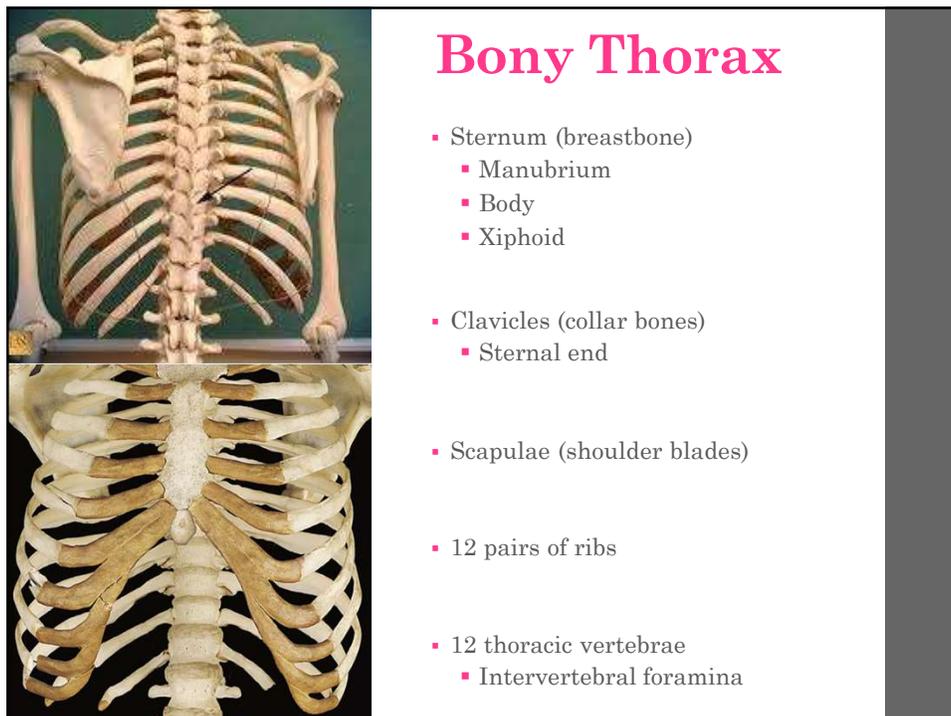
## Consists of:

1. Bony thorax
  - Protective framework
2. Respiratory system
  - Lungs and airways
3. Mediastinum
  - Space between the lungs

2

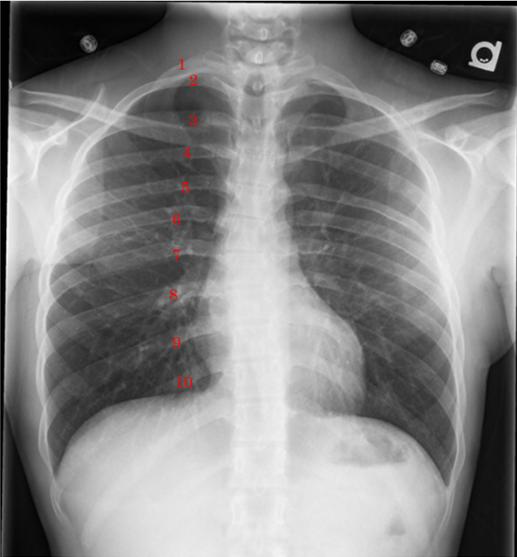


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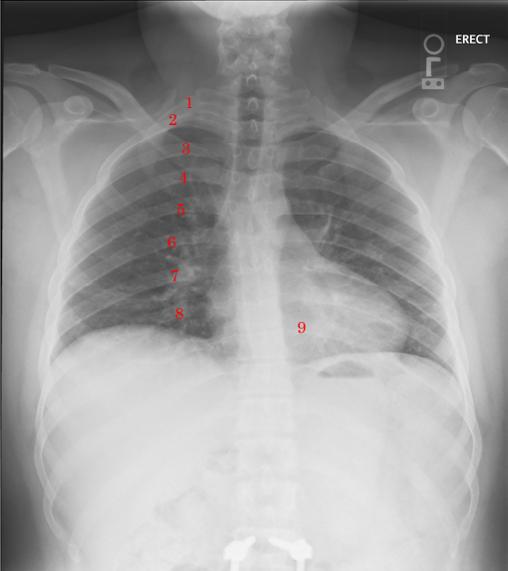
4

# Counting Ribs:



5

# Counting Ribs---Thoughts?



6



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## Respiratory System

- Purpose: Exchange of gaseous substances between the air and blood
- Four Divisions:
  - Pharynx
  - Trachea
  - Bronchi
  - Lungs

Nasal Cavity

Pharynx

Larynx

Trachea

Bronchi

Bronchioles

Alveoli

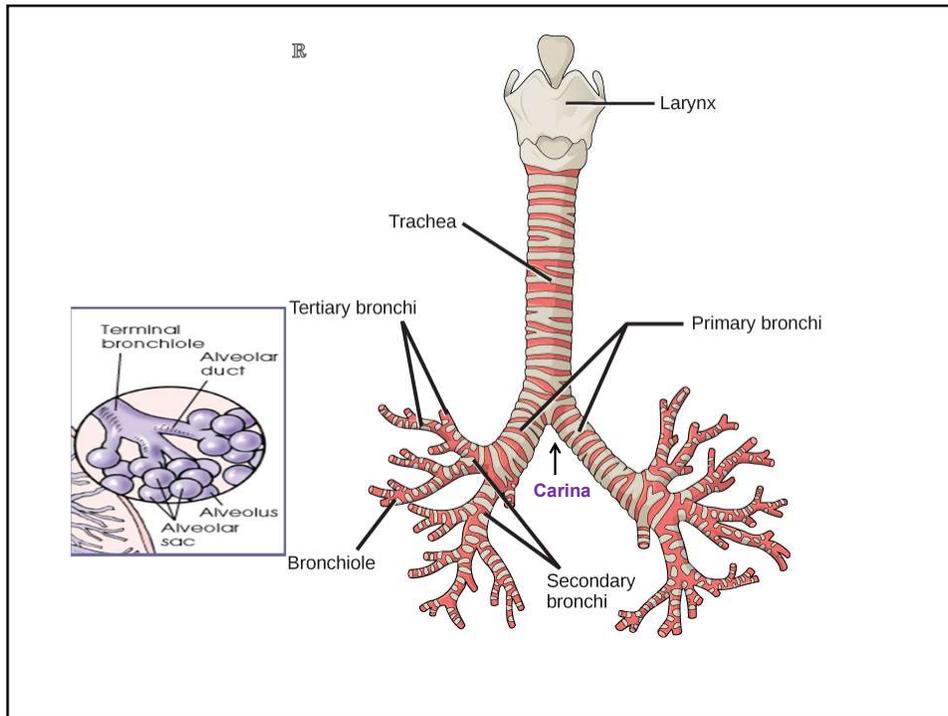
Diaphragm

Lung

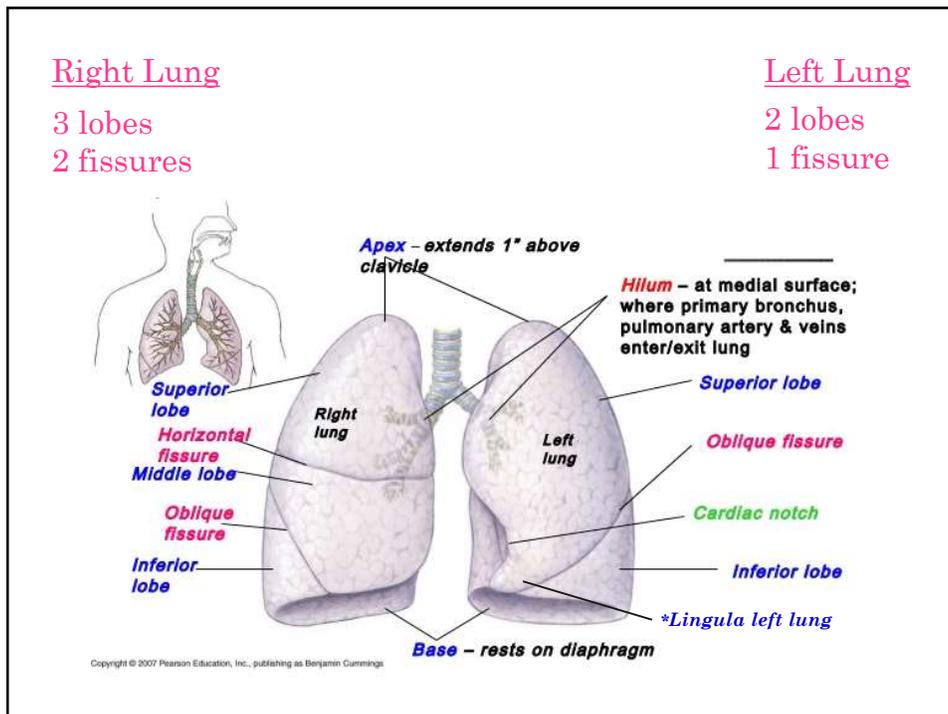
wiseGEEK

An anatomical diagram of the human respiratory system. The trachea and bronchi are shown in a light blue color, while the lungs and alveoli are in a darker blue. The diaphragm is shown at the bottom. Labels with orange lines point to various parts of the system.

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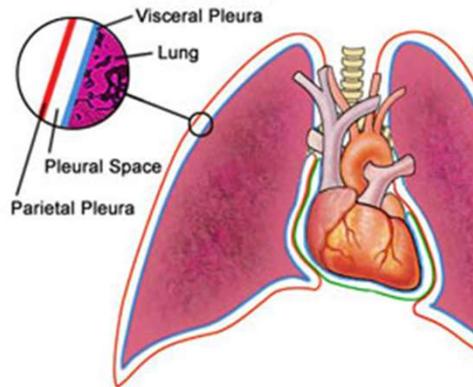
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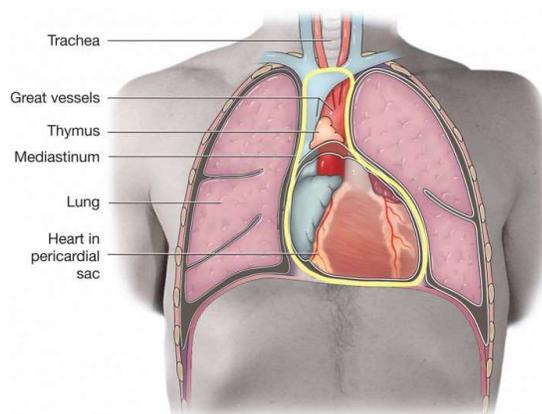
## Pleural Membranes

- *Visceral Pleura* – Attached to the surface of the lungs
- *Parietal Pleura* – Lines the thoracic cavity
- *Pleural Cavity* – Space between the two membranes filled with lubricating fluid



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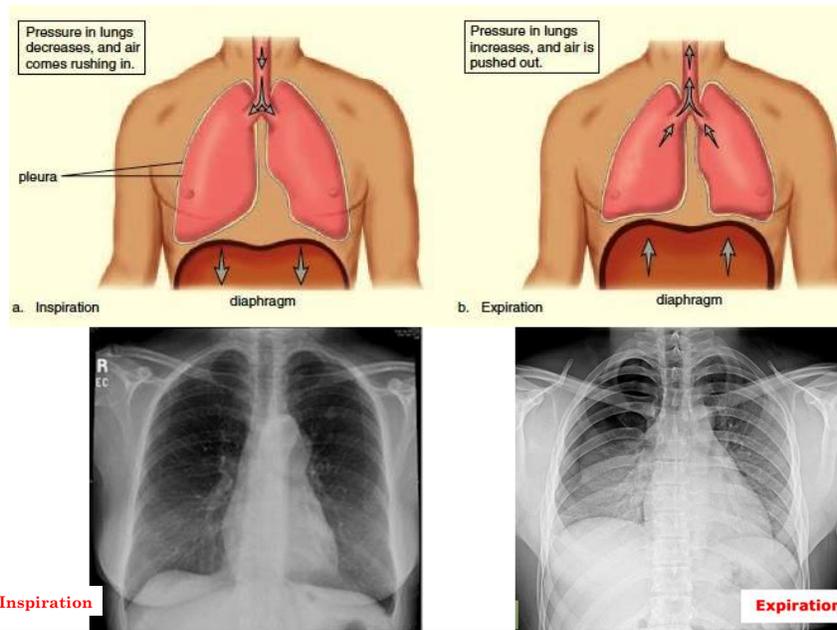
## Mediastinum



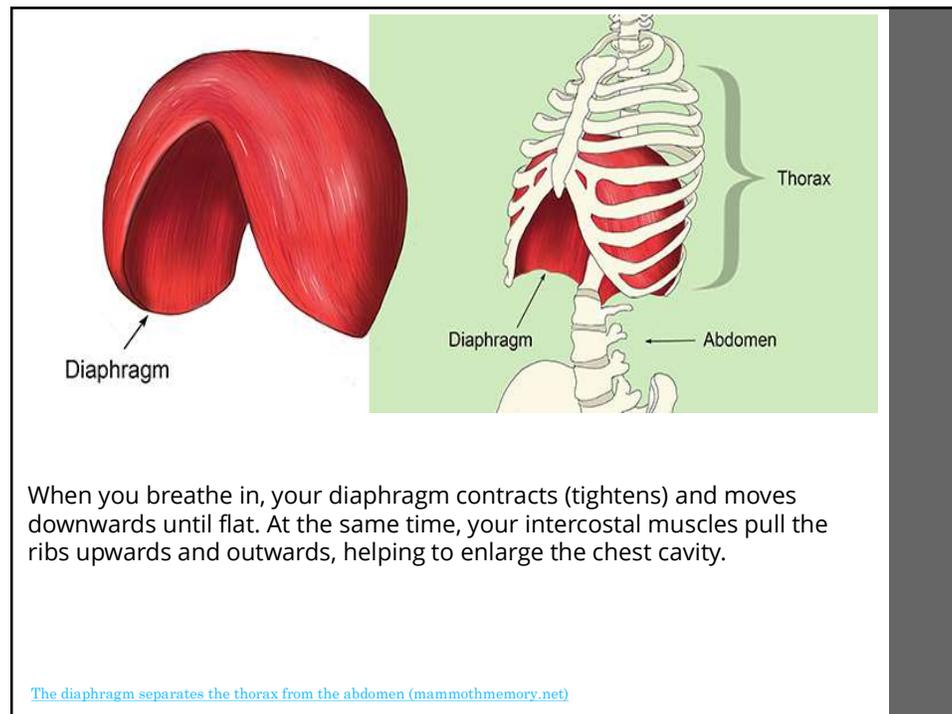
- Medial portion of the thoracic cavity between lungs
- Structures within:
  - Heart and Great Vessels
  - Trachea
  - Esophagus
  - Thymus Gland
  - Lymphatics, Nerves

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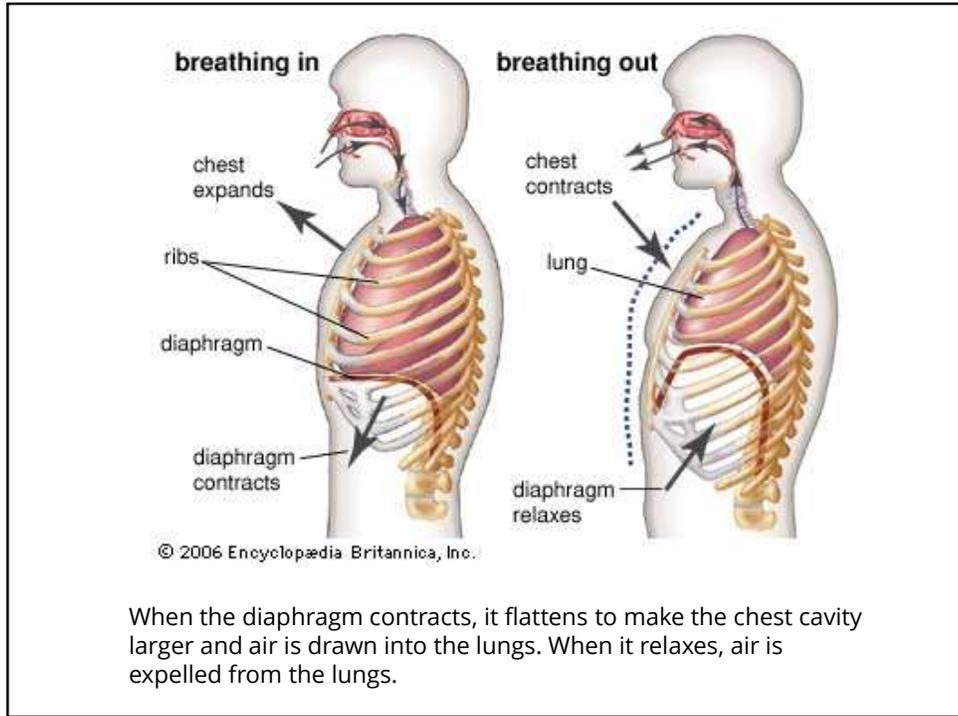
## Lung Movement



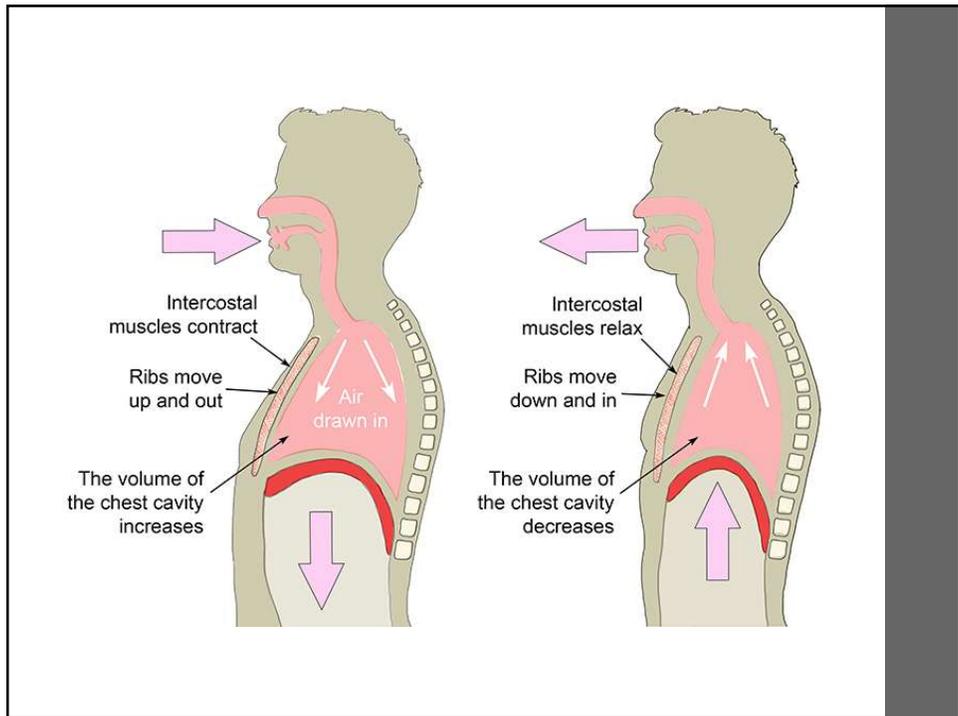
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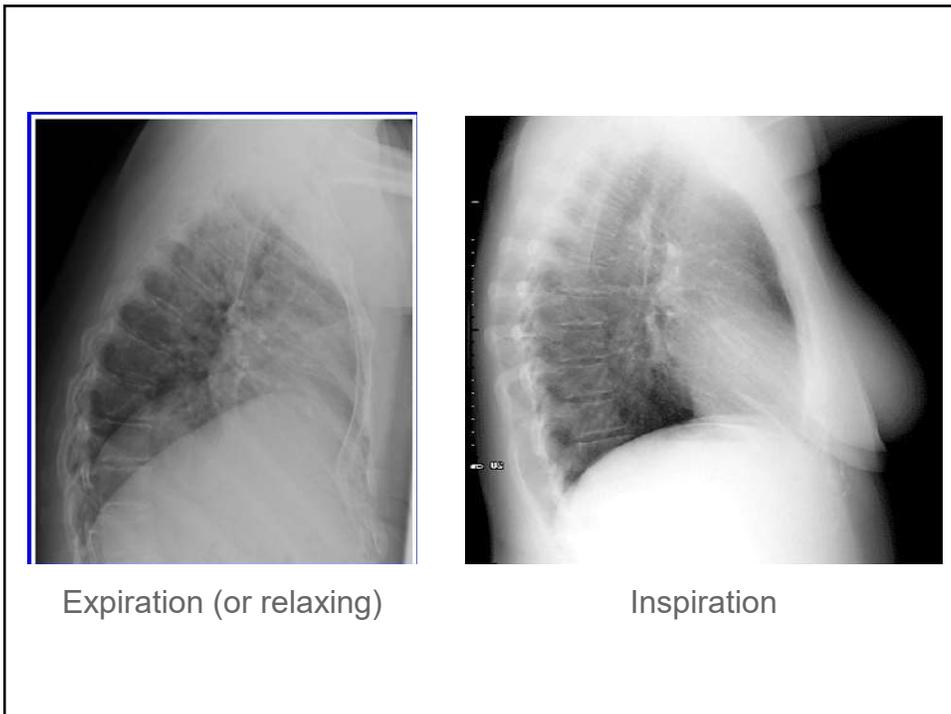
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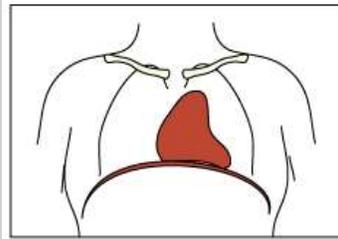


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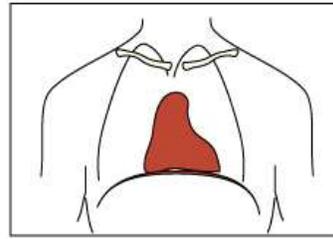


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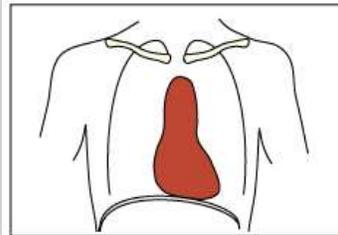
## How body habitus affects lungs



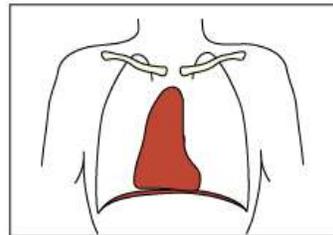
Hypersthenic



Sthenic



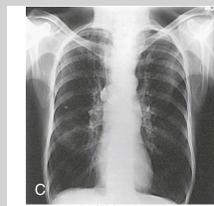
Asthenic



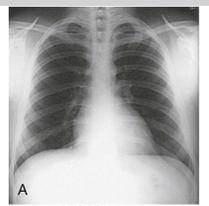
Hyposthenic

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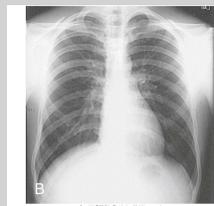


asthenic

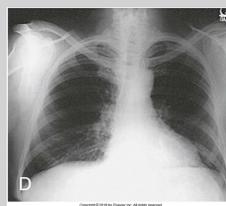


sthenic

## Body Habitus



hyposthenic



hypersthenic

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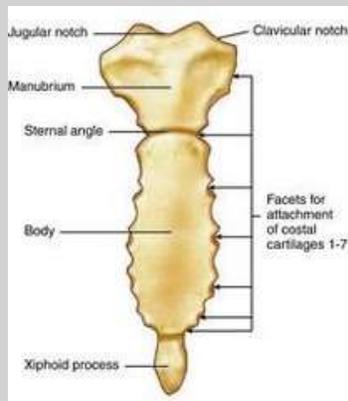


## Positioning Landmarks for Chest Radiography:

“Vertebral Prominens”  
C -7 Spinous Process

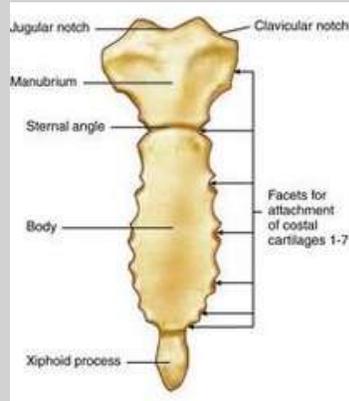
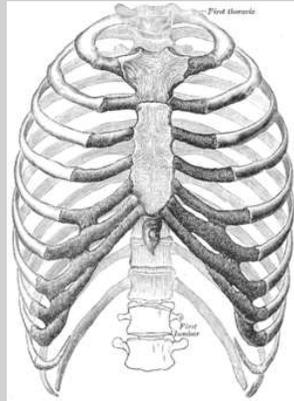


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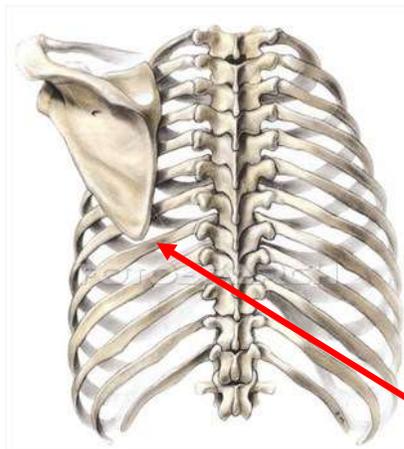
Manubrial (Jugular) Notch = T2, T3

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Xiphoid Process = T 9  
 Xiphoid Tip = T 10

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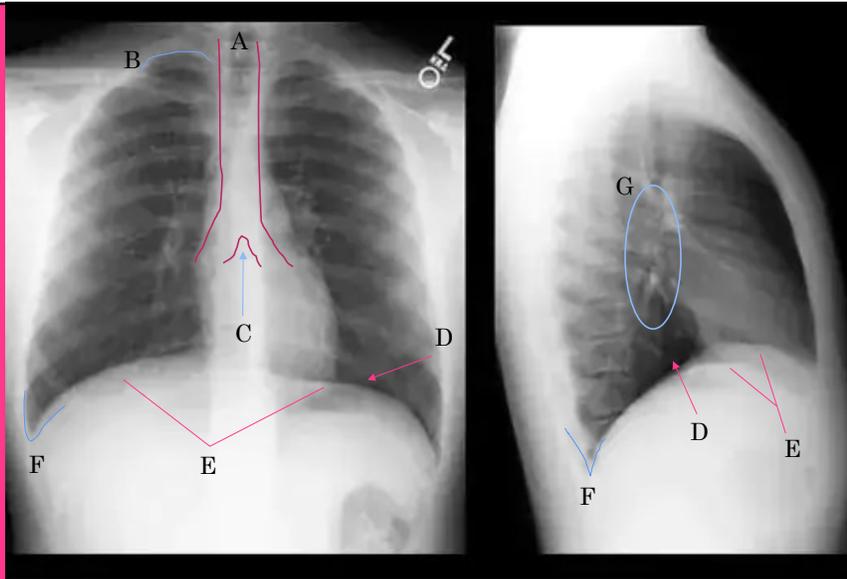


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Inferior angle of the scapulae = T 7

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Can you remember the parts?

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# Positioning Skills Practice

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WHAT	WHERE	WHAT TO BRING
Demonstration of procedure(s)	Voice-over ppt. on Edvance	Positioning Notes for reference or additional note taking
Anatomy Lecture specific to anatomical section	Classroom/Virtual	Anatomy PPT given
Image Critique and Pathology Lecture	Classroom/Virtual	Image Critique PPT given
Positioning Skills Practice	MI Skills Lab	Positioning notes for reference – however should not be used while positioning! *Remember mask, eye protection, badges and for future semesters lead markers as well!
Exam	Computer Lab	Bring your knowledge ☺ And Workbook assignment!!

Clinical Seminar Course Flow  
 Radiographic Procedures: Mon, Wed, Fri for Clin Sem I  
 Mon, Tues, Thursday for Seminars II – IV

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## Positioning Skills Practice

- For this semester, will complete Positioning Skills Practice on both views of the chest (PA & Lateral)
  - Includes everything from checking orders to dismissing the patient
- Come to the lab prepared!
  - Complete reading assignment
  - Watch Demonstration power point on Edvance
  - Review positioning notes
- Observation by faculty will occur – positive and constructive feedback will be give based on performance.
  - Feedback is recorded and will be used for assessing the student's overall performance on evaluations and Progress Reports.

*\*Positioning Skills practices will be part of all Clin Sem courses*

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## Expectations of Positioning Skills Practice

Expectations	Acceptable Performance	Performance Needs Improvement
<p>Students will be prepared to properly demonstrate the following skills for the procedures being performed:</p> <ul style="list-style-type: none"> <li>• patient positioning</li> <li>• tube angles</li> <li>• SID</li> <li>• collimation</li> <li>• lead marker placement</li> <li>• shielding</li> <li>• breathing instructions</li> <li>• align tube and IR</li> </ul>	<p>Correct positioning of patient for view(s) being performed.</p> <p>Appropriate manipulation of room equipment including SID, tube angles and collimation</p> <p>Accurate lead marker placement</p> <p>Adequate shielding of the gonadal region</p> <p>Effective breathing instructions</p>	<p>Gross mal-positioning of patient for view(s) being performed</p> <p>Inability to properly manipulate equipment or unsafe use of room equipment to obtain proper SID, tube angle, and/or collimation.</p> <p>Grossly incorrect tube angle, SID, and/or collimation used</p> <p>Placement of incorrect marker or marker placement on the wrong anatomical side</p> <p>Excessive hesitation or the need for repeated intervention from the proctoring CI</p>

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(Name)	Verify orders	ID pt	Change pt	Intro self & CI	LMP/preg	Shield	Set technique	Proper SID	Correct breathing	Positioning	Marker	Collimation	Protocol	Image analysis	Document	Other views
CKR																
Fingers & thumb																
Hand & Wrist																
Forearm & Elbow																
Forefoot, foot, heel																
Ankle, tib/fib																
Abdomen																
Adv. CKR																
FINAL PSP																

# Positioning Skills Practice

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