



Lung & Pleura

This work contains schedules,
summaries and questions.
And its only for revision.

Respiratory Block
ANATOMY
team 435



COLOR CODES

- IMPORTANT NOTES
- EXTRA NOTES
- DEFINITION

	Lung	Broncho-pulmonary segments	Pleura			
Nerve supply	autonomic pulmonary plexus	<u>1- Sympathetic Fibers</u> From sympathetic trunk Action: <u>broncho-dilatation</u> /and vasoconstriction.	autonomic nerves.	<u>Parietal pleura</u> sensitive to <u>pain</u> , <u>pressure</u> , <u>temperature</u> , and <u>touch</u> .	Costal pleura	intercostal nerves.
		<u>2- Parasympathetic Fibers</u> From Vagus nerve Action: <u>Broncho-constriction</u> and <u>secretomotor</u> to bronchial glands /and vasodilatation.		<u>Mediastinal pleura</u>	phrenic nerves.	
				<u>Diaphragmatic pleura</u>	over the domes by phrenic nerves, around the periphery by lower 6 intercostal nerves.	
				<u>Visceral pleura</u> sensitive to <u>stretch</u> only	autonomic fibers from the pulmonary plexus	
arteries	<ul style="list-style-type: none"> Bronchial arteries (<u>From descending aorta</u>) It <u>supplies oxygenated blood</u> Pulmonary artery which carries <u>non-oxygenated blood from right ventricle</u> to the <u>lung alveoli</u>. 	<u>segmental artery</u>				
veins	<ul style="list-style-type: none"> Bronchial veins : drain into azygos & hemiazygos veins carrying non-oxygenated blood. 2 pulmonary veins : carry <u>oxygenated blood from lung alveoli</u> to the <u>left atrium</u> of the heart. 	<u>The segmental vein</u> lies in the inter-segmental <u>C.T. septa</u> between the segments.				

- **Costal surface** is convex & covered by costal pleura
- **Medial surface:**

Mediastinal part: contain a Hilum

Vertebral part: related to bodies of thoracic vertebrae, intervertebral disk, posterior intercostal vessels, sympathetic trunk

- The right and left lung root **both** have superior pulmonary artery, 2 pulmonary veins. they **differ** in the number of bronchi, right has 2, left has 1 only.
- **Right lung:** larger, shorter, divided by 2 fissures to become 3 lobes
- **Left lung:** divided by one oblique fissure into 2 lobes, has a cardiac notch at lower border of anterior border.



- Mediastinal surface of right lung: Azygos vein, Vagus nerve, Esophagus **POSTERIORLY**. Phrenic nerve **ANTERIORLY**.
- Mediastinal surface of left lung: Descending aorta, Vagus nerve **POSTERIORLY**. Phrenic nerve **ANTERIORLY**.
- **Blood supply of lung:** bronchial arteries, bronchial veins, pulmonary artery., 2 pulmonary veins.
- Nerve supply of lungs from sympathetic & parasympathetic fibers.
- **Right main bronchus** divides **before** entering the hilum it gives superior lobar
- Lobar (secondary) bronchi segmental → (tertiary) bronchi bronchioles → terminal bronchioles → respiratory bronchioles → alveolar ducts → alveolar sacs → alveoli
- **bronchopulmonary segments** are subdivisions that are pyramidal in shape.

Has: segmental bronchus, segmental artery, lymph vessels, autonomic nerves.

The segmental vein lies between the segments



- **Pleura** is a double-layered serous membrane completely enclosing the lung.
- It has two layers: Partial & Visceral and a pulmonary cavity In between that contains (5-10 ml) fluid.
- Partial pleura is divided according to the region in which it lies and the surface it covers, into:
1-Cervical pleura 2-Costal pleura 3-Mediastinal pleura 4-Diaphragmatic pleura

Pleural Recesses: The lung expand into the recess during forced inspiration.

- 1- Costodiaphragmatic
- 2- Costomediastinal

- **Pleura Nerve supply:**

1-Partial pleura: SENSITIVE TO: Pain, Pressure, Temperature and Touch

2-Visceral pleura: SENSITIVE TO: Stretch

Pleural effusion: Abnormal accumulation of fluid about 300 ml which compress the lung

Auscultation is a skill done to listen to lungs -> during pleural effusion you will hear faint & decreased lung effusion

- **Surface anatomy of :**

Right Pleura: 1 inch above medial 1/3 of the clavicle to 6th costal cartilage to 8th rib to 10th rib to last thoracic spine.

Left Pleura: 1 inch above medial 1/3 of the clavicle to 4th costal cartilage as it deviates 1 inch to left 6th costal cartilage to form cardiac notch to 8th rib to 10th rib to last thoracic spine.

Lung: Same as the pleura but slightly away from median plane but it reach the 10th thoracic spine.

- The lung contains **two fissures:** Oblique fissure & Transverse fissure (Only in the right lung)
- **Lungs:** Is a conical organ that is located in the thoracic cavity on each side of the mediastinum that is covered by the visceral pleura
- It is attached to visceral pleura by **only one root**
- **It has two borders:** Anterior and posterior



Q1: The lowest extent of the pleural cavity, into which lung tissue does not extend, is known as the

- .A-Costodiaphragmatic recess
- B-costomediastinal recess
- .C-inferior mediastinum
- .D-pulmonary ligament

Ans: A

: Q2: The portion of the parietal pleura that extends above the first rib is called the

- A- costodiaphragmatic recess
- B- costocervical recess
- C-cupola
- D- costomediastinal recess

Ans: C

:Q3: the costal pleura is segmentally supplied by

- .A-intercostal nerves
- .B-phrenic nerve
- .C-autonomic fibers
- .D-vagus nerve

Ans: A

?Q4: The Mediastinal pleura is supplied by which nerve

- .A-intercostal nerves
- .B-vagus nerve
- .C-sympathetic trunk
- .D-phrenic nerve

Ans: D

:Q5: The cardiac notch is between the

- .A-8th and 10th costal cartilages
- .B-4th and 6th costal cartilages
- .C-3rd and 6th costal cartilages
- .D-4th and 7th costal cartilages

Ans: B

..Q6: visceral layer of pleura covers

- .A-thoracic wall
- .B-abdomen wall
- .C-surface of the lung
- .D-pulmonary ligament

Ans: C

:Q7: pleural effusion is an abnormal accumulation of the pleural fluid in the

.A-costomediastinal pleura recess

.B-costodiaphragmatic recess

.C-costal pleura

.D-cervical pleura

Ans: B

:Q8: cervical pleura project up into the neck about one inch the of clavicle

A-below - medial 1/3rd

B-below - lateral 1/3rd

C-above - medial 1/3rd

D-above - lateral 1/3rd

Ans: C

?Q9: which one of parietal pleura continuous with visceral pleura

.A-cervical pleura

.B-costal pleura

.C-mediastinal pleura

.D-diaphragmatic pleura

Ans: C

:Q10: costomediastinal recess is between costal and mediastinal pleurae along the

- .A-anterior border of the lung
- .B-medial border of the lung
- .C-lateral border of the lung
- .D-inferior border of the lung

Ans:A

:Q11:visceral pleura is sensitive to which one of the following

- .A-temperature
- .B-pressure
- .C-stretch
- .D-pain

Ans: C

:Q12: parietal pleura is sensitive to all of the following EXCEPT

- .A-touch
- .B-pain
- .C-pressure
- .D-stretch

Ans: D

13-True or false: right lung presents a cardiac notch at its lower border?

- A- true
- B- false

14- Lung's Costal surface covered by

- A- parietal pleura
- B- costal pleura
- C- visceral pleura
- D- diaphragmatic pleura

15- Lung's Apex is anteriorly grooved by

- A- aorta
- B- bronchial artery
- C- subclavian artery
- D- pulmonary artery

16- Another name for anterior part of the lung

- A- mediastinal
- B- vertebral
- C- diaphragmatic
- D- cardiac

13-B (left lung)

14- B

15- C

16- A

:SAQ

List the parietal pleura parts and mention the nerves supply for each
:one of them

.Mediastinal pleura supplied by phrenic nerve-1

.costal pleura supplied by intercostal nerve-2

diaphragmatic pleura supplied by 2 nerves phrenic nerve over the-3

.domes and lower 6 intercostal nerves around the periphery

.cervical pleura-4

?What is the pleural effusion

It is an abnormal accumulation of pleural fluid about 300 ml (normally
.5-10 ml fluid) in the **costodiaphragmatic pleural**

هذا العمل إجتهد من طلاب و طالبات
إن أصبنا فمن الله وإن أخطأنا فمن أنفسنا و من الشيطان

TEAM MEMBERS:

Raghda Alqassim
Luluwah Alsagheir
Muneerah Alhussaini
Fatima Alden
Alhanouf Aljaloud
Deema Alrajhi

TEAM LEADERS:

Ghaida Aljamili
Abdullah Alfuraih

- For questions and suggestions
you can contact us on
Anatomy435@gmail.com

