

## PT CardioPulmonary Evaluation Reference Card:

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This is a quick reference guide to perform Physical Therapy Cardiopulmonary evaluation. You can also use this as a sheet to quickly guide you through the eval process.

### Measure vitals:

- Heart Rate: 220 - Resting HR Or use Karvonen Formula
- Pulse Rate:
- Blood Pressure: sBP and dBP
- SpO2 : measure at rest, during activity and after activity
- Measure recovery period.

These measurements should be taken at rest, during activities and after exercise session.

### Auscultation:

Heart sound: Normal Sounds S1 and S2.

Abnormal Heart Sounds: S3, S4, systolic and diastolic murmurs.

Lung sound: Bronchial, bronchovesicular, and vesicular

Check for presence of abnormal lung sounds : wheezes or crackles.

## Heart Sounds

Heart Sounds	Representations	Location
S1 ("Lub")	Beginning of systole. Closure of Mitral (& tricuspid) valve	Right fifth intercostal space, midclavicular line
S2 ("Dub")	End of systole Closure of Aortic (& pulmonary) valve.	2nd intercostal space just right to sternum.
S3	Ventricular gallop	Occurs after S3
S4	Atrial gallop	Occurs before S 1
Systolic Murmur	Semilunar valve Stenosis or A-V valve incompetencies	Heard between S1 & S 2
Diastolic Murmur	A-V stenosis or Semilunar valve incompetencies	Heard after S2 and before S 1

## Lung Sounds.

Normal Lung sounds	Definitions	Location on body
Bronchial	loud high pitched sound. Shorter inspiratory than expiratory duration with a pause between each phase of ventilation.	Close to sternum.
Bronchovesicular	Soft high pitched sound. Continuous throughout the ventilation.	On back between scapula On front between 2nd and 3rd Intercostal space
Vesicular	Low pitches muffled sound Louder and higher pitch in inspiratory phase than expiratory phase.	Peripheral lung fields.

### Skin changes:

- Check for pallor
- Check for cyanosis: can be peripheral or central.
- Presence of Edema: can be pitting or non pitting.
- DOE or PND: Dyspnea on exertion or dyspnea at night during sleep

Check for laboratory studies and diagnostic studies.

Any abnormal values:

1. Laboratory tests
2. Chest x ray
3. ECGs
4. ETT
5. Cardiac Catheterization
6. Hemodynamic monitors
7. Arterial Blood Gases Study (ABGs)