

Apex Beat or Impulse

By: Dr. Farhan Ullah Afridi

Demonstrator, KGMC

Introduction

- **Impact of pulsations of heart occurring against chest wall during systole.**
- **Area of chest wall where the impact is seen is circular and about 2,5 cm in diameter**
- **Apex beat is the lowest (inferior) and outermost (laterally) point of definite cardiac impulses, where it is seen or felt more forcibly.**
- **aka point of maximum impulse (PMI)**

Location

- Lies 9 cm from the Midline Or 1 cm internal to the Mid-Clavicular line in the 5th ICS.

How to palpate Apex beat

Palpating apex beat

Feeling the heart beat:

- ...palpate **left 2nd rib**
- Count down to **5th IC space**, follow along **midclavicular** line (under left nipple)
- *Index finger in IC space, thumb perpendicular to finger.*
- Should feel beat on the curve of thumb and finger.
- **More prominent** by asking patient to *turn to their left* (heart brought closer to chest).

TO FIND THE APEX BEAT



APEX BEAT





- **Failure to detect apex beat:**

Obesity

Pleural or Pericardial effusion

Asystole

Dextrocardia

Apex beat displacement

- Pathological “PULL” or “PUSH” on the heart from surrounding viscera
- Pleural effusion and Pneumothorax (PUSH)
- Pulmonary fibrosis and Collapse of lung (PULL)
- Apex beat more powerful and extends outwards to axilla.
Occur in LVH
- Prominent in anxiety, nervousness, exercise

Video Source

- https://www.youtube.com/watch?v=XU_xeUMJ3Zc

Between 4:12 to 4:27 is apex beat in above video.

- <https://www.youtube.com/watch?v=L2T3soMKt4U>

Thank You