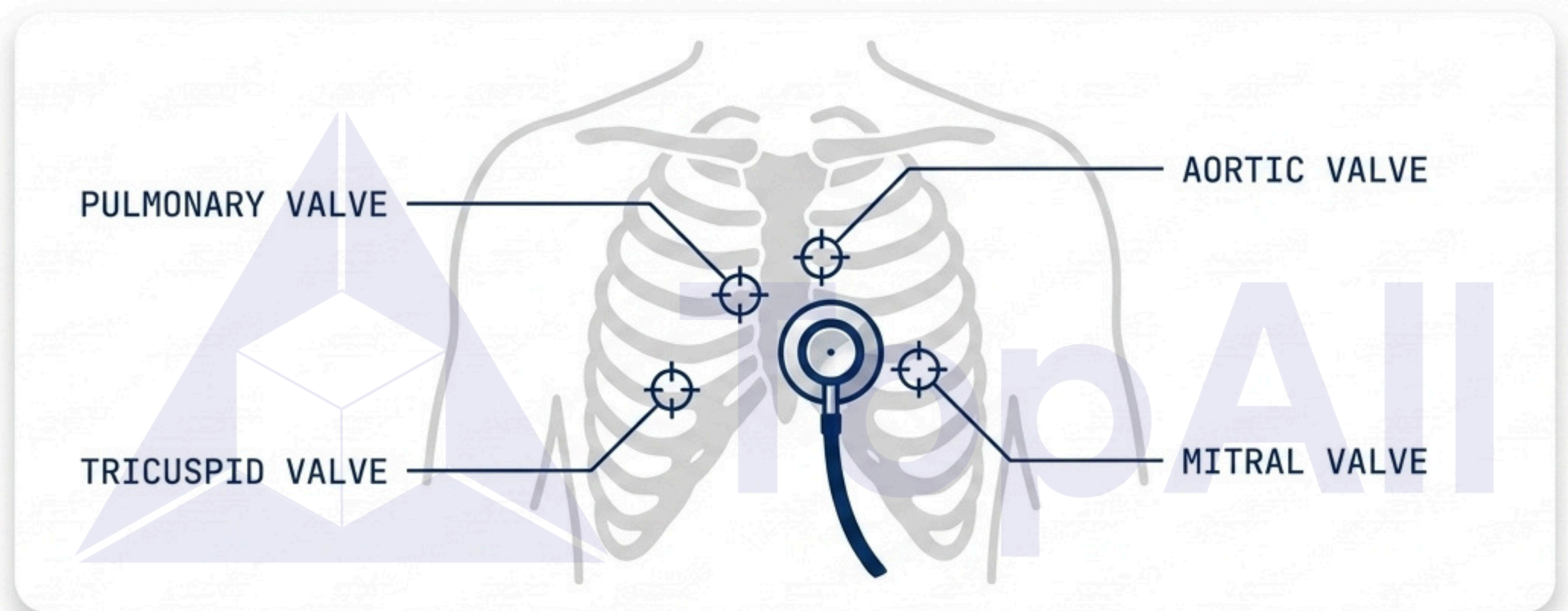


CARDIOVASCULAR MECHANICS

Lub-Dub: What the Sounds Mean



The Diagnostic Window



AUSCULTATION

The heart's mechanical events produce distinct acoustic signals. By listening to these echoes, clinicians evaluate the timing, rhythm, and structural integrity of the heart's valves without making a single incision.



You've Learned the Theory. Let's Test Them Now.

$$E=mc^2$$



Turn theory into marks with **unlimited MCQs, smart analysis, and focused revision.**

Practice Now



At prep.topall.app

Key Highlights

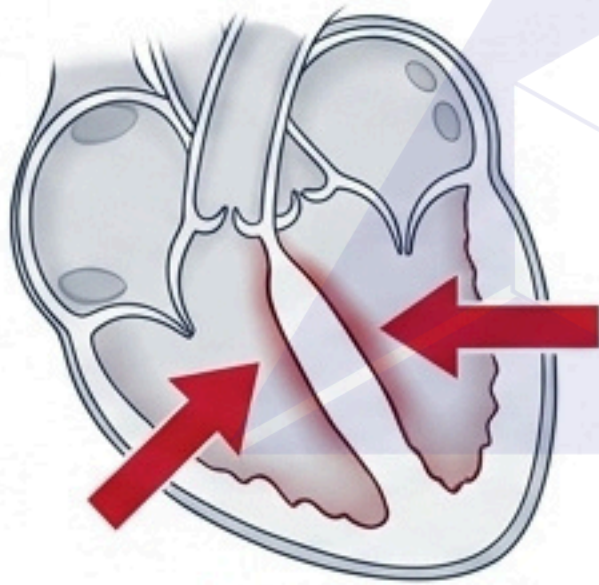
- » Free Study Material, Videos & Infographics
- » Push Your Limits with Level-Based Challenges
- » Climb the Leaderboard Among Fellow Aspirants
- » Practice Unlimited MCQs for NEET & JEE
- » Get Clear Explanations, Not Just Marks
- » Track Your Performance Smarter



SOUND: S1 (LUB)

S1: The "Lub"

VENTRICULAR SYSTOLE



As ventricles contract, internal pressure rises sharply.

ATTEMPTED BACKFLOW



The Tricuspid and Bicuspid (Mitral) valves slam shut to prevent reverse flow.

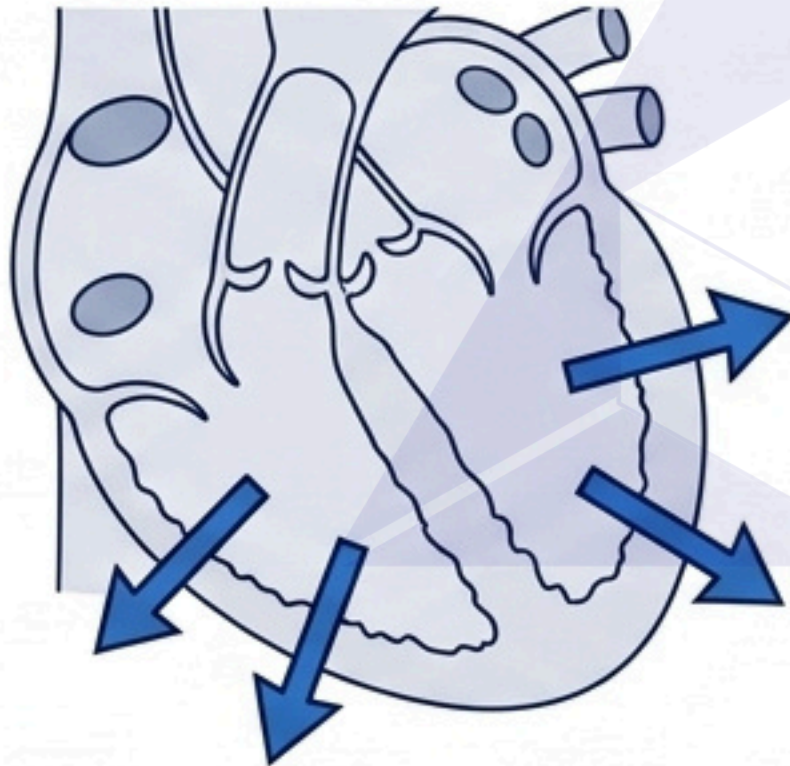
ACOUSTIC EVENT



The sudden deceleration of blood and snapping of the valves creates the first, lower-pitched sound.

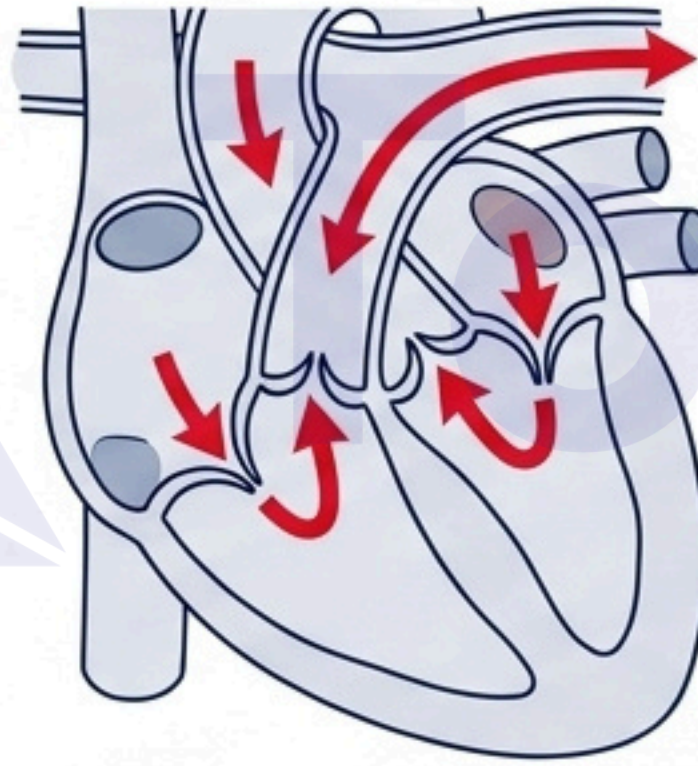
S2: The “Dub”

VENTRICULAR DIASTOLE



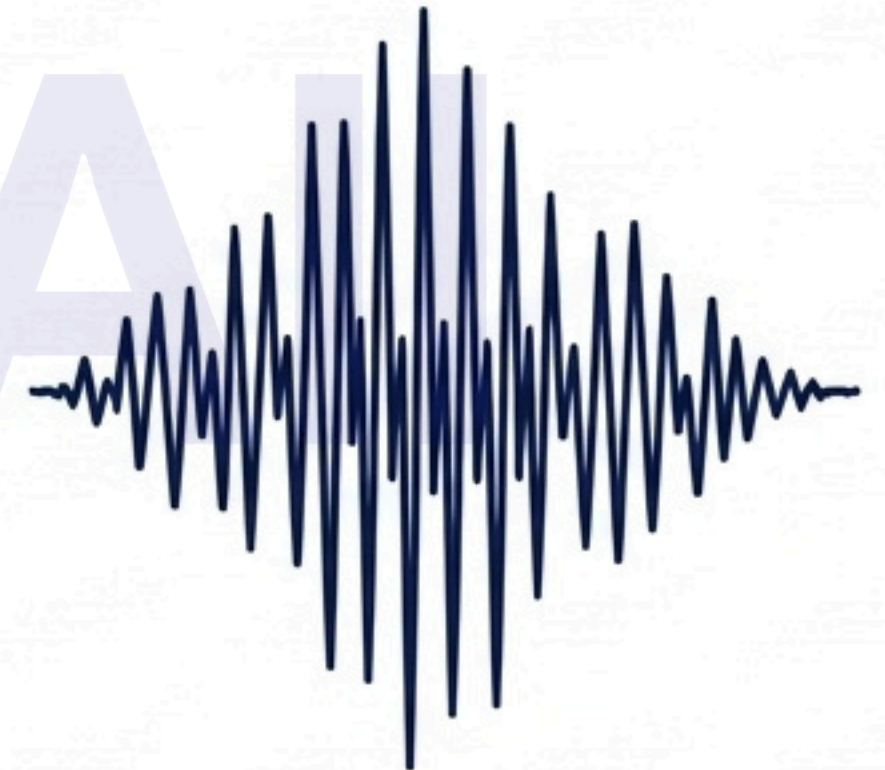
The ventricles relax, causing a sudden drop in internal pressure.

ATTEMPTED BACKFLOW



The Semilunar valves (Pulmonary and Aortic) snap shut to seal the exits.

ACOUSTIC EVENT



This quick, tight closure creates the second, sharper and shorter sound.

Acoustic Signal	Clinical Label	Valves Closed	Cardiac Phase
"Lub"	S1	Tricuspid & Bicuspid (Mitral)	Beginning of Systole
"Dub"	S2	Semilunar (Aortic & Pulmonary)	End of Systole (Diastole)



Core Mechanical Takeaway

Heart sounds are not the sound of muscles squeezing. They are the acoustic echo of fluid dynamics—specifically, the structural doors (valves) slamming shut against fluid pressure to ensure blood flows strictly in one direction.



You've Learned the Theory.

Now Let's Test It.

Reading notes gets you knowledge.

Practicing MCQs gets you marks.

That's exactly what TopAll Pro is built for.

Try TopAll Pro Now

What TopAll Pro Does Differently

-  **Stuck? Snap it. Solve it. — Doubts AI**
Photo → step-by-step solution in seconds, 24/7
-  **Your AI Coach finds your blind spots**
Concept-level weakness detection — not just chapter-level
-  **4.5 Lakh+ questions. Never run out.**
13× more content than any other prep app in India
-  **Build your own test in 60 seconds**
Pick a chapter, set difficulty — AI does the rest instantly.
-  **AI Recommendation that helps you improve**
AI Recommendation Analysis your Tests and tell you where you need to improve.



Practice the moment you finish studying
Jump in while the concept is still fresh in your head

4.5L+
MCQs

1.5L+
Students

AI Powered
In-Depth Analysis