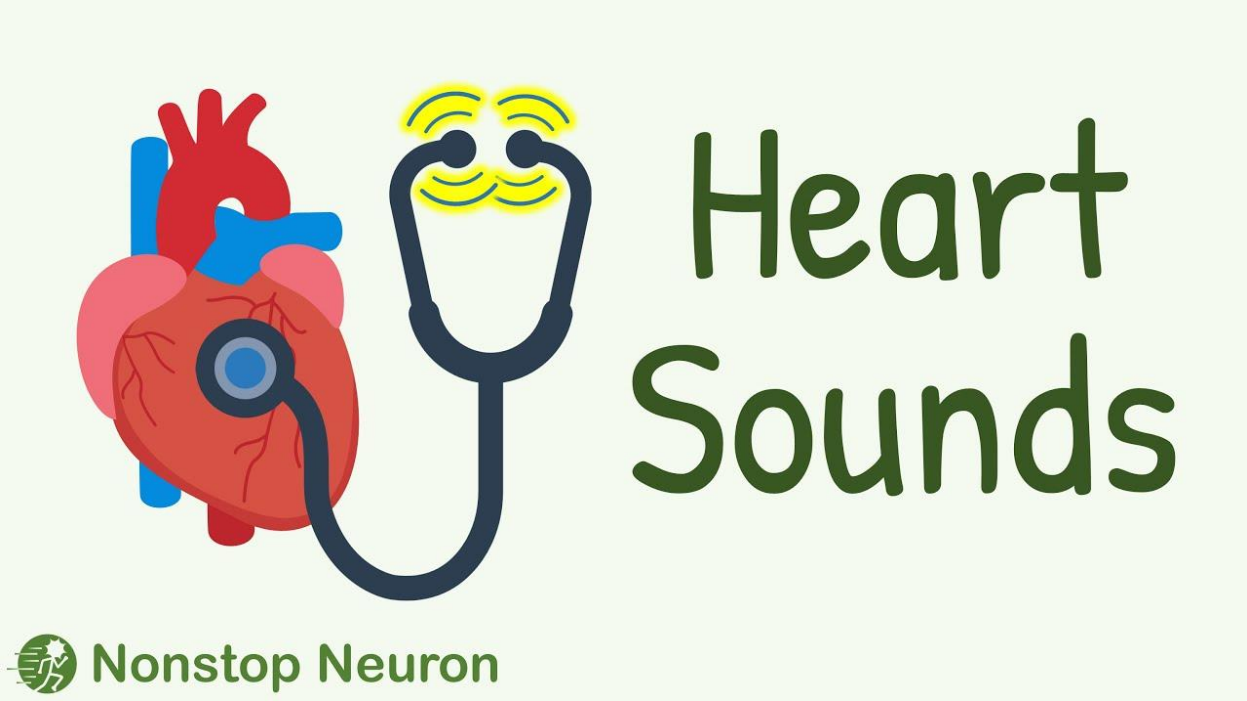


Heart Sounds

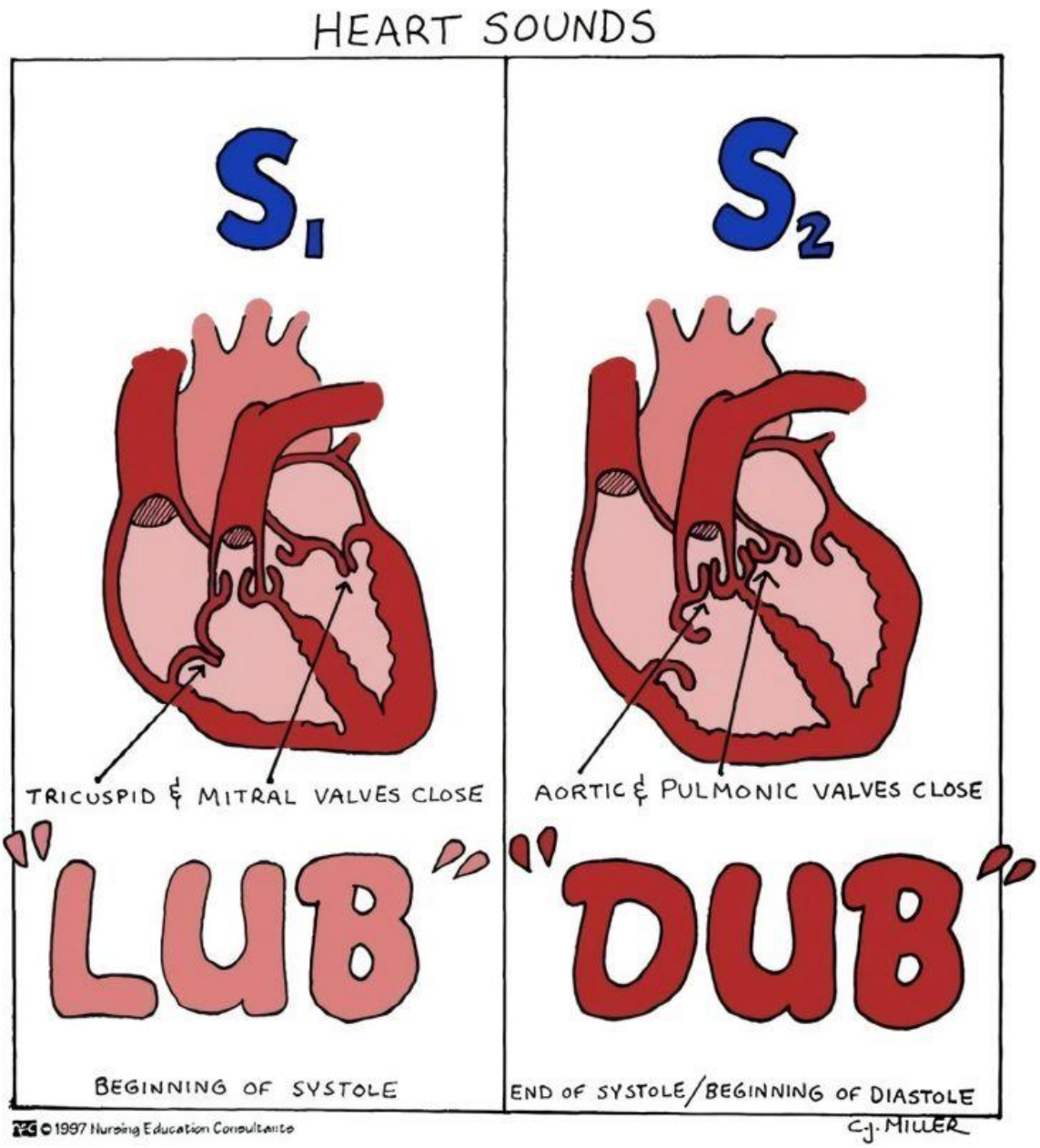
Heart sounds arise from the closing of heart valves and blood flow during the cardiac cycle. There are two main sounds:

1. First Sound (S1):

- Known as the "lub" sound.
- Occurs with the closure of the atrioventricular (AV) valves .
- Coincides with the start of ventricular systole.

2. Second Sound (S2):

- Known as the "dub" sound.
- Occurs with the closure of the semilunar valves (aortic and pulmonary valves).
- Coincides with the start of ventricular diastole.


HEART SOUNDS
S1
S2
TRICUSPID & MITRAL VALVES CLOSE
AORTIC & PULMONIC VALVES CLOSE
"LUB"
"DUB"
BEGINNING OF SYSTOLE
END OF SYSTOLE/BEGINNING OF DIASTOLE
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Additional Heart Sounds

In some cases, additional sounds can be heard:

1. **Third Sound (S3): (can be normal in young athletes)**
    - A low-pitched sound occurring just after S2.
    - Attributed to the rapid filling of a dilated ventricle.
    - Can be heard in conditions like heart failure.
2. **Fourth Sound (S4)**:
    - A low-pitched sound occurring just before S1.
    - Caused by strong atrial contraction pushing blood into a stiff ventricle.
    - Heard in conditions like ventricular stiffness or hypertension.

Additional Details

Heart Sounds:

The first heart sound (S1) occurs due to the closure of the AV valves after the atria have contracted and pushed blood into the ventricles.

The second heart sound (S2) occurs due to the closure of the semilunar valves after the ventricles have contracted and pushed blood into the arteries.