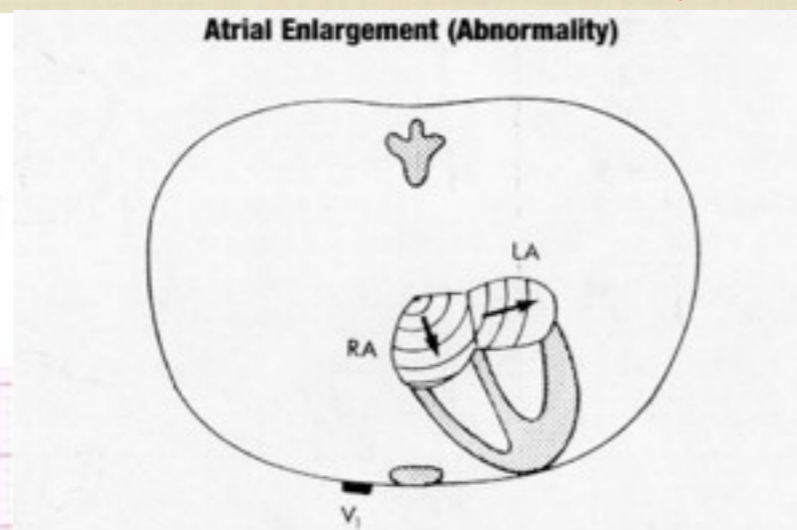
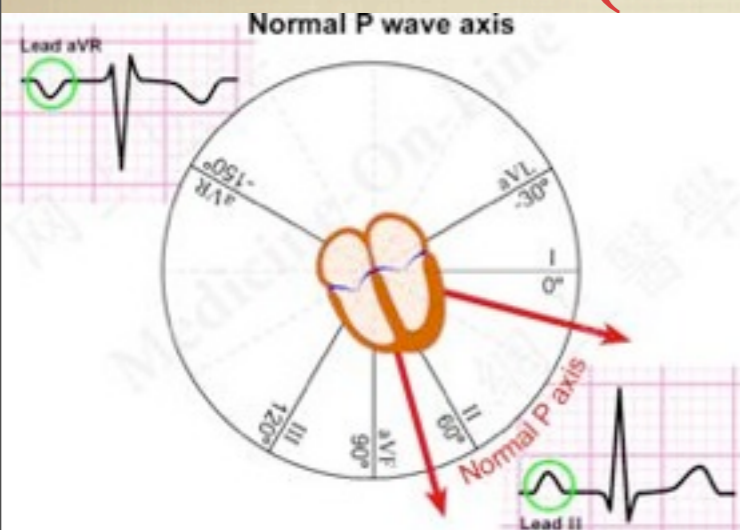


# ATRIAL ENLARGEMENT (ABNORMALITY) 1



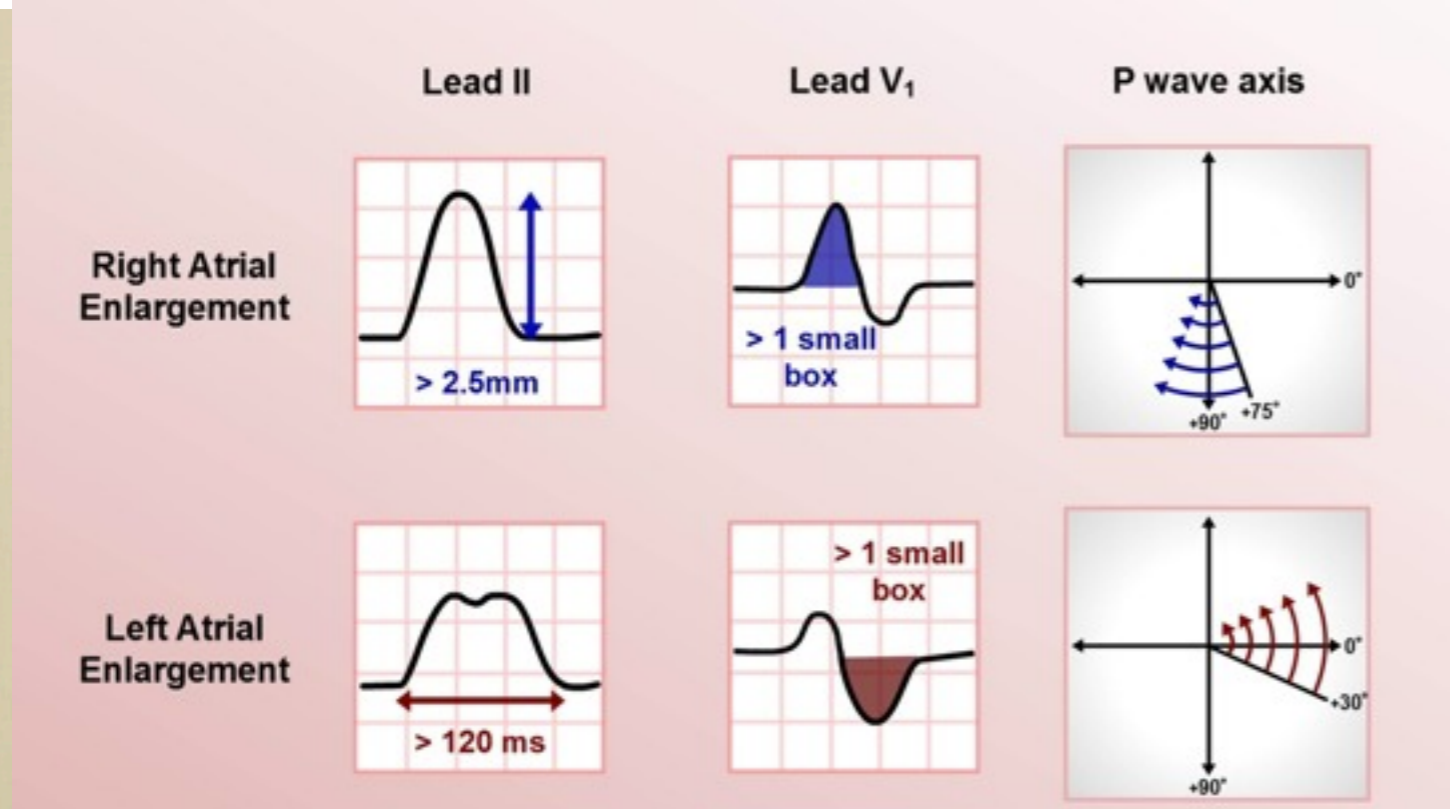
Ask Mish



- **P wave vector:**
  - normal range 30-75 degrees
  - best seen on EKG in lead II (60 degrees) since it's approx. parallel and same direction with lead II as a positive wave < 2.5 mV
  - obtained by summation of depolarization vectors RA and LA.

- **RA depolarization vector:**
  - normal orientation around 90 degrees pointing to inferior leads
  - on EKG normally makes the first half of the P wave

- **LA depolarization vector:**
  - normal orientation around 0-20 degrees pointing to lateral leads
  - on EKG normally makes the second half of the P wave

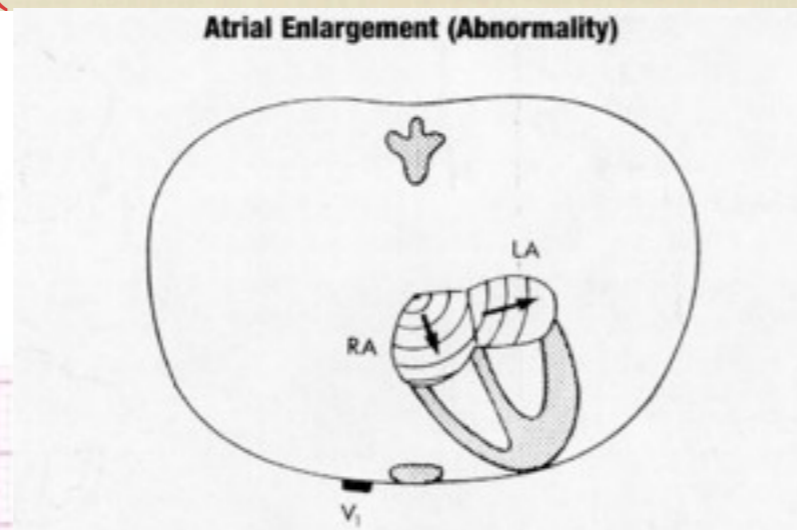
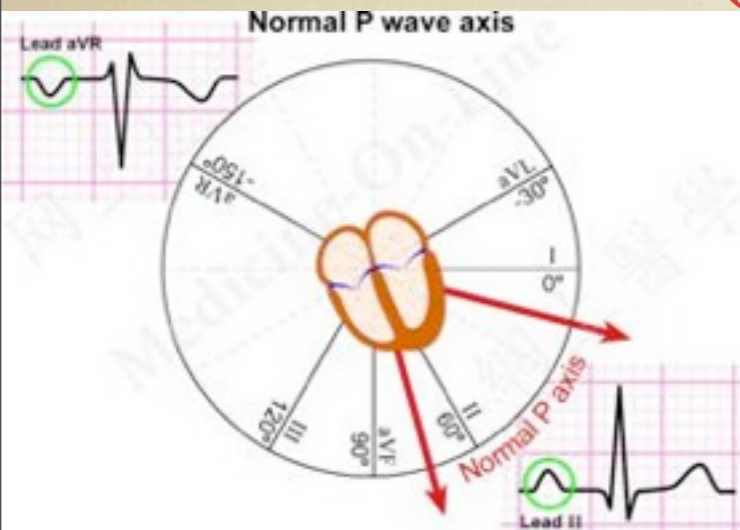




# ATRIAL ENLARGEMENT (ABNORMALITY) 2

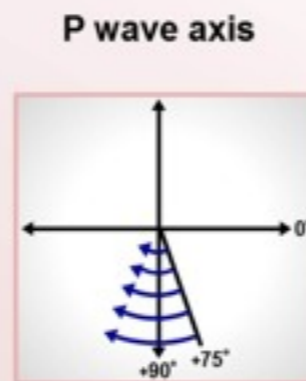
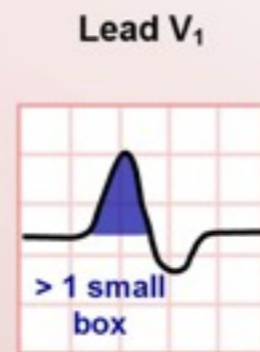
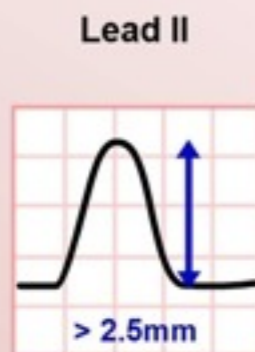


Ask Mish

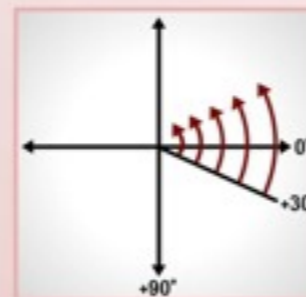
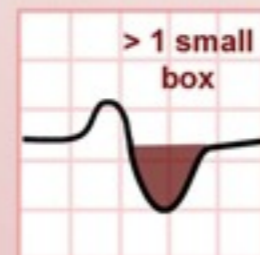
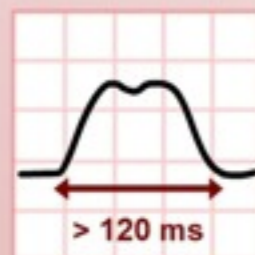


Enlargement	RA	LA
Vector depolarization	↑ RA	↑ LA
P wave	1st half ↑ & covers 2nd half	2nd half ↑ & delayed
Lead II	tall p > 2.5 mV	$m_p > 0.12 s$
Lead V <sub>1</sub>	tall p > 1 small box	deep p > 1 small box
P wave axis	> 75 degrees toward RA	< 30 degrees toward LA

Right Atrial Enlargement



Left Atrial Enlargement





# Atrial Abnormality



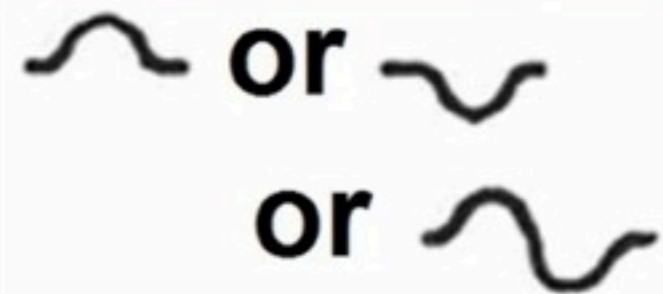
Ask Mish

**NSR**

**Lead II**

**Lead V<sub>1</sub>**

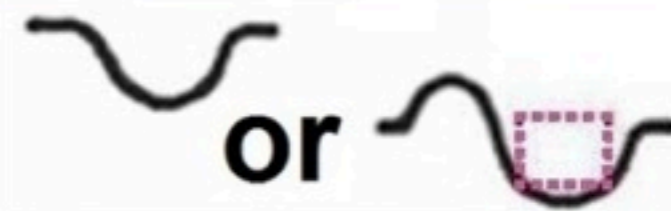
**RAA**



**LAA**



**m**



**1 box deep & wide**



# HYPERTROPHY & ENLARGEMENT



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