

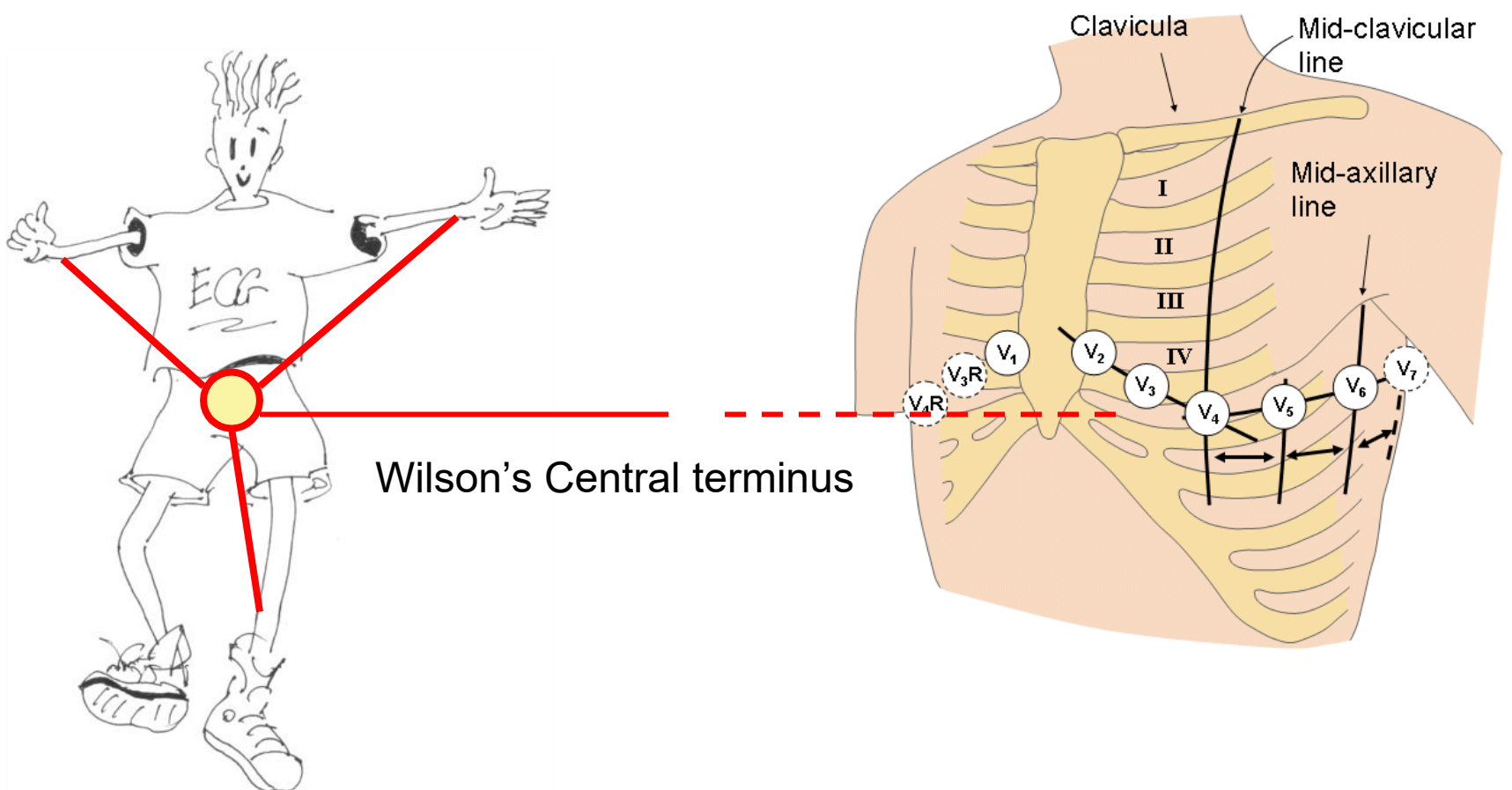
Electrocardiography (Part 2)

Department of Physiology

Specific learning objectives

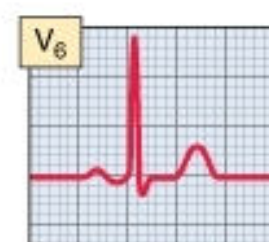
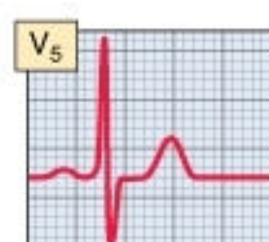
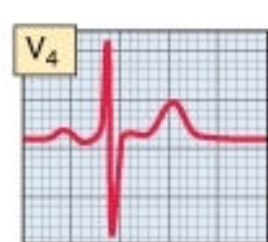
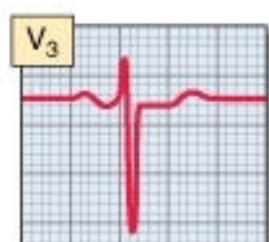
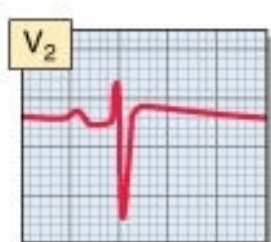
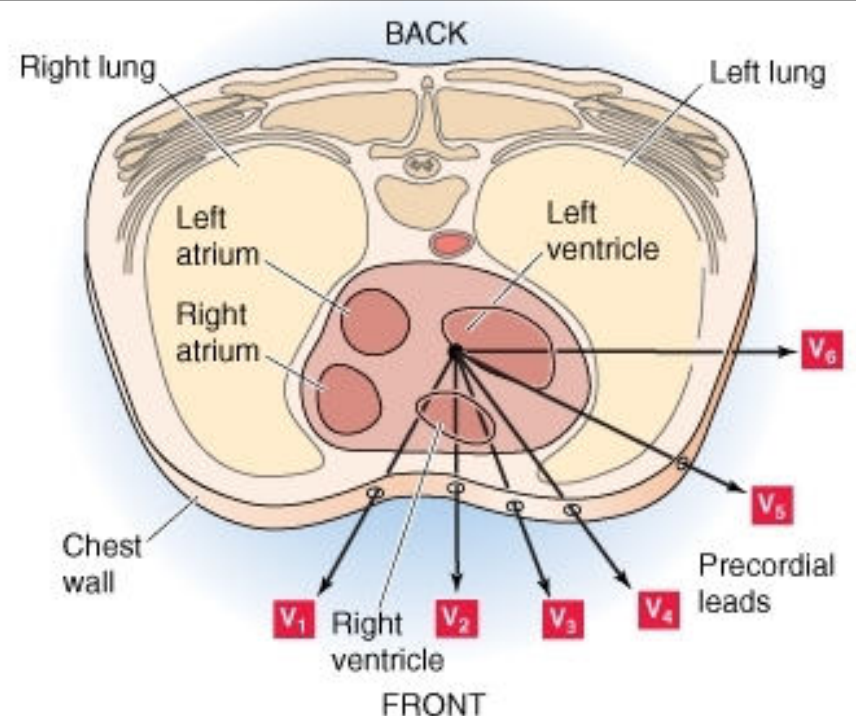
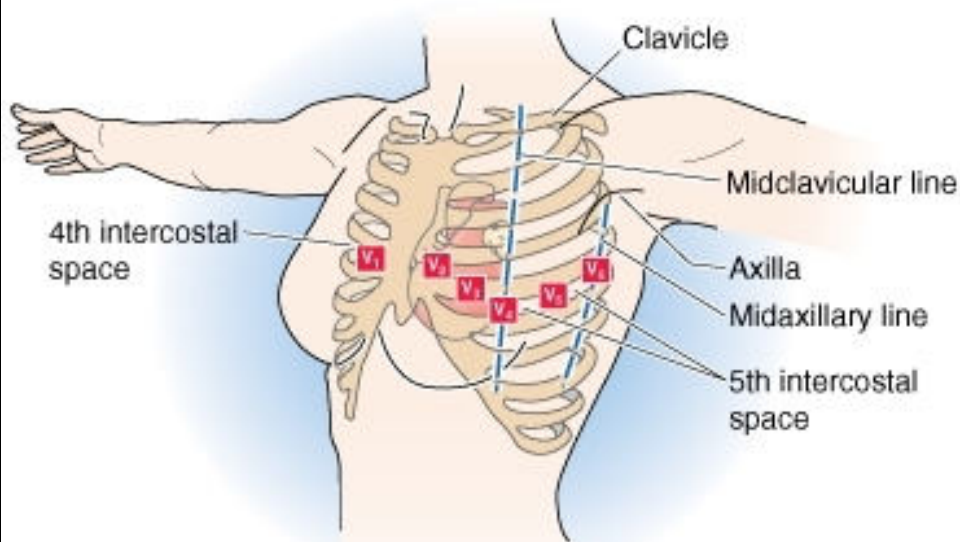
- Chest Leads
- Vector analysis
- Clinical applications of ECG

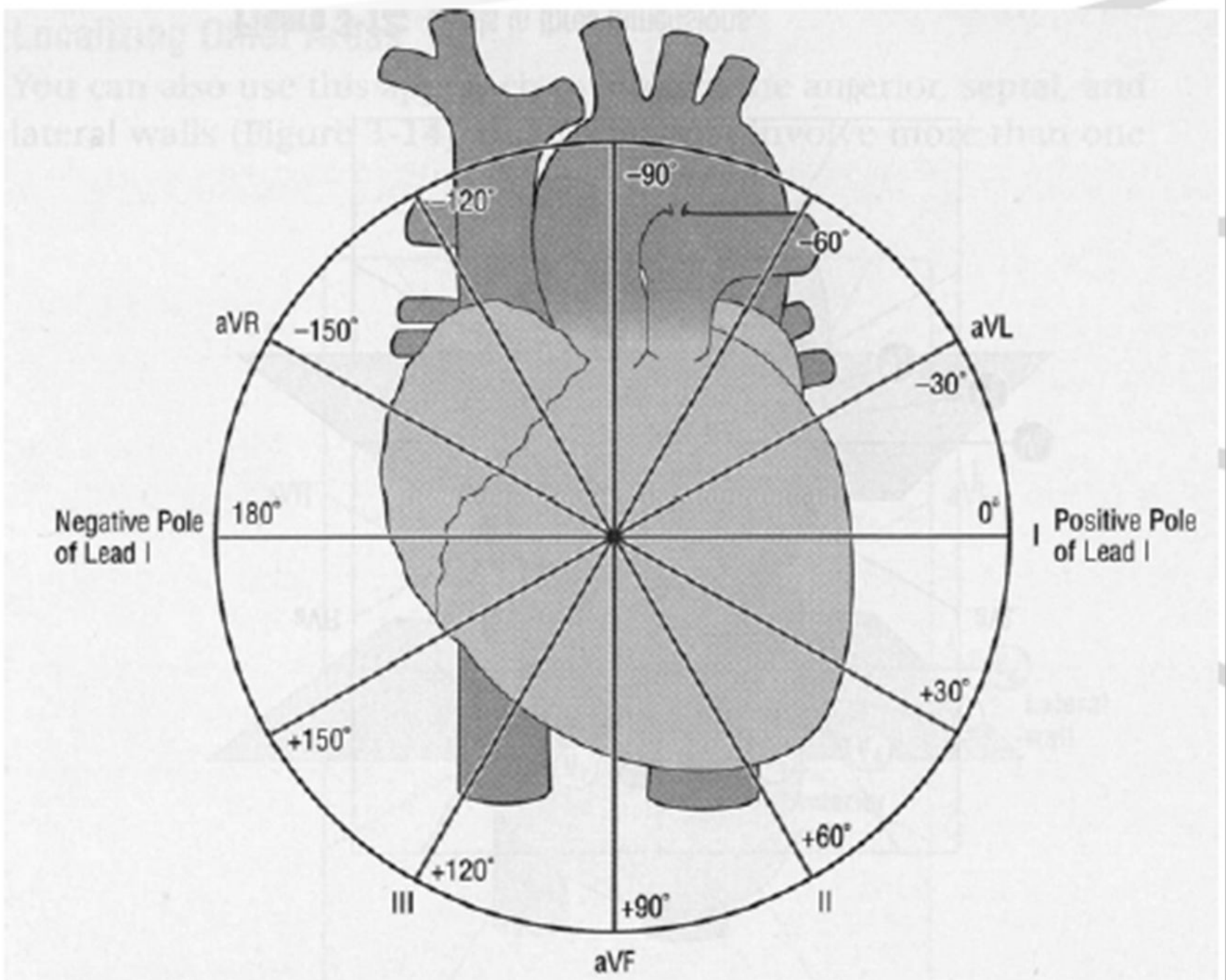
Chest (Precordial) Leads



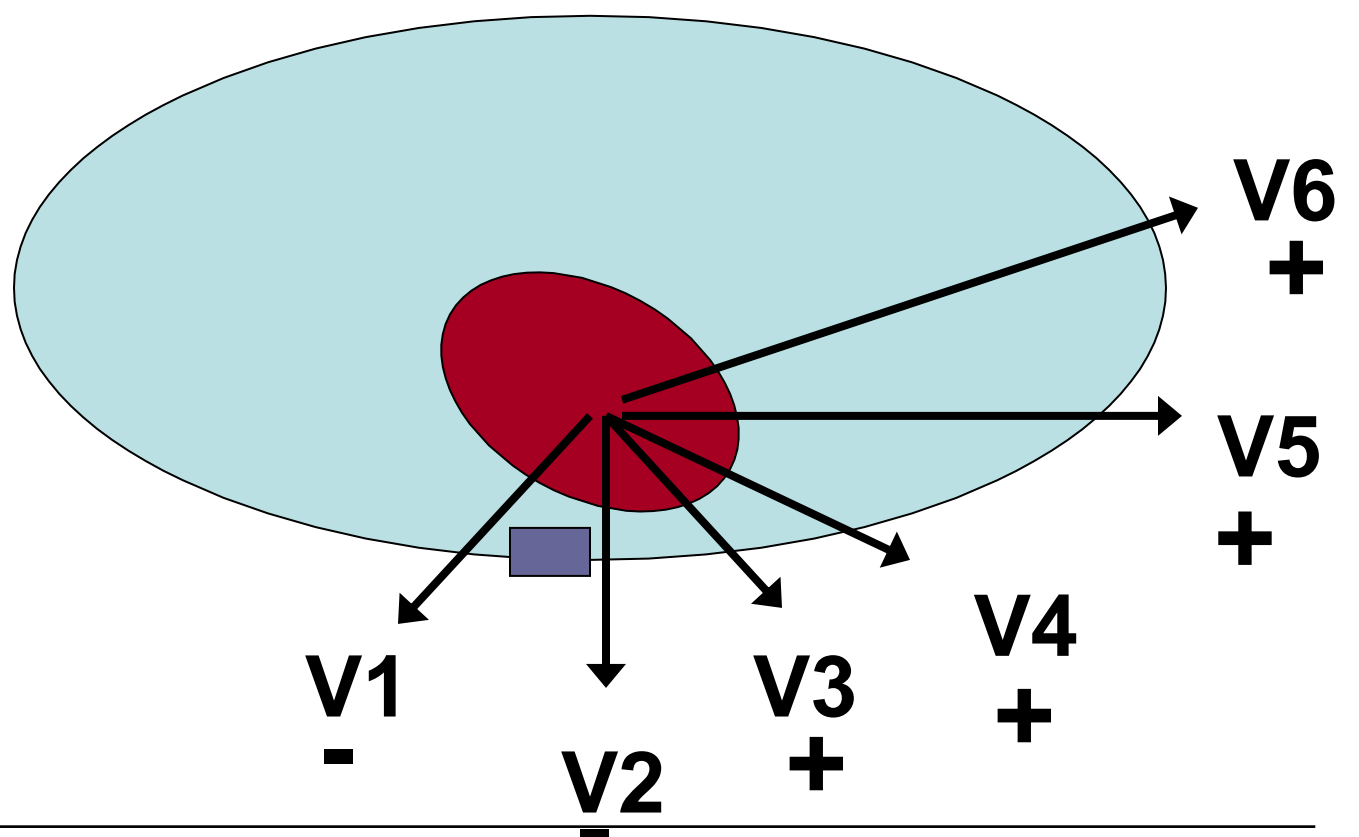
The Precordial (Chest) Leads

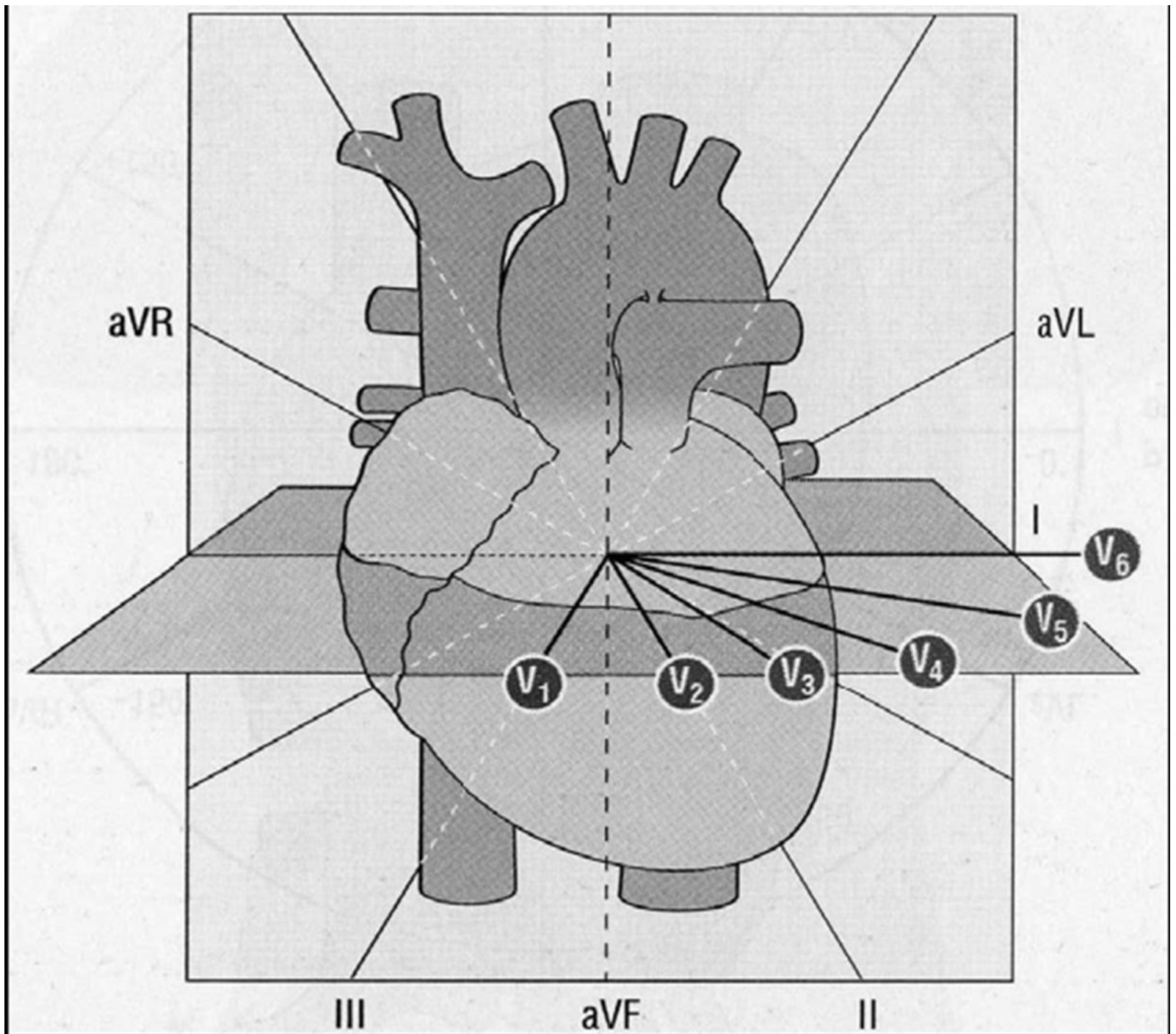
B TRANSVERSE PLANE—PRECORDIAL LEADS





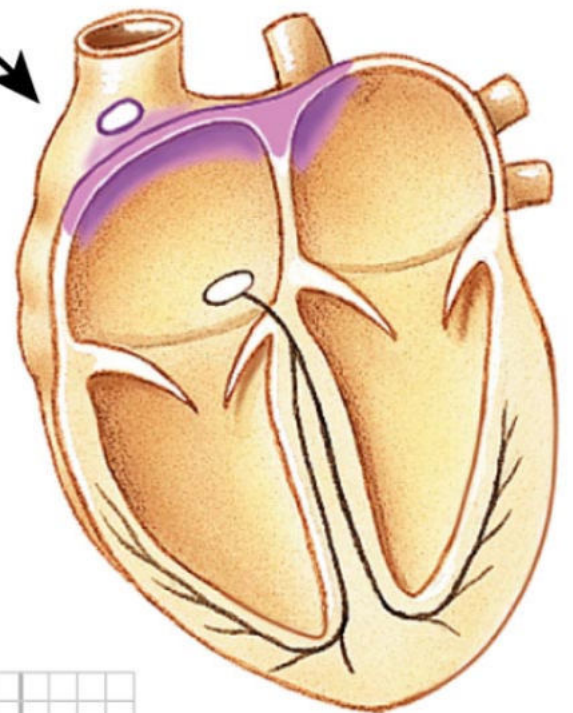
The Precordial (Chest) Leads





ELECTRICAL EVENTS OF THE CARDIAC CYCLE

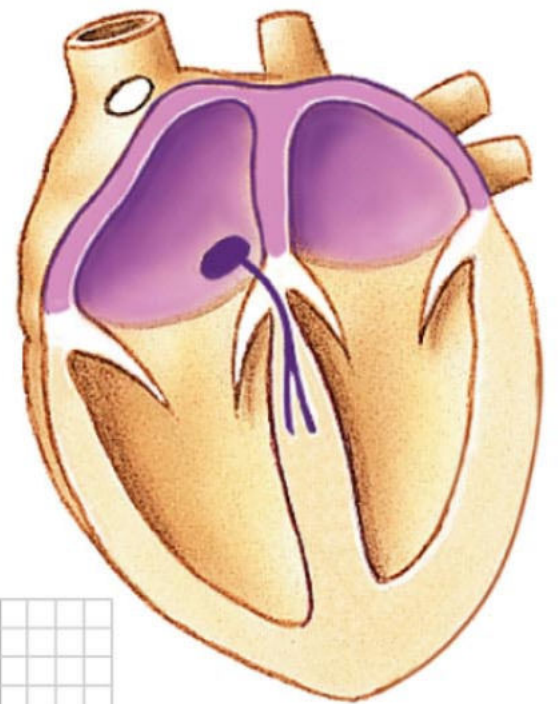
START



**P wave: atrial
depolarization**

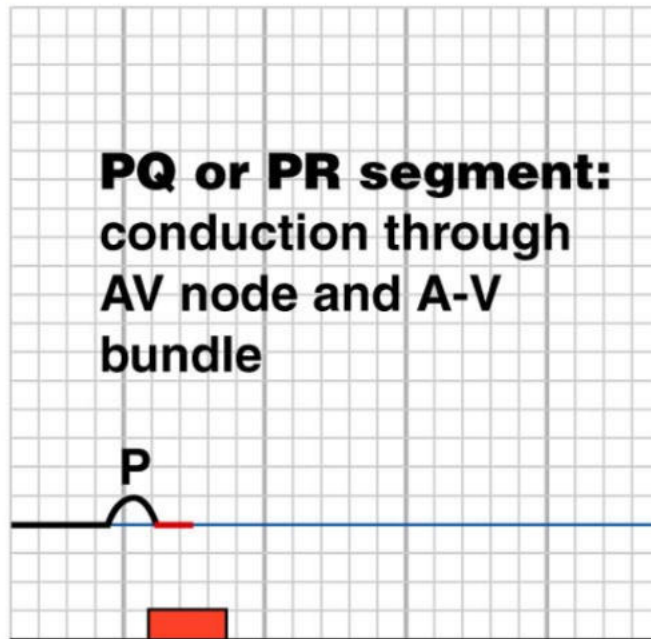


ELECTRICAL EVENTS OF THE CARDIAC CYCLE

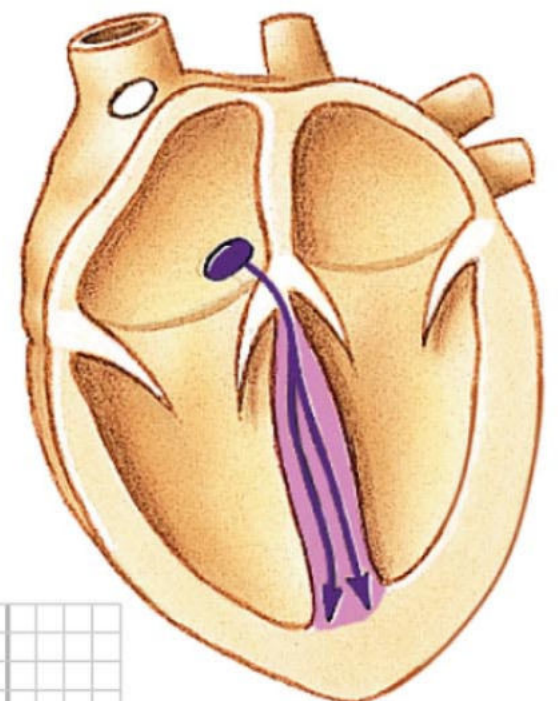


PQ or PR segment:
conduction through
AV node and A-V
bundle

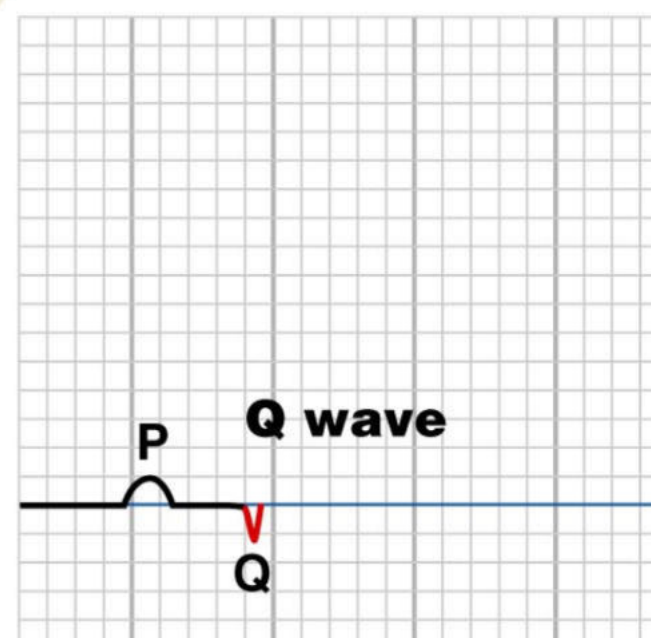
Atria
contract.



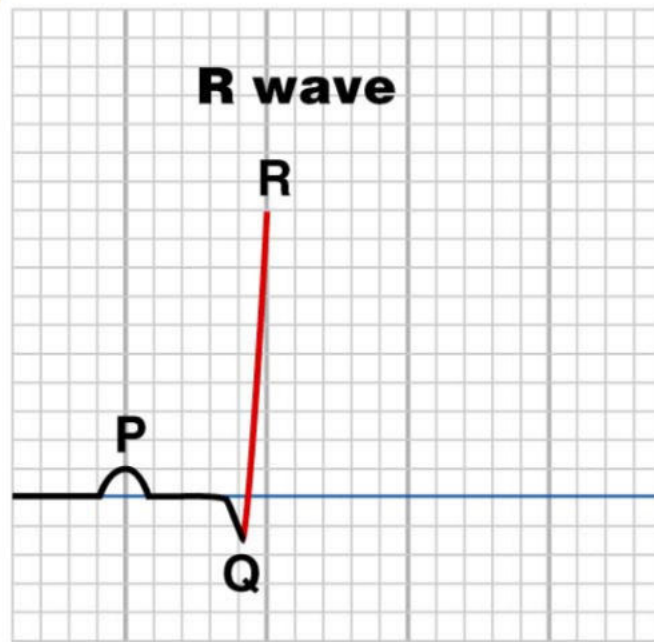
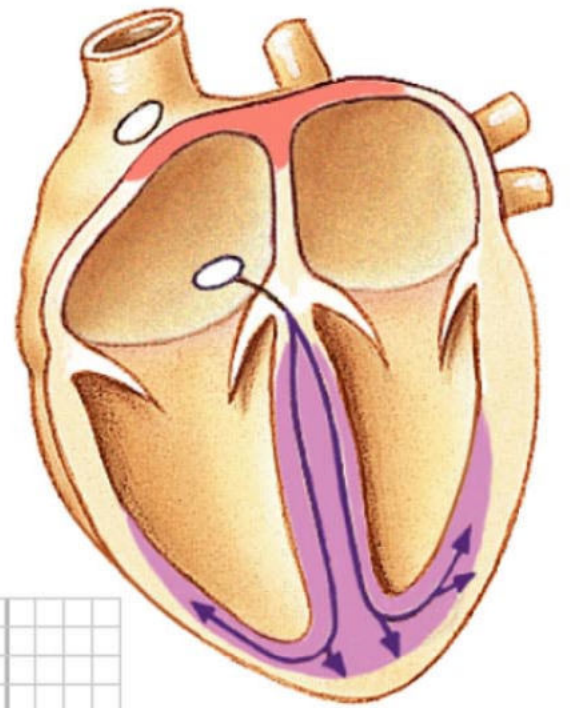
ELECTRICAL EVENTS OF THE CARDIAC CYCLE



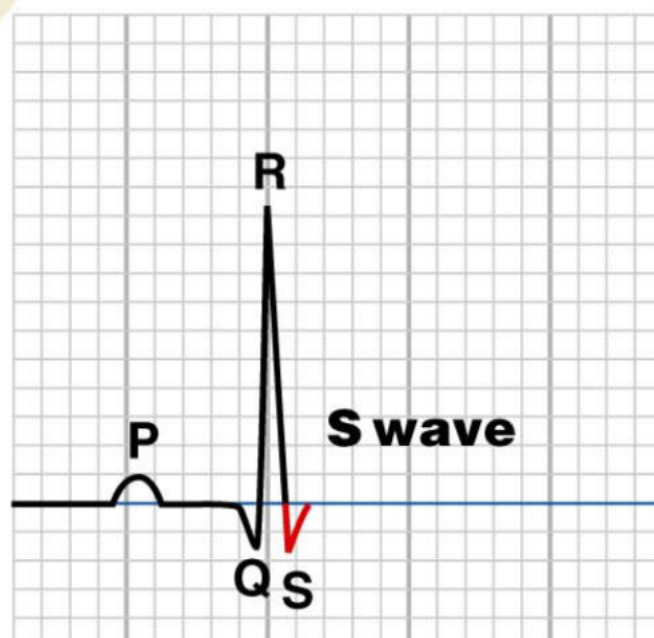
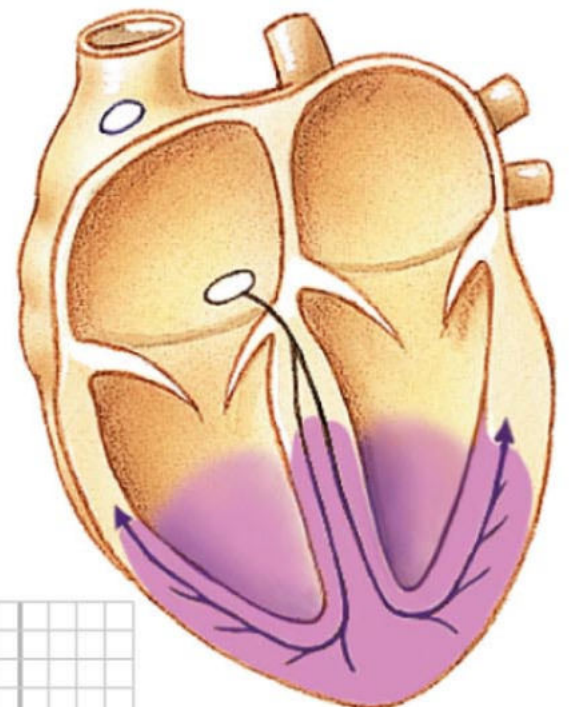
Q wave



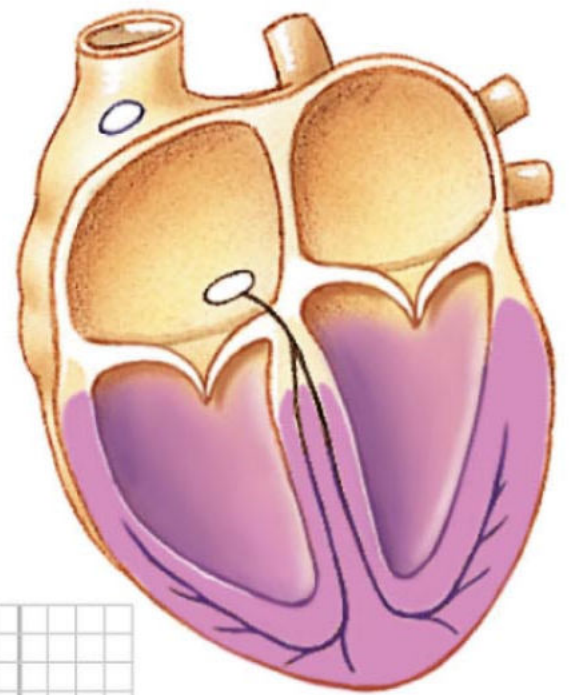
ELECTRICAL EVENTS OF THE CARDIAC CYCLE



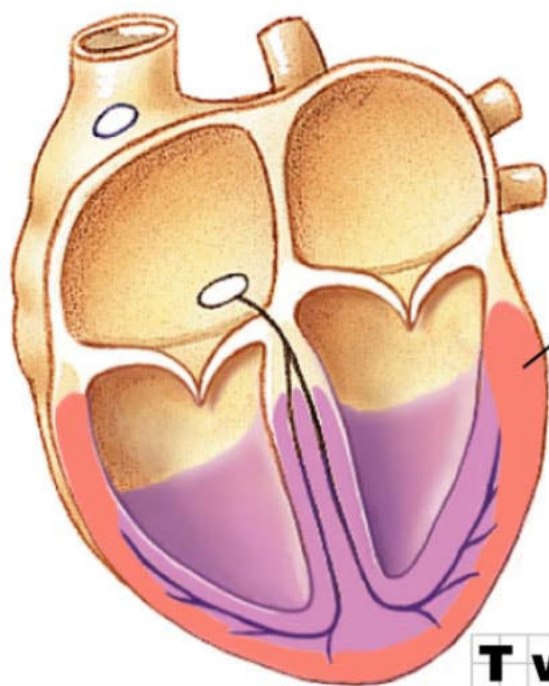
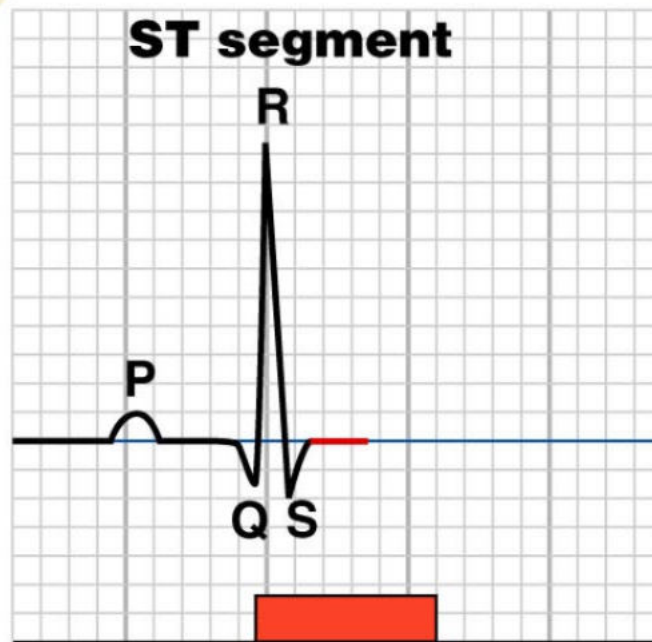
ELECTRICAL EVENTS OF THE CARDIAC CYCLE



ELECTRICAL EVENTS OF THE CARDIAC CYCLE

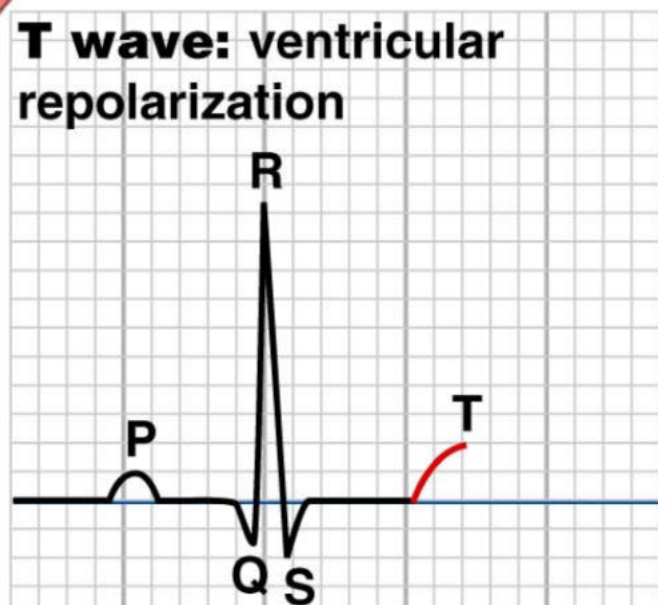


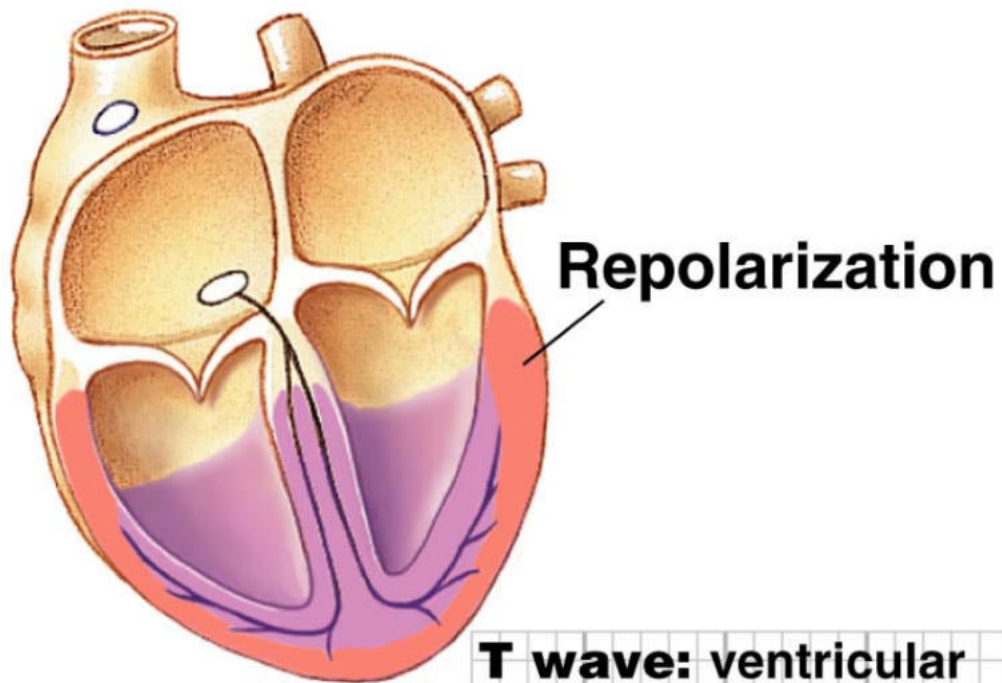
**Ventricles
contract.**



Repolarization

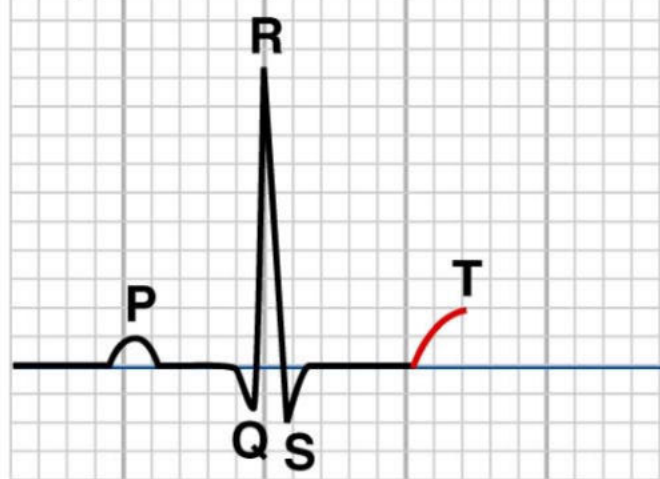
ELECTRICAL EVENTS OF THE CARDIAC CYCLE





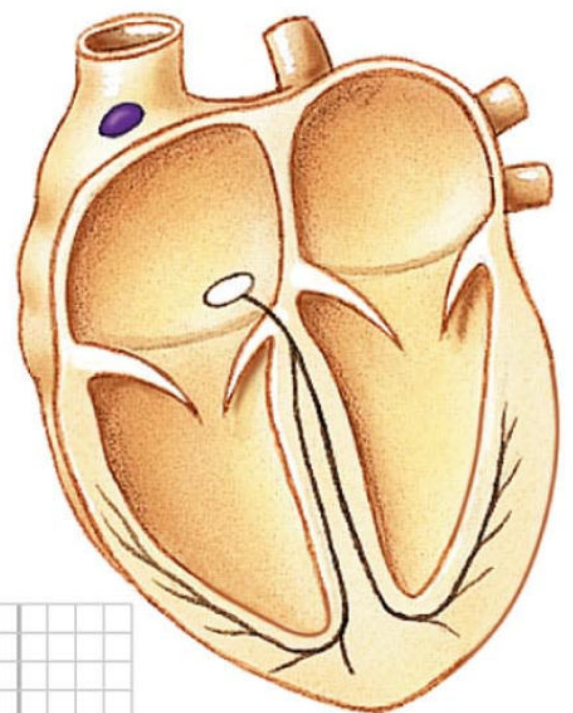
ELECTRICAL EVENTS OF THE CARDIAC CYCLE

T wave: ventricular
repolarization

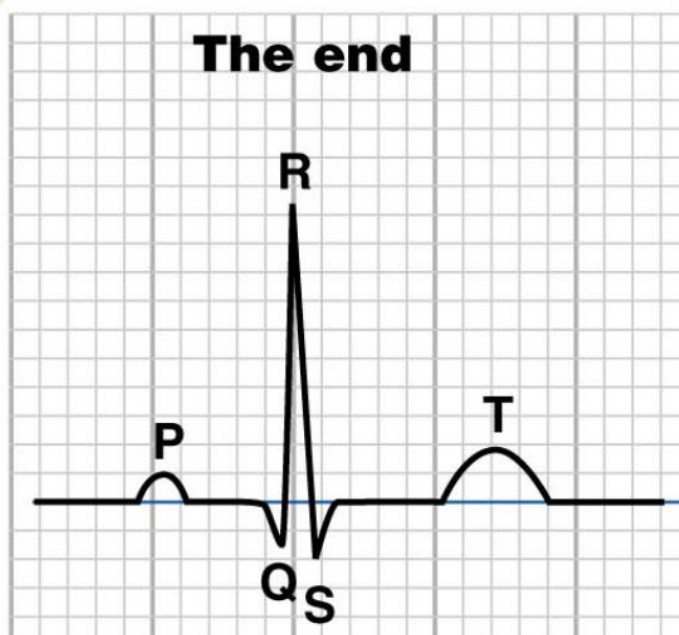


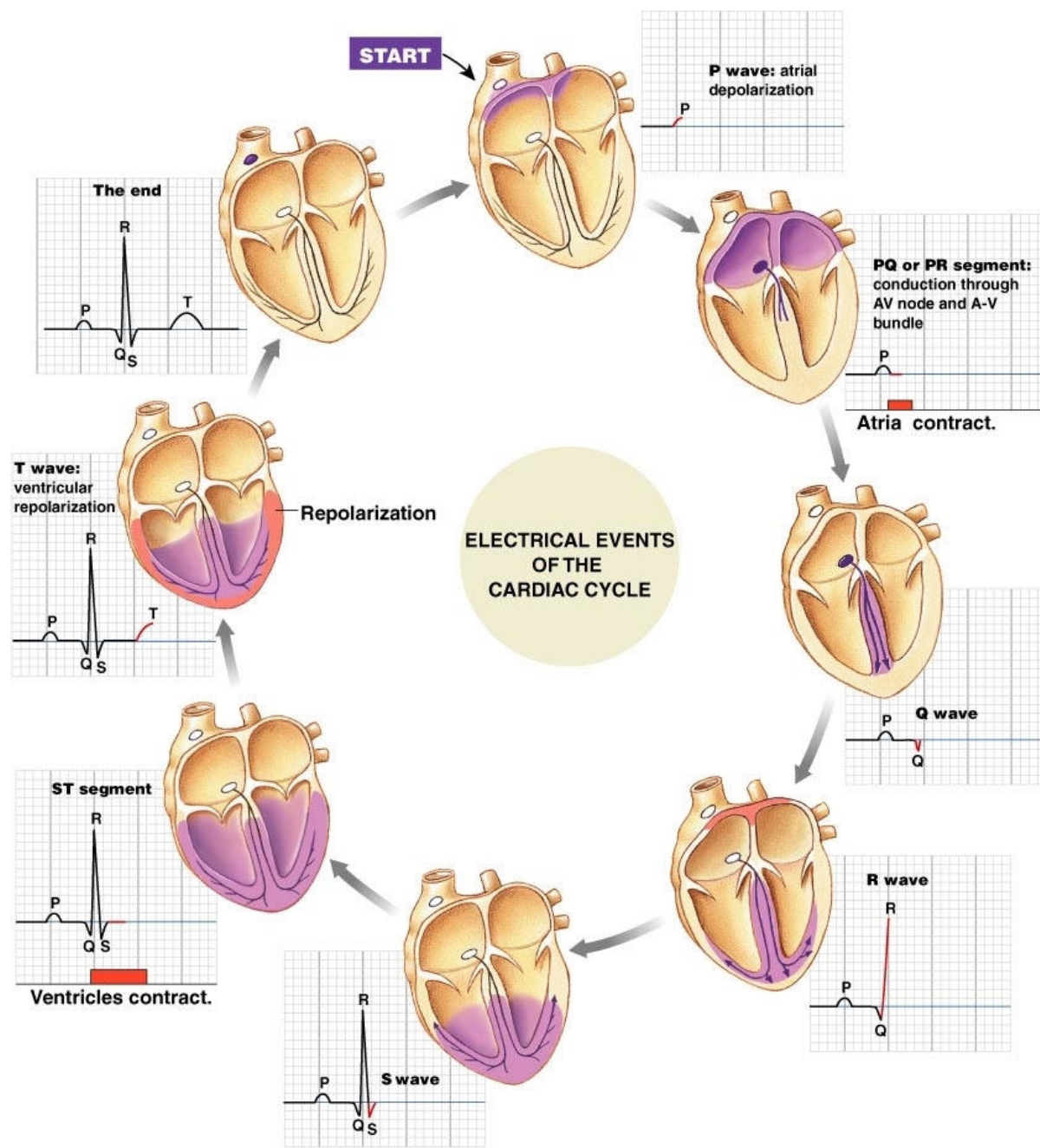
**Why is the T-wave
concordant (Same
direction) as the
QRS complex?**

ELECTRICAL EVENTS OF THE CARDIAC CYCLE

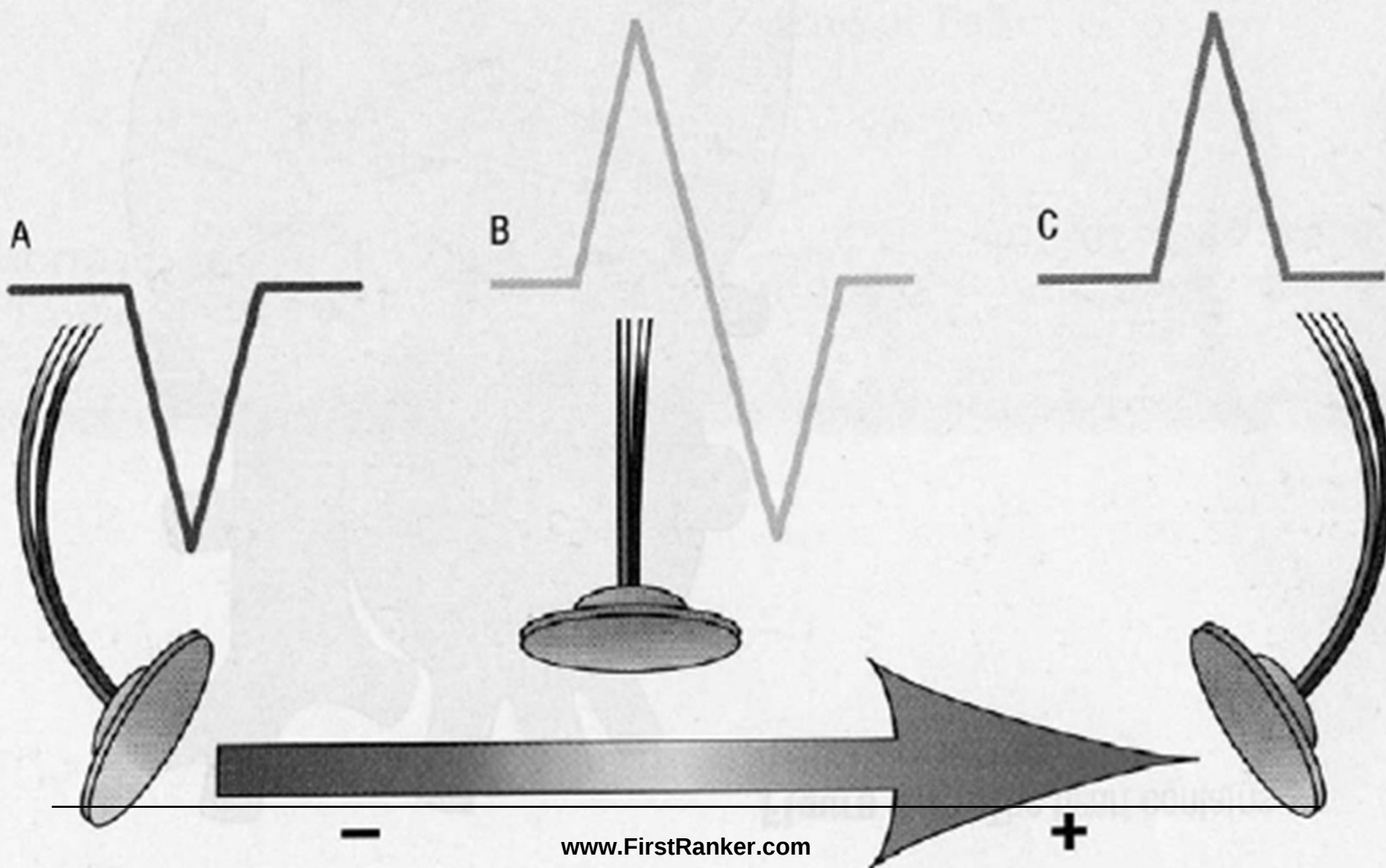


The end

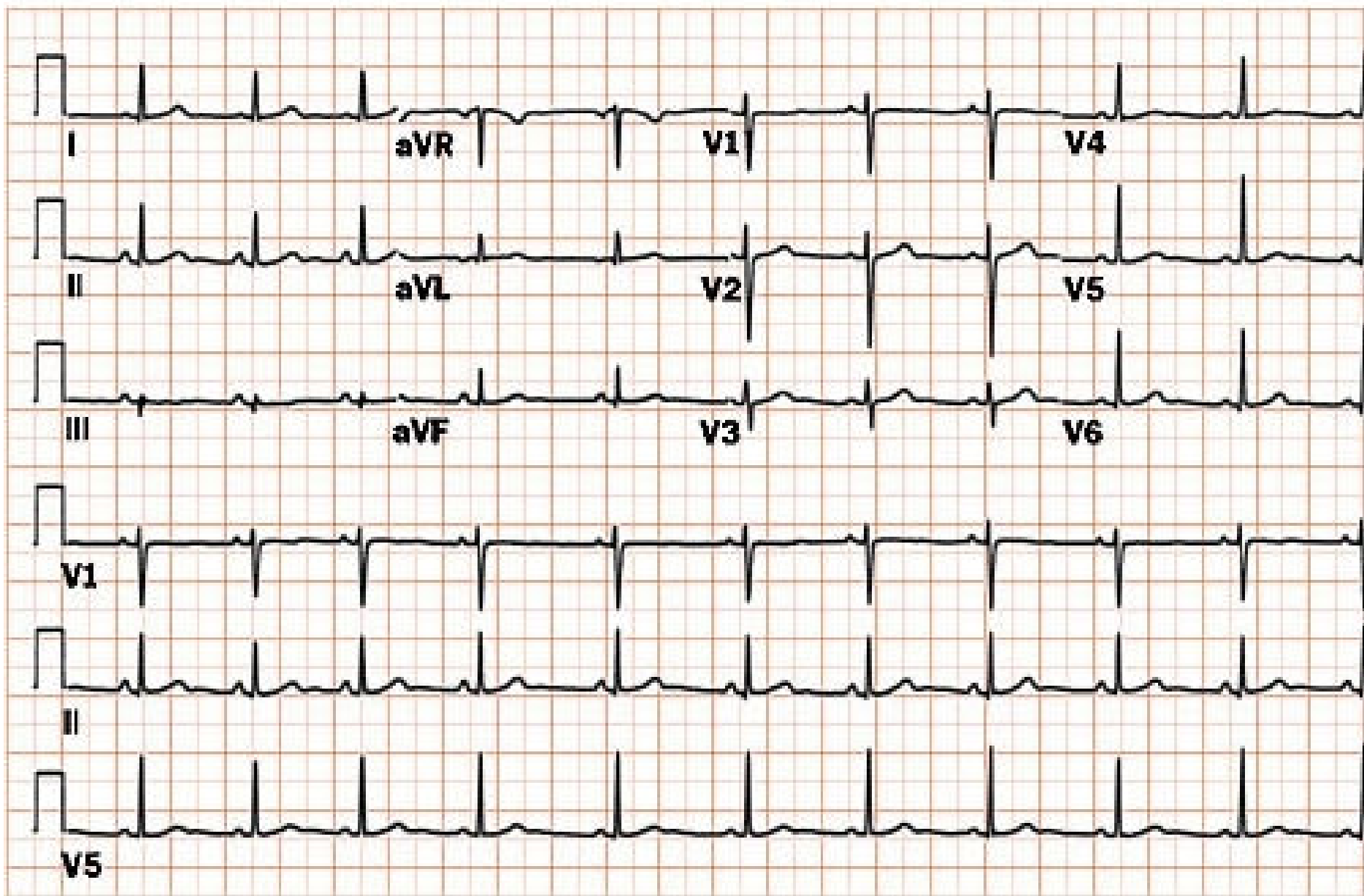




Effect of lead placement on recording



Sinus Rhythm



Clinical applications of ECG

- Diagnosis of acute coronary insufficiency (angina, infarction)
- Diagnosis of conduction defects of the heart and detection of arrhythmia
- Detection of electrolyte imbalances
- Assist in detection of atrial and ventricular hypertrophy
- Assist in clinical management of all patients in ICU
- Preoperative risk assessment of surgical interventions
- Monitor the treatment of arrhythmia
- Screening for high risk employment and sports activity

Thank You

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