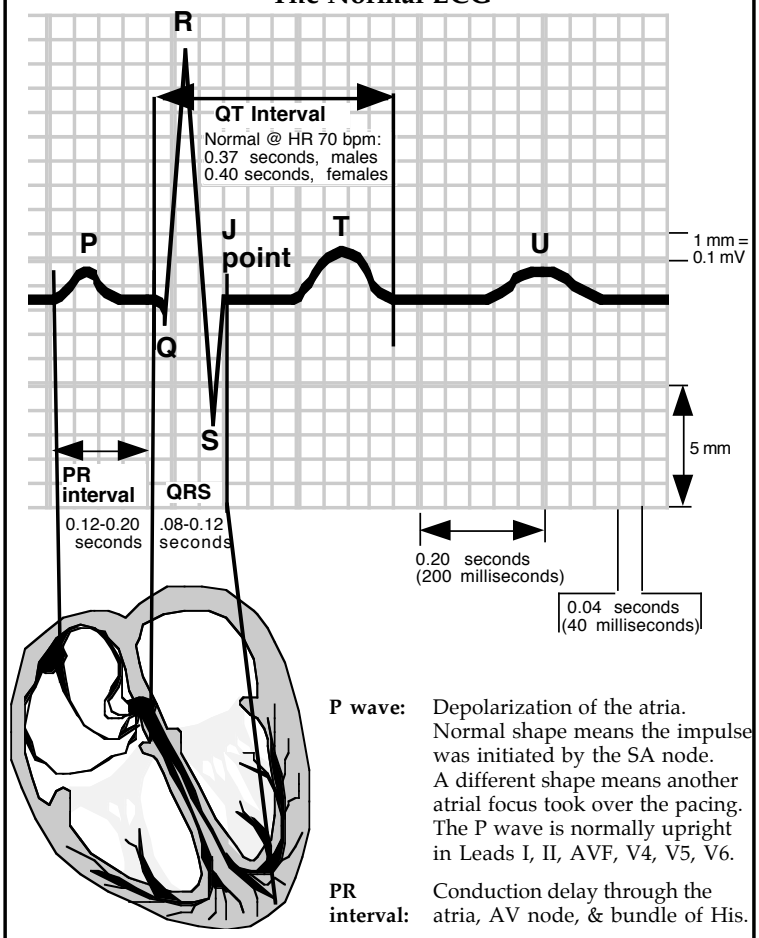
The Normal ECG



P wave: Depolarization of the atria.
Normal shape means the impulse was initiated by the SA node.
A different shape means another atrial focus took over the pacing.
The P wave is normally upright in Leads I, II, AVF, V4, V5, V6.

PR interval: Conduction delay through the atria, AV node, & bundle of His.

Q wave: The first negative deflection of the QRS.
Normally, Q waves are small (< 1 mm tall). Q waves that are > 1 mm may be significant for pathology (ischemia, infarction).

QRS: Depolarization of the ventricles.
Normally, the QRS is positive in all leads except AVR.
Normal configuration and duration means the impulse was initiated by the AV node.
A wide QRS means conduction was delayed through the AV node or an ectopic impulse within the ventricles initiated the impulse.

J Point: Where the S wave ends and the ST segment begins.
ST segment monitoring analyzes the ST segment beginning 60 milliseconds after the J point, to minimize confusion with the upslope of the T wave.

T wave: Repolarization of the ventricles. Electrical stimulus during the T wave (R-on-T phenomenon) can cause ventricular arrhythmia.

QT interval: The distance from the Q to the end of the T wave.
Prolonged by some electrolyte and metabolic imbalances.
Prolonged QT can increase the chance of R-on-T phenomenon.

U wave: Probably repolarization of the Purkinje system.