

International Criteria for ECG Interpretation in Athletes

Normal ECG Findings

- Increased QRS voltage for LVH or RVH
- Incomplete RBBB
- Early repolarization/ST segment elevation
- ST elevation followed by T wave inversion V1-V4 in black athletes
- T wave inversion V1-V3 \leq age 16 years old
- Sinus bradycardia or arrhythmia
- Ectopic atrial or junctional rhythm
- 1° AV block
- Mobitz Type I 2° AV block

Borderline ECG Findings

- Left axis deviation
- Left atrial enlargement
- Right axis deviation
- Right atrial enlargement
- Complete RBBB

Abnormal ECG Findings

- T wave inversion
- ST segment depression
- Pathologic Q waves
- Complete LBBB
- QRS \geq 140 ms duration
- Epsilon wave
- Ventricular pre-excitation
- Prolonged QT interval
- Brugada Type 1 pattern
- Profound sinus bradycardia $<$ 30 bpm
- PR interval \geq 400 ms
- Mobitz Type II 2° AV block
- 3° AV block
- \geq 2 PVCs
- Atrial tachyarrhythmias
- Ventricular arrhythmias

No further evaluation required in asymptomatic athletes with no family history of inherited cardiac disease or SCD

In isolation

2 or more

Further evaluation required to investigate for pathologic cardiovascular disorders associated with SCD in athletes