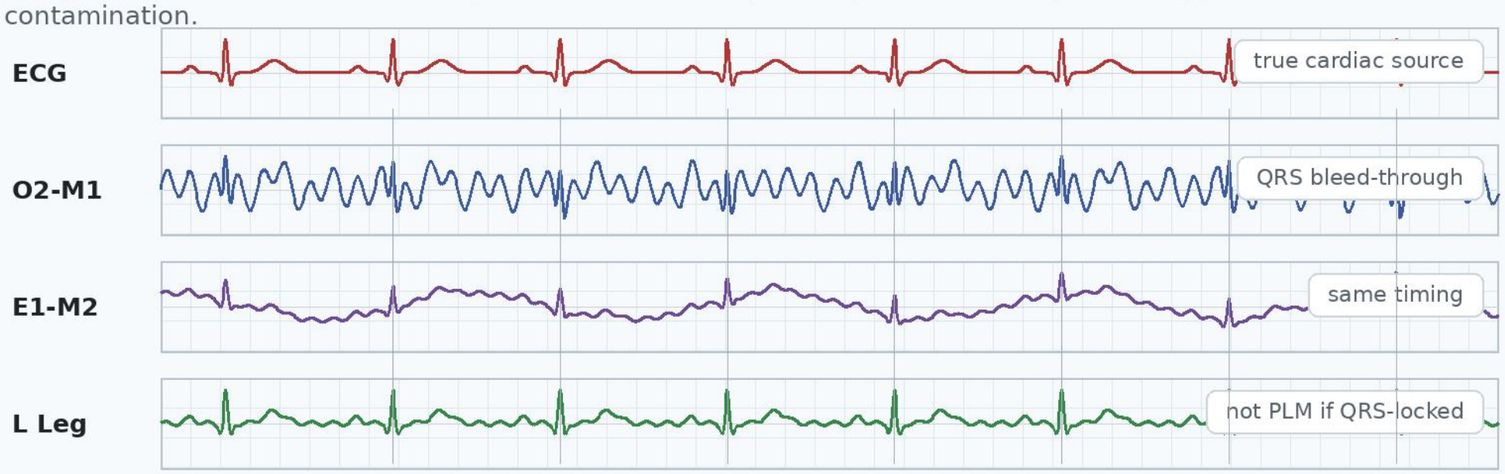
EKG Artifact Recognition Lab

Original RPSGT study rendering - PSG artifact patterns, correction steps, and BRPT-style practice questions

Coach Bob says:
Trace across channels before you call it pathology.

A. Cardiac timing is the artifact clue

Sharp deflections in EEG, EOG, or leg channels that line up exactly with QRS complexes suggest ECG contamination.

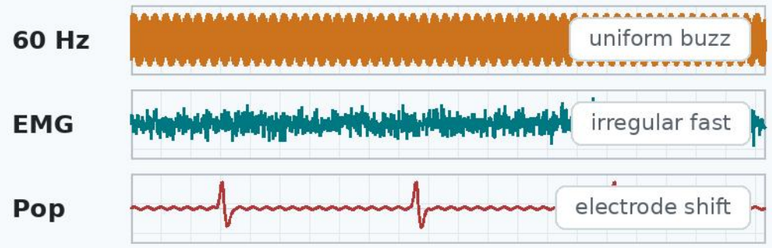


Key idea: the artifact repeats with the heart, not with sleep stage or true limb activation.

Do not score ECG artifact as spikes, PLMs, apnea, or arrhythmia.

B. Compare artifact types

Shape and distribution help separate ECG contamination from other common PSG artifact.



C. Correcting artifact

AASM-style mini-guide: fix signal quality and document changes.

1. Confirm: compare suspect channel with ECG.
2. Inspect: check contact, reference, impedance, sweat bridge, and cable strain.
3. Correct: re-prep/replace electrode; secure and separate wires.
4. Document: mark artifact and note the intervention.

D. BRPT-style RPSGT practice questions

Original practice items for study use only - not official BRPT questions.

1. A sharp waveform appears in O2-M1 and the left leg channel at the same time as every QRS complex. What is the best interpretation?

A. Periodic limb movements
B. ECG artifact contaminating other channels
C. REM-related sawtooth waves
D. Alpha intrusion

Answer: B

2. During acquisition, ECG artifact is seen in EEG references. What is the best first troubleshooting step?

A. Ignore it until morning
B. Increase gain only
C. Check electrodes/references and route wires away from ECG leads
D. Score it as epileptiform activity

Answer: C

3. Which finding supports artifact rather than a true leg movement?

A. Deflection repeats exactly with QRS complexes
B. Deflection lasts 0.5-10 seconds with EMG burst
C. It occurs only after respiratory events
D. It has visible patient movement on video

Answer: A

Teaching note: Artifact correction is a technical skill. Identify the source, fix the signal, document the action, and avoid over-scoring artifact as pathology.

SleepPathwaysGuild.com