

CARDIOVERSION

1. Level: Paramedic, RN
2. Indications: The treatment of unstable tachycardia due to cardiac conduction disturbances with serious signs and symptoms:
 - 2.1. No palpable blood pressure
 - 2.2. Altered mental status
 - 2.3. Systolic blood pressure < 90 or chest pain if Vagal maneuvers and pharmacological therapy were unsuccessful
3. Contraindications: None in pre-hospital emergent setting
4. Complications: May result in ventricular fibrillation
5. Procedure:
 - 5.1. Adult
 - 5.1.1. Cardiac monitoring
 - 5.1.2. Must have monitoring electrodes in place in order to synchronize
 - 5.1.3. Assure that R wave is being detected by synchronizer circuit: Choose lead II for tall upright R waves, adjust gain if needed
 - 5.1.4. Apply hands free Quick Combo pads as follows—right of sternum at 2nd intercostal space and anterior axillary line at 5th intercostal space.
 - 5.1.5. Monitor shows Narrow Complex Tachycardia (SVT, A-fib, A-flutter)
 - 5.1.5.1. Initial synchronized cardioversion at 125 J DC
 - 5.1.5.2. Additional synchronized cardioversion energy levels are 200 J, 300 J, and 360 J.
 - 5.1.5.3. All subsequent synchronized cardioversion energy levels are at 360 J.
 - 5.1.6. Monitor shows Polymorphic Ventricular Tachycardia
 - 5.1.6.1. Initial cardioversion at 200 J DC .
 - 5.1.6.2. Additional cardioversion energy levels are 300 J and 360 J.
 - 5.1.6.3. All subsequent cardioversion energy levels are at 360 J.
 - 5.1.7. Monitor shows Monomorphic Ventricular Tachycardia
 - 5.1.7.1. Initial synchronized cardioversion at 100 J DC.
 - 5.1.7.2. Additional synchronized cardioversion energy levels are 200 J, 300 J, and 360 J.
 - 5.1.7.3. All subsequent synchronized cardioversion energy levels are at 360 J.
 - 5.1.8. Clear patient.
 - 5.1.9. Hold the discharge button down until the unit discharges.
 - 5.1.10. If patient converts: Go to appropriate protocol.
 - 5.1.11. No change in rhythm: Increase dose as noted above and confirm that the **sync** is activated.
 - 5.2. Pediatric cardioversion¹
 - 5.2.1. Use largest paddle that will fit:
 - 5.2.1.1. Adult Quick Combo pads A/P or conventional (12 months or over 10 kg.)²
 - 5.2.1.2. Pediatric Quick Combo pads (less than 10 kg)
 - 5.2.2. Cardioversion Energy Levels

¹ Dieckmann, Ronald, Dena Brownstein and Mariane Gausche-Hill, ed. Pediatric Education for Prehospital Professionals, pp. 283-285.

² Quick Combo –RTS disposable Pediatric pads instructions.

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- 5.2.2.1. The energy level for pediatric cardioversion is based on the 1 J/kg for initial cardioversion and 2 J/kg for second and subsequent shocks. The cardiac monitor is not capable of delivering the exact energy levels for all weights on the Broselow Tape. The cardioversion energy levels on the Pediatric Broselow—Color Coded Drug List by Volume have been revised to represent actual energy levels capable of being delivered using the cardiac monitor.
- 5.2.2.2. If cardioversion is indicated and the cardiac monitor is not capable of delivering the exact energy level, shock at the next highest energy level.