

	C06 - UNSTABLE TACHYCARDIA	
	All ages	RESUSCITATION
ALL - Paramedics with all work scopes will follow this protocol except where indicated by PCP (primary & intermediate only) or ICP (intermediate only).		
Version date: 2022-07-16	Effective Date: 2022-09-27 (0700 hrs)	

If sinus tachycardia is the most likely rhythm, consider & manage the underlying cause¹

- Is there cardiopulmonary compromise?**
- Acutely altered consciousness
 - Hypotension / poor perfusion
 - Ischemic chest discomfort / pain
 - Acute heart failure / pulmonary edema

Yes

ICP: Cardioversion
(consider sedation if time & hemodynamics allow)

No

- Maintain ABCs
- Establish full monitoring
- PCP:** Establish IV access
- PCP:** Obtain ECG

TEN YEARS & OLDER:
 Narrow regular = 50 – 100 J
 Narrow irregular = 120 – 200 J
 Wide regular = 100 J
 Wide irregular = 120 – 200 J⁴

UP TO TEN YEARS:
 Initial shock = 0.5 – 1 J/kg
 Subsequent shock = 2 J/kg

Is the QRS wider than 120 milliseconds?

Yes

Are the complexes monomorphic & regular?

No

No

POSSIBLE SVT²

- PCP:** Vagal maneuvers
- ICP:** Consider adenosine

NOT SVT³
ICP: Consult OLMS for possible amiodarone

No

Are the complexes regular?

Yes

PROBABLE SVT

- PCP:** Vagal maneuvers
- ICP:** Administer adenosine

Transport

TABLE A - MAXIMUM PHYSIOLOGICAL HEART RATE (BPM) BY AGE

AGE (YRS)	HR (BPM)	AGE (YRS)	HR (BPM)	AGE (MOS) ²	HR (BPM)	AGE (MOS) ²	HR (BPM)
> 18	100	6 - 8	120	24 - 36	140	9 - 12	160
15 - 18	105	4 - 6	130	18 - 24	150	6 - 9	170
12 - 15	110	3 - 4	135	12 - 18	155	3 - 6	175
8 - 12	115					0 - 3	180

INDICATIONS

- A palpable pulse with a sustained heart rate (HR) greater than the age-appropriate physiological maximum (table A) and cardiopulmonary compromise known or suspected to be due to the tachycardia.

CONTRAINDICATIONS

- Tachycardia without a palpable pulse indicates will be treated as per the appropriate resuscitation care map (C01 / C02).

NOTES

1. In an infant or child, that rhythm with a heart rate (HR) of less than 200 beats per minute (bpm) is consistent with sinus tachycardia (causes include hypovolemia, sepsis, or hypoxemia). A HR above 220 bpm suggests **paroxysmal supraventricular tachycardia** (PSVT or SVT), especially if accompanied by signs of heart failure.
2. SVT can have wide QRS complexes when abnormal conduction is present. However, the complexes should all look similar (monomorphic) and be very regular. A history of prior SVT or known aberrant conduction is an important clue.
3. A wide QRS complex that is not monomorphic and not regular is much less consistent with SVT and highly suspicious for ventricular tachycardia (VT), or atrial fibrillation (AF) with abnormal conduction. In this case, adenosine is unlikely to work and could precipitate ventricular fibrillation (VF) if the rhythm is aberrantly conducted AF.

If the transport time is long or the patient is at risk of developing ischemia, chemical cardioversion with amiodarone should be considered. **Paramedics with the intermediate scope of work must consult with the on-line medical support (OLMS) physician if amiodarone is being considered.**
4. With extremely irregular polymorphic rhythms, synchronization may not be possible.
5. When performing cardioversion on a patient with an implanted cardioverter defibrillator (ICD) or pacemaker, place the electrodes at least 8 centimeters (3 inches) away from the pulse generator. Do not perform cardioversion on a patient with a left ventricular assist device (LVAD).

LINKS

C01 - BASIC RESUSCITATION C02 - ADVANCED RESUSCITATION M01 - ADENOSINE M14 - AMIODARONE
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APPROVED BY

	
Medical Director - Provincial EMS/PT	Associate Medical Director - Provincial EMS/PT

VERSION CHANGES (refer to X03 for change tracking)
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|---|
| <ul style="list-style-type: none"> • Compliance statement moved out of header to become policy & procedure A03 • Work scope statement added to header |
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