

# H's and T's of ACLS

H	Hypovolemia	Hypoxia	Hydrogen Ion (acidosis)	Hypo/Hyperkalemia	Hypothermia
	<p>Loss of fluid volume in the circulatory system.</p> <p>Look for obvious blood loss.</p> <p>Most important intervention is to obtain IV access and administer IV fluids.</p> <p>Use a fluid challenge to determine if the arrest is related to hypovolemia</p>	<p>Deprivation of an adequate oxygen supply can be a significant contributing cause of cardiac arrest.</p> <p>Ensure that the airway is open.</p> <p>Ensure adequate ventilation, and bilateral breath sounds.</p> <p>Ensure oxygen supply is connected properly.</p>	<p>Obtain an arterial blood gas to determine respiratory acidosis.</p> <p>Provide adequate ventilations.</p> <p>Use sodium bicarbonate to prevent metabolic acidosis if necessary.</p>	<p>Both a high and low K+ can cause cardiac arrest.</p> <p>Signs of high K+ include taller, peaked T-waves, and widening of the QRS complex.</p> <p>Signs of low K+ include flattened T-waves, prominent U-waves and possibly widened QRS complex.</p> <p>Never give undiluted intravenous potassium.</p>	<p>If a patient has been exposed to the cold, warming measures should be taken.</p> <p>Core temp. should be raised above 86 F and 30 C as soon as possible.</p> <p>The patient may not respond to drug or electrical therapy while hypothermic.</p>

T	Toxins	Tamponade	Tension Pneumothorax	Thrombosis (heart: acute, massive MI)	Thrombosis (lungs: massive PE)
	<p><u>Accidental overdose</u> : Some of the most common include: tricyclics, digoxin, betablockers, and calcium channel blockers).</p> <p><u>Cocaine</u> is the most common street drug that increases incidence of pulseless arrest.</p> <p><u>Physical signs</u> include bradycardia, pupil symptoms, and other neurological changes.</p> <p>Poison control can be utilized to obtain information about toxins and reversing agents.</p>	<p>Fluid build-up in the pericardium results in ineffective pumping of the blood which can lead to pulseless arrest.</p> <p>ECG symptoms: Narrow QRS complex and <b>rapid heart rate</b>.</p> <p>Physical signs: jugular vein distention (JVD), no pulse or difficulty palpating a pulse, and muffled heart sounds.</p> <p>Perform: pericardiocentesis to reverse.</p>	<p>Tension pneumothorax shifts in the intrathoracic structure and can rapidly lead to cardiovascular collapse and death.</p> <p>ECG signs: Narrow QRS complexes and <b>rapid heart rate</b>.</p> <p>Physical signs: JVD, tracheal deviation, unequal breath sounds, difficulty with ventilation, and no pulse felt with CPR.</p> <p>Treatment: Needle decompression.</p>	<p>Causes acute myocardial infarction.</p> <p>ECG signs: 12 lead ECG with ST-segment changes, T-wave inversions, and/or Q waves.</p> <p>Physical signs: elevated cardiac markers on lab tests, and chest pain/pressure.</p> <p>Treatments: use of fibrinolytic therapy, PCI (percutaneous coronary intervention).</p> <p>The most common PCI procedure is coronary angioplasty with or without stent placement.</p>	<p>Can rapidly lead to respiratory collapse and sudden death.</p> <p>ECG signs of PE: Narrow QRS Complex and rapid heart rate.</p> <p>Physical signs: No pulse felt with CPR. distended neck veins, positive d-dimer test, prior positive test for DVT or PE.</p> <p>Treatment: surgical intervention (pulmonary thrombectomy) and fibrinolytic therapy.</p>

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