



ACLS Study Guide

The ACLS Provider exam is 50-multiple choice questions. Passing score is 84%. Student may miss 8 questions. For students taking ACLS for the first time or renewing students with a current card, exam remediation is permitted should student miss more than 8 questions on the exam. Viewing the ACLS book ahead of time with the online resources is very helpful. The American Heart Association link is www.heart.org/eccstudent and has an ACLS Precourse Self-Assessment, supplementary written materials and videos. The code for the online resources is on the ACLS Provider Manual page ii. Basic Dysrhythmias knowledge is required in relation to asystole, ventricular fibrillation, tachycardias in general and bradycardias in general. Student does not need to know the ins and outs of each and every one. For Tachycardias student need to differentiate wide complex (ventricular tachycardia) and narrow complex (supraventricular tachycardia or SVT).

BLS Overview – CAB

Push Hard and Fast-Repeat every 2 minutes

Anytime there is no pulse or unsure about a pulse – Do COMPRESSIONS

Elements of good CPR

Rate-at least 100

Recoil

Compression depth at least 2 inches

Minimize interruptions (less than 10 seconds)

Avoid excessive ventilation

Switch compressors every 2 min or 5 cycles

If AED doesn't promptly analyze rhythm: compressions.

Tachycardia with a Pulse

If unstable (wide or narrow) - go straight to synchronized cardioversion

If stable narrow complex

obtain 12 lead

vagal maneuvers

adenosine 6mg RAPID IVP, followed by 12mg

Stroke

Cincinnati Pre-Hospital Stroke Scale

Facial Droop, Arm Drift, Abnormal Speech

rtPA can be given within 3 hours from symptom onset.

Important to transport patient to an appropriate hospital with CT capabilities. If CT not available divert to the closest hospital (i.e. 15 min away) with CT

Acute Coronary Syndromes

Vital signs, O₂, IV,

12 Lead for CP, epigastric pain, or rhythm change

Def brillation

Unresponsive patient, no breathing, or no normal breathing

Activate Emergency response and get AED

Start CPR, shock if indicated

Included in Primary Survey

Shock as soon as def brillator is available

May continue compressions while def brillator is charging

Be sure oxygen is not blowing over chest during def brillation

Tachycardia with a Pulse

If unstable (wide or narrow) - go straight to synchronized cardioversion

If stable narrow complex

obtain 12 lead

vagal maneuvers

adenosine 6mg RAPID IVP, followed by 12mg

Waveform Capnography in ACLS (PETCO₂)

Allows for accurate monitoring of CPR

Most reliable indicator for ET tube placement

Cardiac Arrest

Shockable Rhythms:

Ventricular Fibrillation (VF)

Ventricular Tachycardia (VT) without pulse

Biphasic: 120-200J Monophasic: 360J

Non-Shockable Rhythms:

PEA and Asystole

2 minute cycles of compressions, shocks (if VF/VT), and rhythm checks.

Epi 1 mg every 3-5 minutes (preferred method IV)

NO MORE ATROPINE for Asystole and PEA

Ventilations – 30:2 Ratio

Rescue breathing – 1 breath every 5-6 sec

If advanced airway – 8-10 ventilations/minute

Treat reversible causes (Hs and Ts)

Hypoxia or ventilation problems

Hypovolemia

Hypothermia

Hypo-/hyper-kalemia

Hydrogen ion (acidosis)

Tamponade, cardiac

Tension pneumothorax

Toxins – poisons, drugs

Thrombosis – coronary (AMI) – pulmonary (PE)

Bradycardia

Need to assess stable versus unstable.

If stable, monitor, observe, and consult.

If unstable. . .

Atropine 0.5mg IV. Can repeat Q3-5 minutes. Maximum dose=3mg (Including heart blocks)

If Atropine ineffective

Transcutaneous pacing

Dopamine infusion (2-10mcg/kg/min)

Epinephrine infusion (2-10mcg/min)

Return of Spontaneous Circulation (ROSC)

Post Resuscitation Care

Therapeutic Hyperthermia 32-34 degree Celcius

Insure proper oxygenation

If hypotensive: 1-2 liters of fluid

Points to Ponder

COMPRESSIONS are very important.

Rigor mortis is an indicator of termination of efforts.

Simple airway maneuvers, such as a head-tilt, may help.

The Medical Emergency Teams (MET) can identify and treat pre-arrest situations.

Consider terminating efforts after deterioration to asystole and prolonged resuscitation time