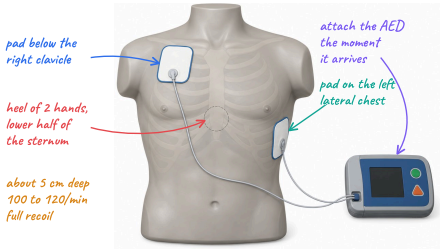
EKG TECH BASICS · ONE-PAGER

BLS, High-Quality CPR and Choking

Recognition, compressions, breaths and AED for adults, children and infants, choking relief, special cases and team roles (2025)

26 sources + more detail
ekgtechbasics.com/sheets/bls-cpr-choking.html
checked Nov 2026

SET-UP Pads and hands



1 Recognize arrest and start

1. Scene safe. Tap and shout. No response: shout for help, send someone for the AED and to call the code team or 911.
2. Check breathing and (professionals) a carotid pulse together, for no more than 10 s.
3. Not breathing or only gasping, and no pulse you are sure of: start compressions. An uncertain pulse counts as no pulse.
4. Pulse present but breathing abnormal: rescue breaths (adult 1 every 6 s; child or infant 1 every 2 to 3 s) and recheck the pulse about every 2 min.
5. Attach the AED the moment it arrives; compressions continue while the pads go on.

EXAM TIP Alone with a phone: speaker on, start CPR while you call. Alone with a child or infant and no phone: about 2 min of CPR first.

2 High-quality CPR by age

Each breath about 1 s, just enough to see the chest rise. Puberty moves a child to adult BLS.

ITEM	ADULT AND ADOLESCENT	CHILD (1 YR TO PUBERTY)	INFANT (UNDER 1 YR)
Depth	About 5 cm (2 in), not more than 6 cm	At least one-third of the chest, about 5 cm	At least one-third of the chest, about 4 cm
Rate	100 to 120/min	100 to 120/min	100 to 120/min
Hands	Heel of 2 stacked hands, lower half of the sternum	Heel of 1 or 2 hands, center of the chest	2 thumbs encircling the chest, or heel of 1 hand if you cannot encircle; not 2 fingers
Ratio, no advanced airway	30:2	30:2 alone; 15:2 with 2 rescuers	30:2 alone; 15:2 with 2 rescuers
Breath with a pulse	1 every 6 s	1 every 2 to 3 s	1 every 2 to 3 s
Start CPR when	No pulse, or not sure	No pulse or not sure (heart-rate rule: In depth)	Same as child
AED pads	Adult pads	Pediatric (attenuated) pads if available, else adult	Same as child

3 Every compression counts

- Full recoil: lift your weight off the chest after every push.
- Pauses under 10 s; compressions at least 60% of the time.
- Swap compressors every 2 min, or sooner if depth or rate drifts.
- Restart right after the shock or no-shock message; the AED reanalyzes every 2 min.
- Hospital bed in CPR mode; do not stop to slide in a board or move to the floor. Lower the bed or use a step stool so your shoulders sit over your hands.

SAFETY Out of hospital, work where the patient lies. If the space blocks good CPR (wedged in a bathroom), a quick move to open firm floor is worth the seconds (classic EMS teaching).

4 AED: pads and problems

PROBLEM	WHAT TO DO
Placement	Bare chest: one pad below the right clavicle, one on the left lateral chest; front-and-back is acceptable
Bra	Move it aside rather than remove it, both pads on skin and off breast tissue
Medication patch	Gloves on, peel it off, wipe the skin, then place the pad
Pacemaker or ICD bulge	Never over the device: pad at least 2.5 cm (1 in) from it, or go front-and-back
Wet chest or standing water	Move the patient out of water, wipe the chest dry
Hairy chest	Shave the pad sites

SAFETY Nobody touches the patient during analysis or the shock. In a moving ambulance, stop the vehicle for analysis (classic EMS teaching).

5 Choking (2025)

SITUATION	ADULT AND CHILD OVER 1 YR	INFANT UNDER 1 YR
Mild: coughs, speaks or cries	Let them cough; stay and watch	Same
Severe: signs	Weak or silent cough, cannot speak, cyanosis	Weak cough, no cry, cyanosis
Severe and responsive	Call for help. Cycles of 5 back blows, then 5 abdominal thrusts, until relief or unresponsive	Face down, head low on your forearm: 5 back blows. Face up: 5 chest thrusts. No abdominal thrusts
Late pregnancy, or you cannot reach around the abdomen	5 back blows, then 5 chest thrusts	Not applicable
Becomes unresponsive	Lower to the floor, start CPR with compressions, look in the mouth before breaths	Firm surface, infant CPR, look in the mouth before breaths
Object seen in the mouth	Remove it if loose; never a blind finger sweep	Same
After relief	Medical evaluation even if well	Call the infant's provider even if well

EXAM TIP New in 2025: adult cycles start with back blows, not abdominal thrusts alone. Suction anti-choking devices are unproven; never delay back blows and thrusts for one.

6 Special situations

SITUATION	CHANGE
Pregnancy, fundus at or above the umbilicus (about 20 wk)	Push the uterus to the patient's left by hand during CPR; same hand position and depth (see OB Emergencies)
Obesity	Same targets; compressors rotate often; no pause for a backboard
Suspected opioid overdose	CPR first if no pulse; naloxone if available, without interrupting compressions
Newborn at birth	Neonatal algorithm, not BLS (see Neonatal Resuscitation)

7 Team roles

- Assign roles early: compressor, airway, AED or monitor, recorder, leader.
- Closed-loop: the leader names the person and gives the order, the receiver reads it back, then says when it is done.
- EMS: request ALS early and work the arrest on scene; aim for return of circulation before moving the patient.

8 What changed in 2025

Parts 6 and 7 were read as abstracts and secondary reviews only; Part 4 in full.

TOPIC	2025 POSITION
Adult choking (AHA)	5 back blows, then 5 abdominal thrusts, repeated (abdominal thrusts alone before)
Infant compressions (AHA/AAP)	Heel of 1 hand or 2 thumbs encircling; 2-finger technique dropped
AED in children (AHA/AAP)	Pediatric attenuator and pads when available
Opioids (AHA)	Naloxone included in the adult BLS algorithms

MORE Why rate, depth, recoil and pauses matter

Compressions produce blood flow only while they continue, and the chest must refill between them. ILCOR 2020 recommends a manual rate of 100 to 120/min (strong recommendation) and a depth of about 5 cm (strong), and suggests avoiding more than 6 cm (weak) and avoiding leaning between compressions (weak). The Korean 2025 guideline adds that depths beyond 6 cm are likely to raise complications and sets a chest compression fraction of 60% or more, kept as high as possible.

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