BASIC LIFE SUPPORT

EMERGENCY MEDICINE

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- C-A-B (compressions, airway, breathing) to minimize time to initiation of chest compressions
- Increased emphasis on rapid identification of cardiac arrest by dispatchers…..Even by mobile phone!
- Survival can approach 50% in EMS treated patients

سناریو اول:

- در باشگاه ورزشی در حال تمرین می باشید که ناگهان خانمی حدودا ۵۰ ساله در نزدیکی شما دچار کاهش سطح هوشیاری شده و بر روی زمین می افتد. شما به عنوان اینترنی که دوره طب اورژانس را گذرانده اید بر بالین بیمار حاضر می شوید.

همراه بیمار مورد نظر دختر اوست که جیغ می زند و می گوید مادرم مشکل قلبی دارد کمکش کنید.

چه اقداماتی را به ترتیب اولویت انجام می دهید؟

1. Ensure scene safety

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2. Immediate recognition and activation of 115

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3. Pulse check- 10 seconds with check of breathing

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4. Early CPR (C)

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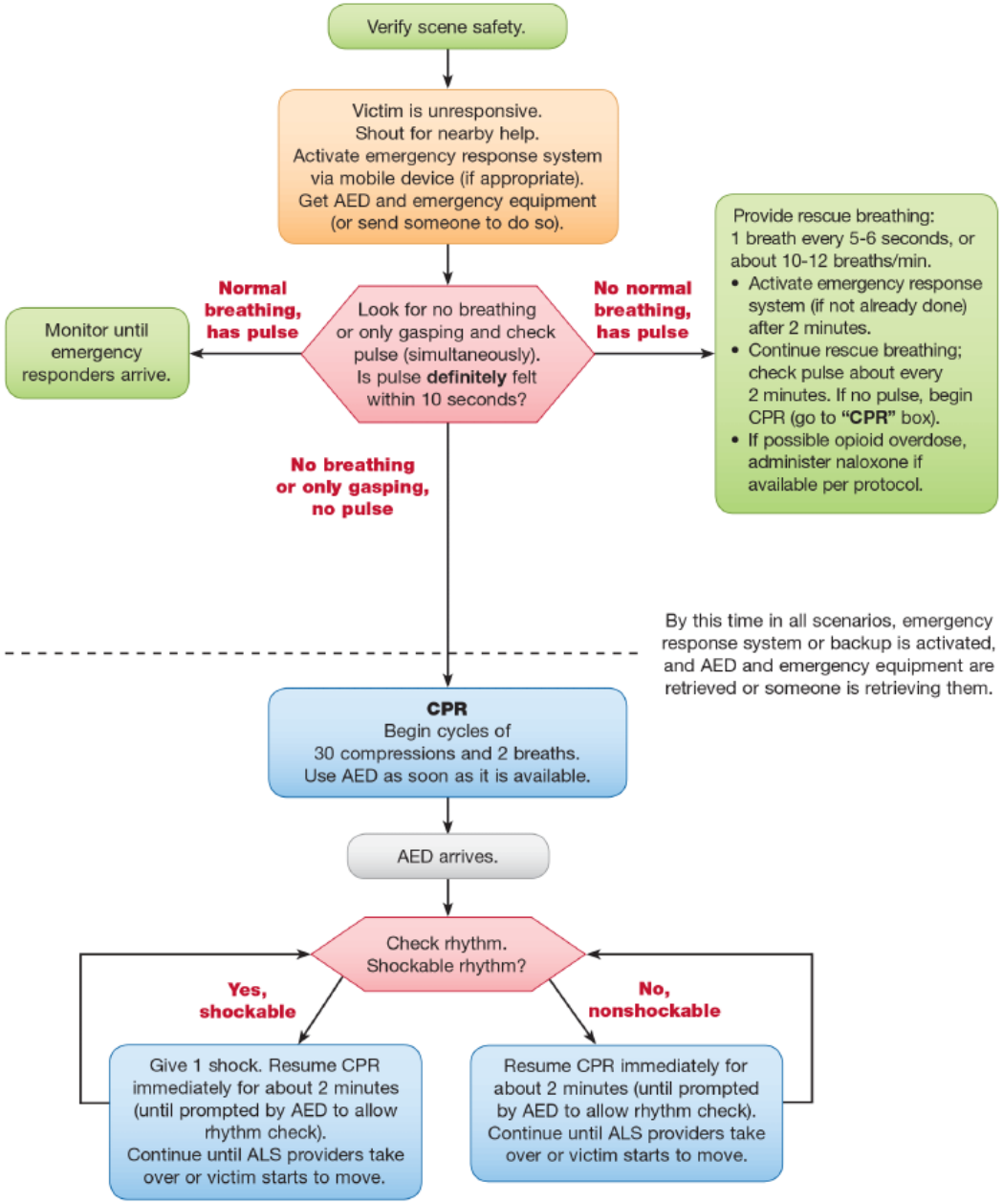
2. Immediate recognition and activation of 115
3. Pulse check- 10 seconds with check of breathing
4. Early CPR (C)
5. Early defibrillation with AED

BLS Healthcare Provider
Adult Cardiac Arrest Algorithm—2015 Update



Verify Scene safety

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Victim is unresponsive.

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Activate emergency response system via mobile device (if appropriate).

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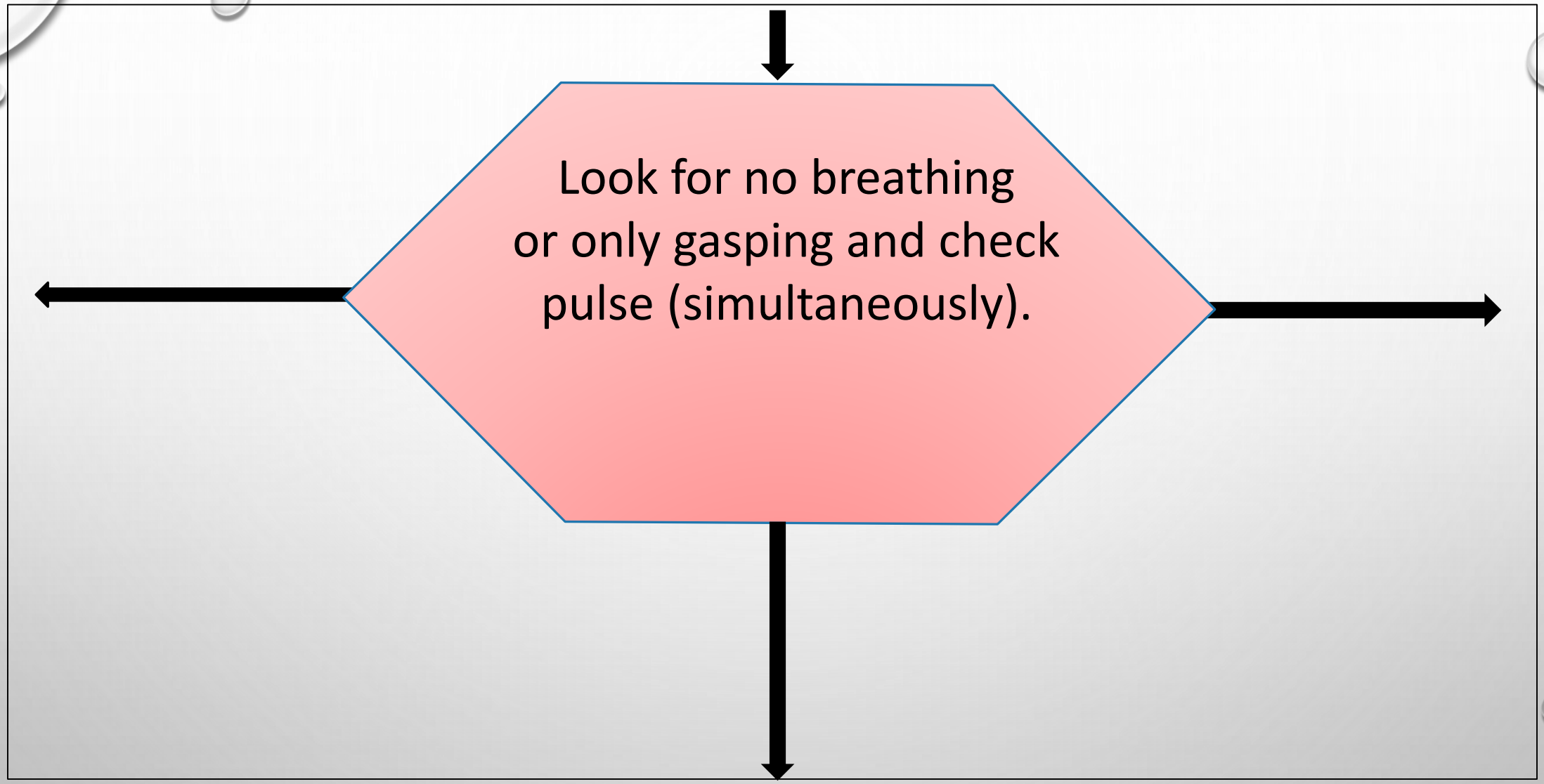
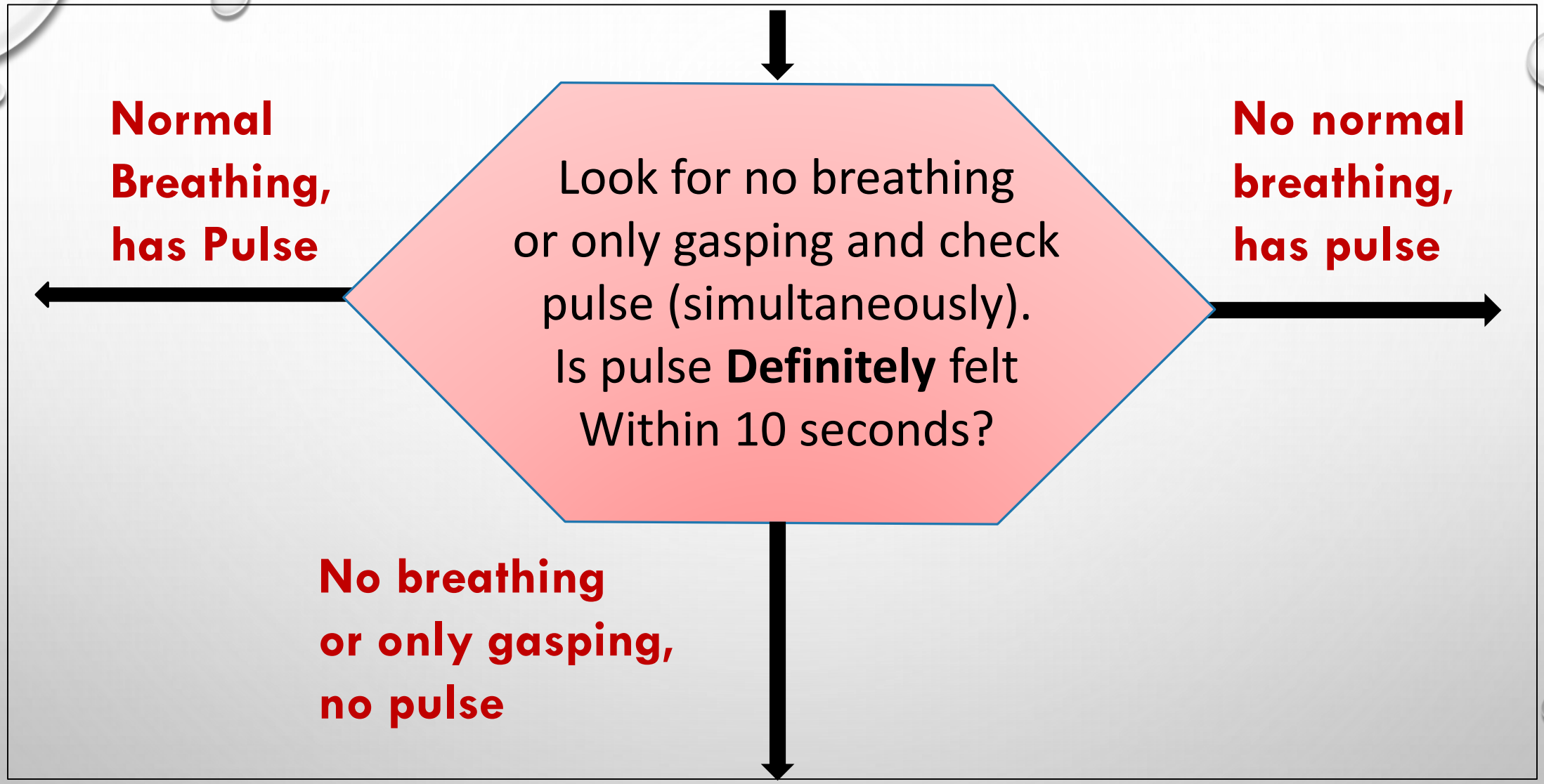
Get AED and emergency equipment (or send someone to do so).


Look for no breathing
or only gasping and check
pulse (simultaneously).

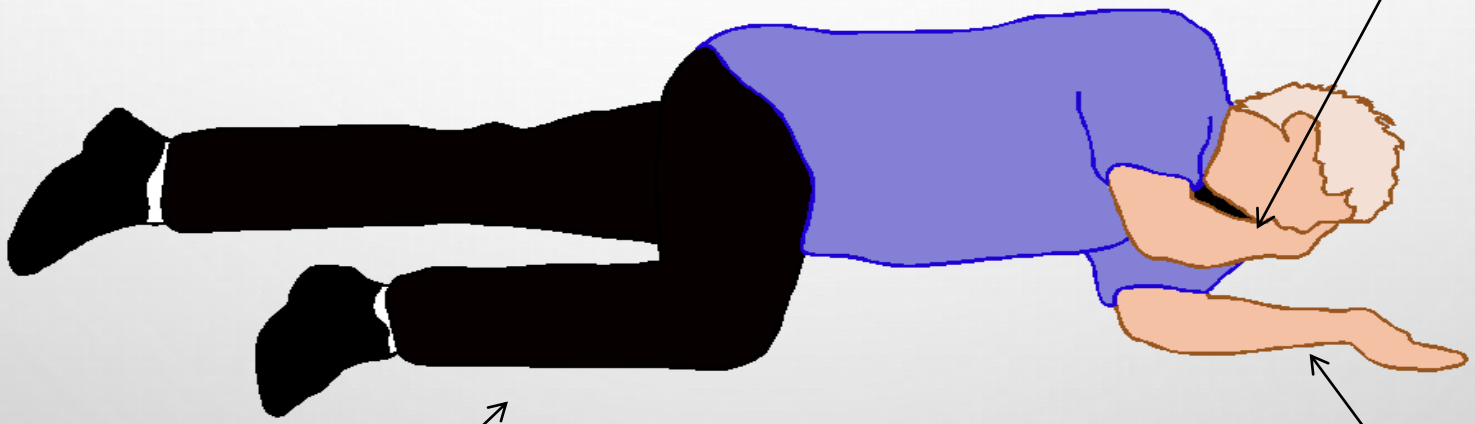

Look for no breathing or only gasping and check pulse (simultaneously). Is pulse **Definitely** felt Within 10 seconds?
Normal Breathing, has Pulse
No normal breathing, has pulse
No breathing or only gasping, no pulse

Monitor until Emergency response arrive.

Normal Breathing, has Pulse

Recovery Position

Hands under chin to keep mouth open



Leg Bent to support position

Arm bent to prevent rolling over

- **No normal breathing, has pulse**

Provide rescue breathing:
Give 1 breath every 5-6 seconds (about 10- 12 breaths/ min).

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- Continue rescue breathing: check pulse every 2 minutes. If no pulse begin CPR (Go to "**CPR**" Box)
- If possible opioid overdose, administer Naloxone if available per protocol.

- **No breathing**
- **or only gasping, no pulse**

CPR

Begin cycles of

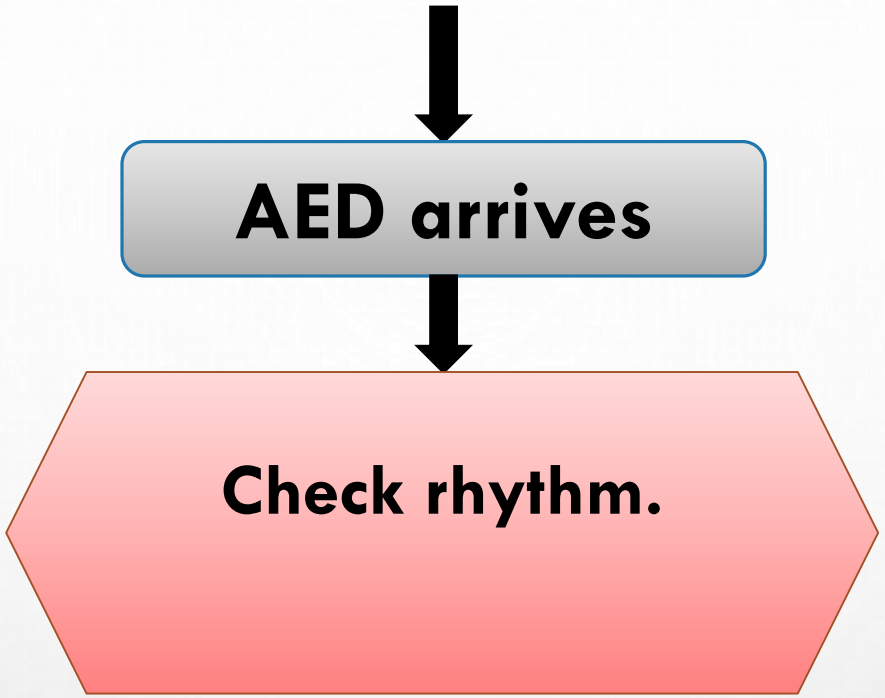
30 Compressions and 2 breaths.

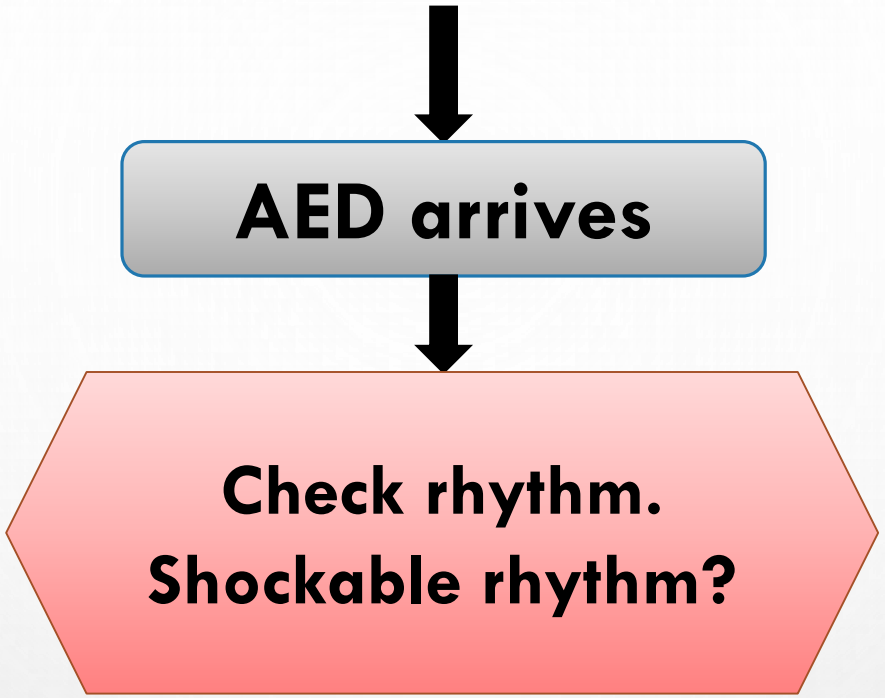
- **No breathing**
- **or only gasping, no pulse**

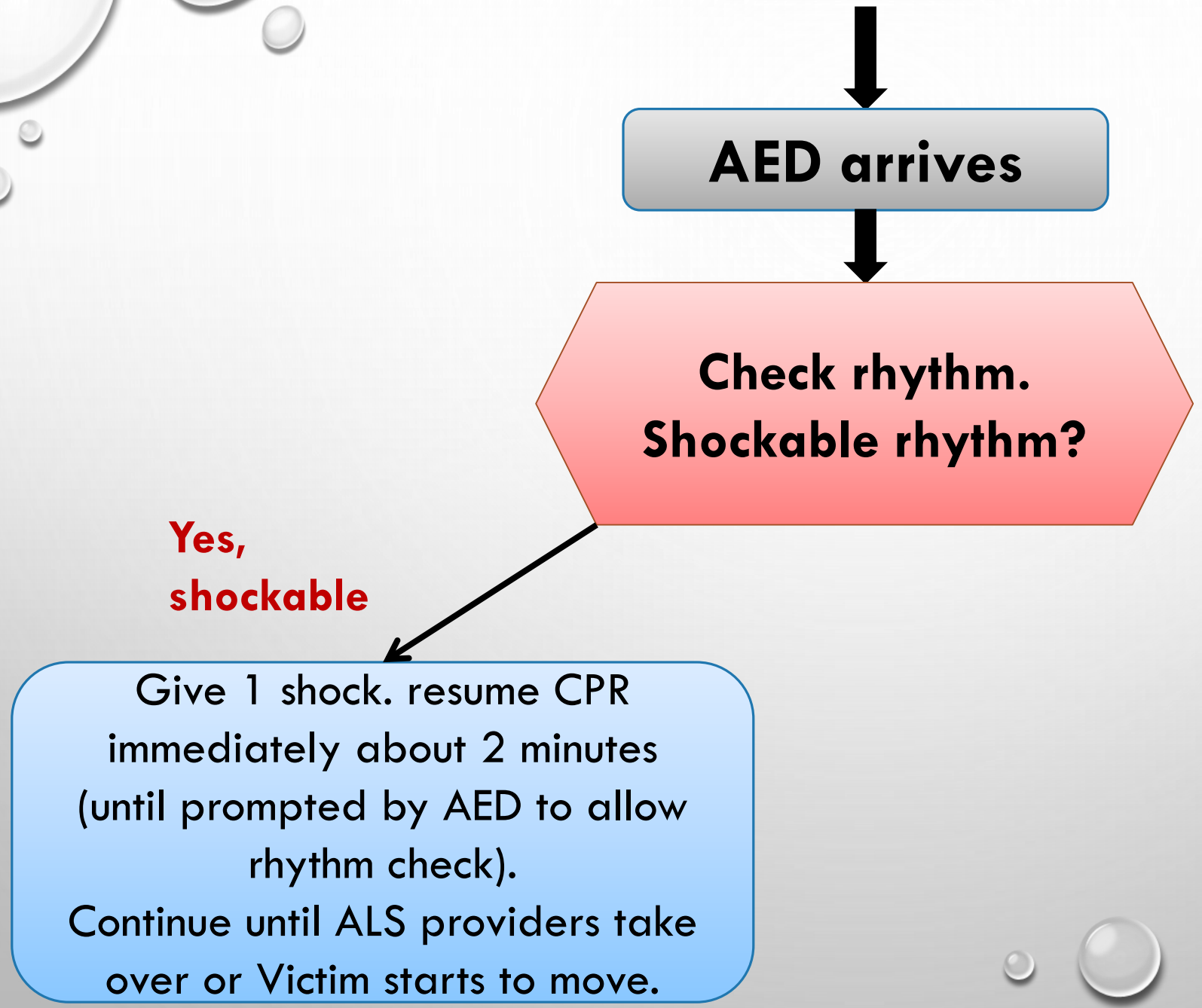
CPR

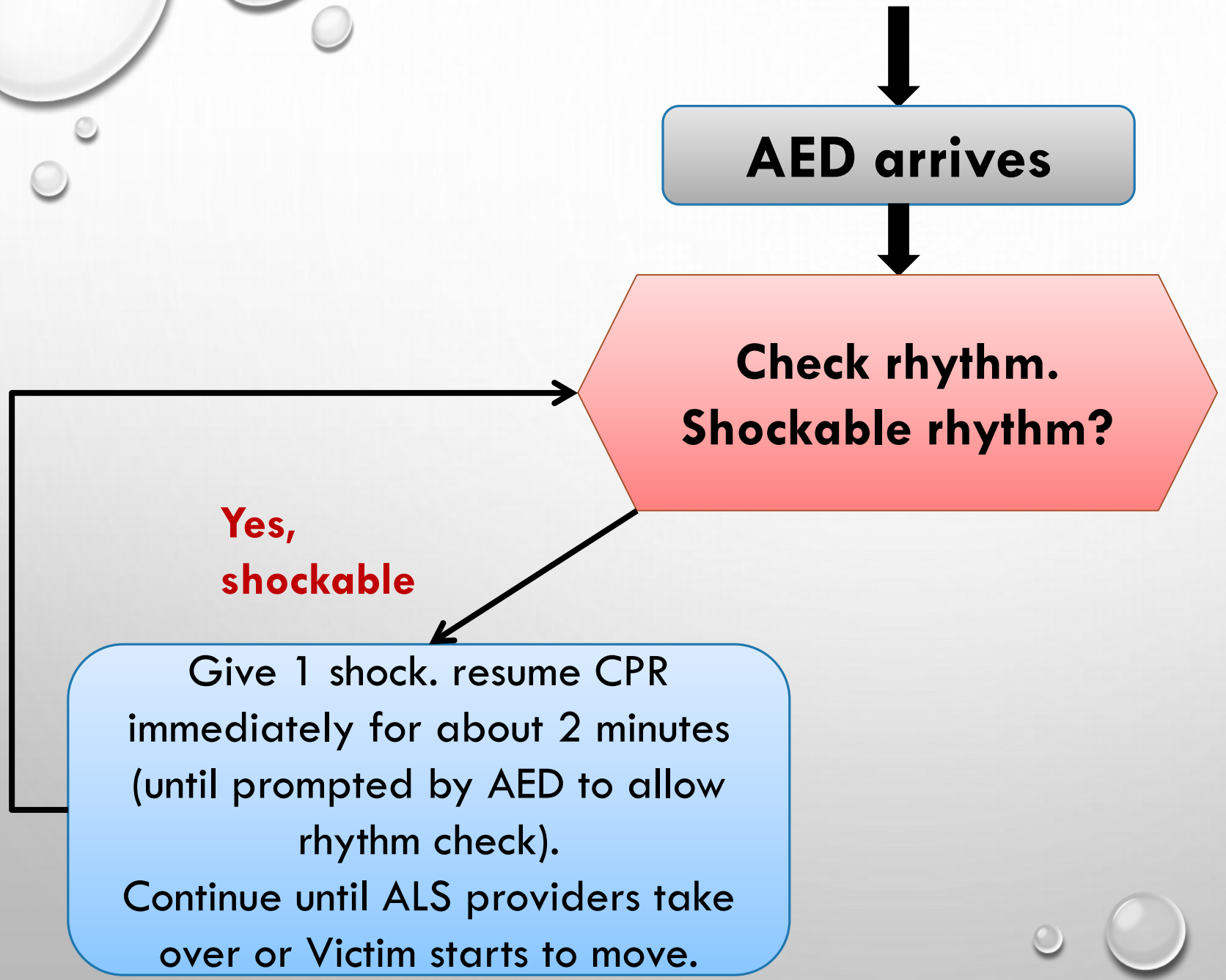
Begin cycles of
30 Compressions and 2 breaths.
Use AED as soon as available.


AED arrives


AED arrives
Check rhythm.


AED arrives
Check rhythm.
Shockable rhythm?


AED arrives
Check rhythm.
Shockable rhythm?
Yes,
shockable
Give 1 shock. resume CPR
immediately about 2 minutes
(until prompted by AED to allow
rhythm check).
Continue until ALS providers take
over or Victim starts to move.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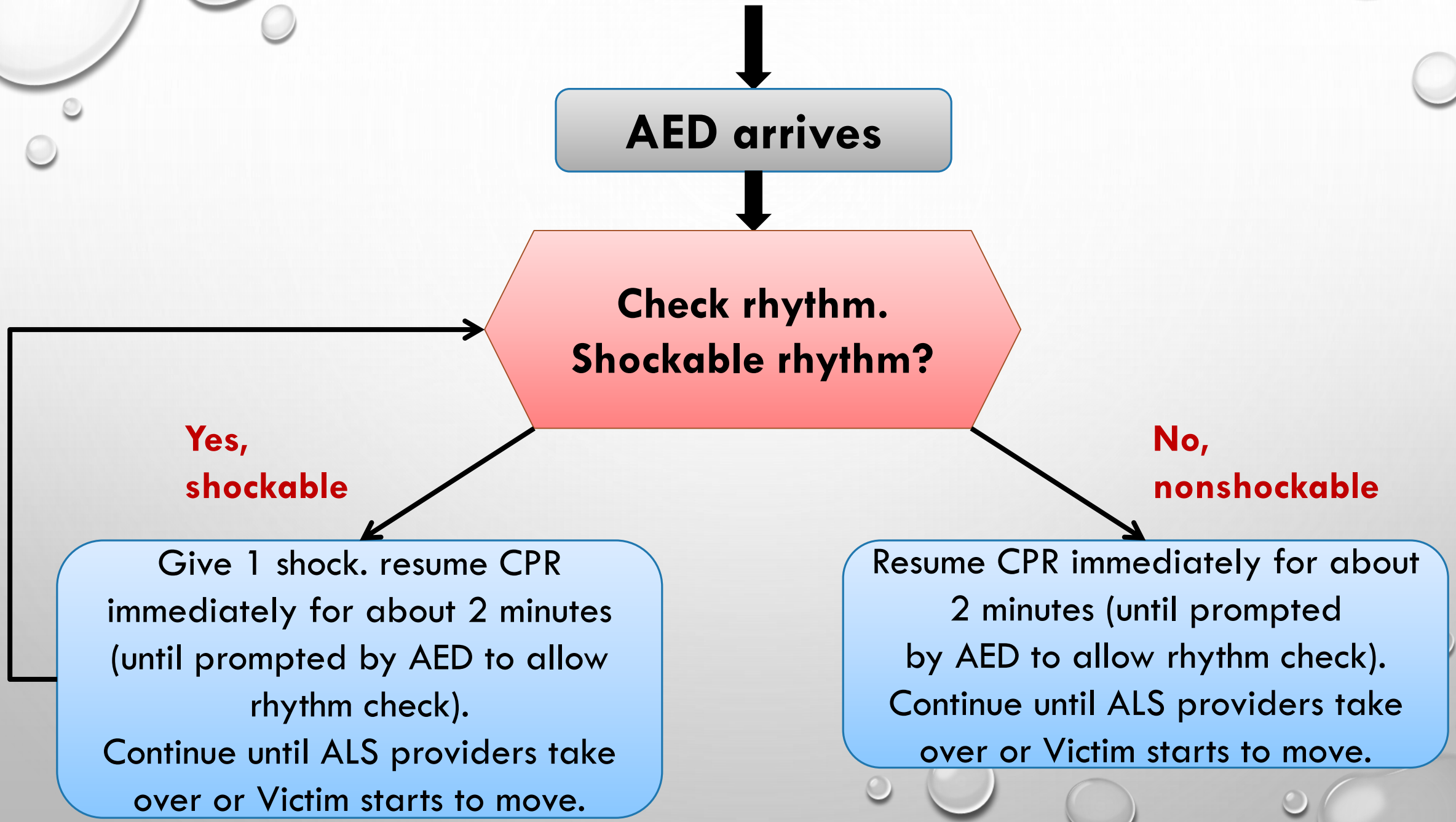
AED arrives
Check rhythm.
Shockable rhythm?
Yes,
shockable
No,
nonshockable
Give 1 shock. resume CPR immediately for about 2 minutes (until prompted by AED to allow rhythm check).
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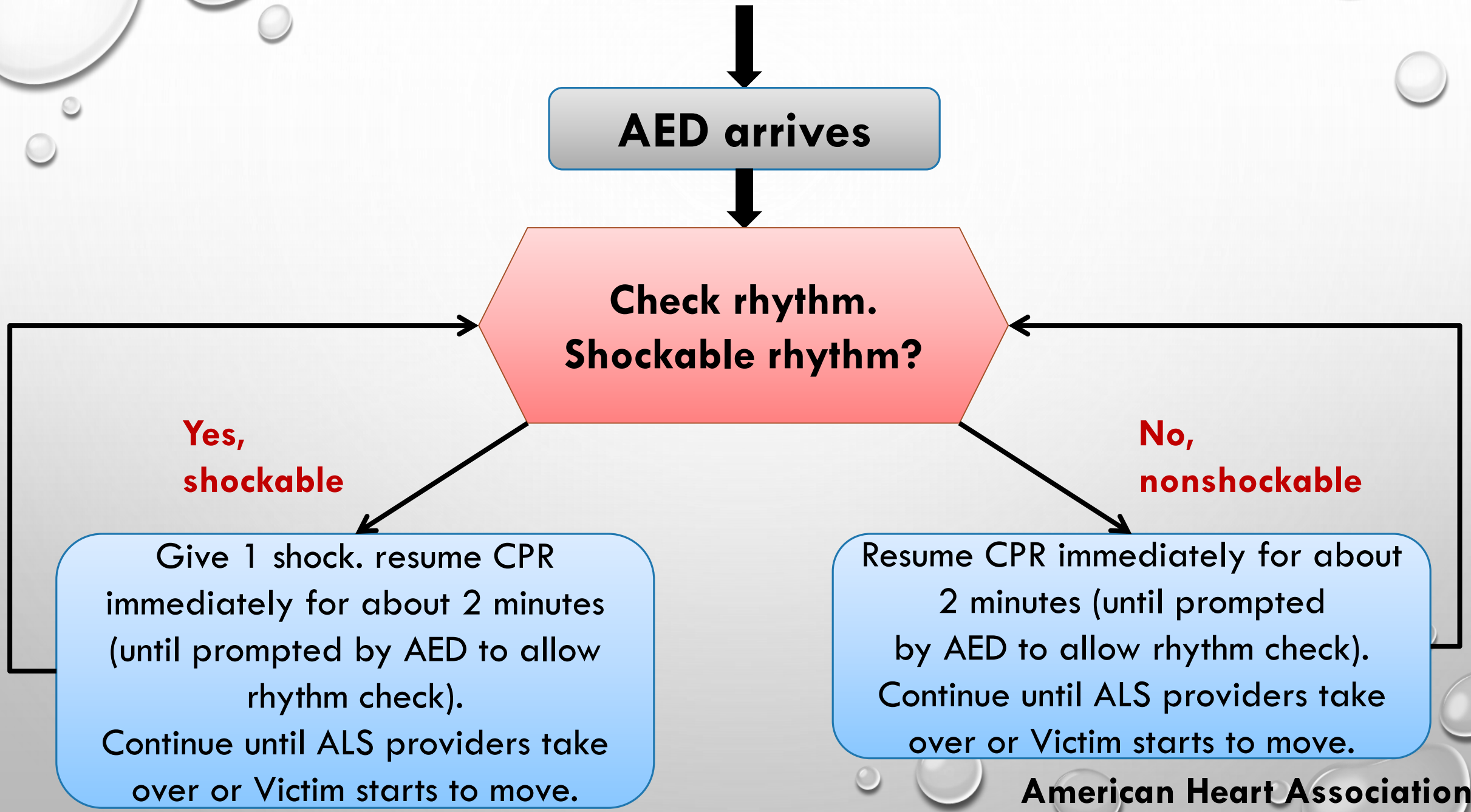


American Heart Association

Opioid Associated Life-Threatening Emergency (Adult) Algorhithm – New 2015

Assess and activate.
Check for unresponsiveness and call for nearby help. Send someone to call 9-1-1 and get AED and Naloxone. Observe for breathing vs no breathing or only gasping.

↓

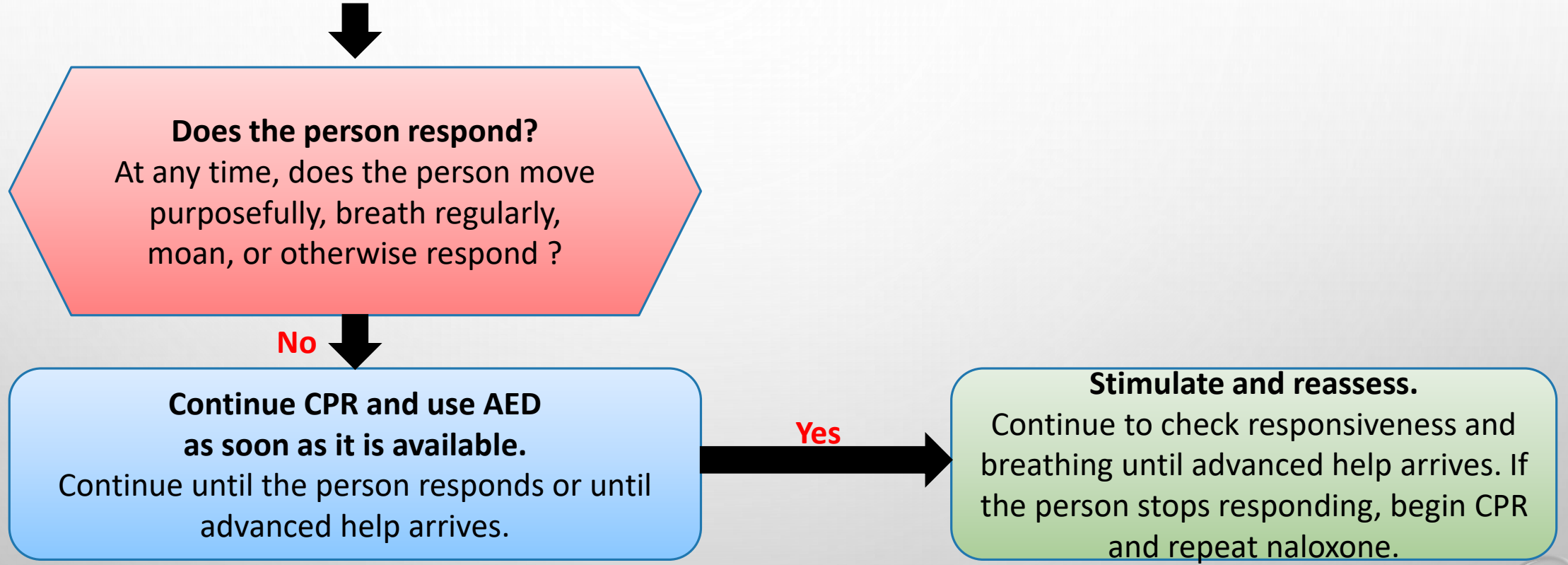
Begin CPR.
If Victim is unresponsive with no breathing or only gasping, begin CPR.* if alone perform CPR for about 2 minutes before leaving to phone 9-1-1 and get naloxone and AED.

↓

Administer Naloxone.
Give naloxone as soon as it is available. 2 mg intranasal or 0.4 mg intramuscular. May repeat after 4 minutes.

↓

Does the person respond?
At any time, does the person move purposefully, breath regularly, moan, or otherwise respond ?



*CPR technique based of the rescuer's level of training

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Does the person respond?
At any time, does the person move purposefully, breath regularly, moan, or otherwise respond ?

Yes →

Stimulate and reassess.
Continue to check responsiveness and breathing until advanced help arrives. If the person stops responding, begin CPR and repeat naloxone.

No ↓

Continue CPR and use AED as soon as it is available.
Continue until the person responds or until advanced help arrives.

*CPR technique based of the rescuer's level of training

Automated **E**xternal **D**efibrillator

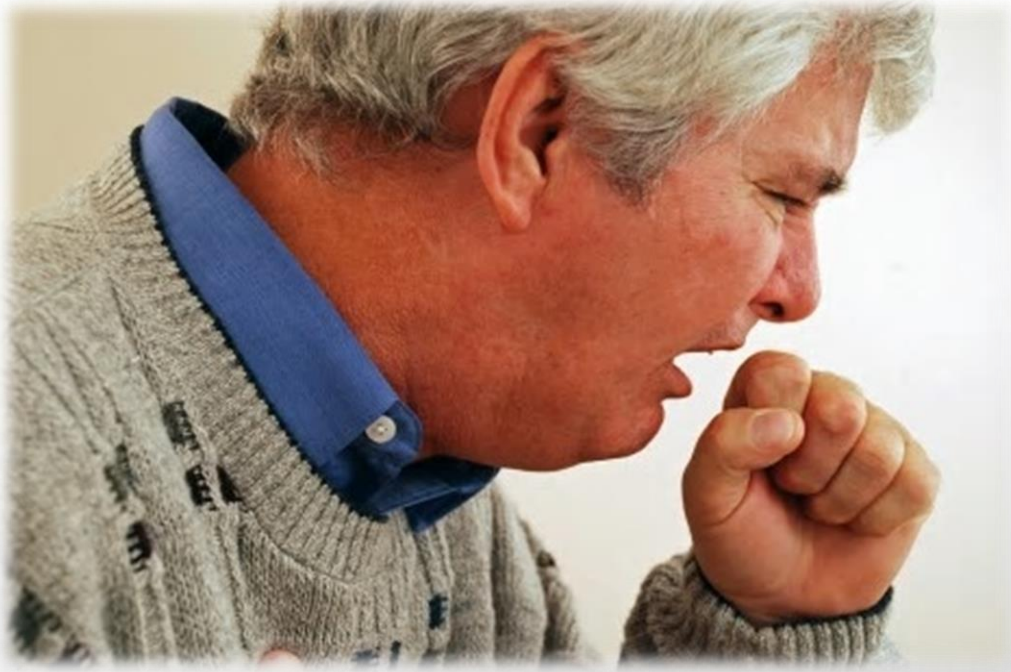
Components Of High-quality *CPR*

- Chest compressions of adequate ***rate***
- Chest compression of adequate ***depth***
- Allowing full chest ***recoil*** between compressions
- Avoiding excessive ***ventilation***

Compression:

- Hand **position**: lower half of the sternum
- Chest compression **rate**: 100-120/min
- Chest compression **depth**: 5-6cm
- Chest wall **recoil**: full recoil

- **Foreign Body Airway Obstruction**
  1. **Awake** Patients With **Partial** Airway Obstruction



- **Foreign Body Airway Obstruction**

1. **Awake** Patients With **Partial** Airway Obstruction

2. **Awake** Patients With **Complete** Airway Obstruction

- **Foreign Body Airway Obstruction**

1. **Awake** Patients With **Partial** Airway Obstruction

2. **Awake** Patients With **Complete** Airway Obstruction

3. **Unconscious** Patients With Airway Obstruction

Airway Management

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- Airway management is the cornerstone of resuscitation and is a defining skill for the specialty of emergency medicine

Airway Management

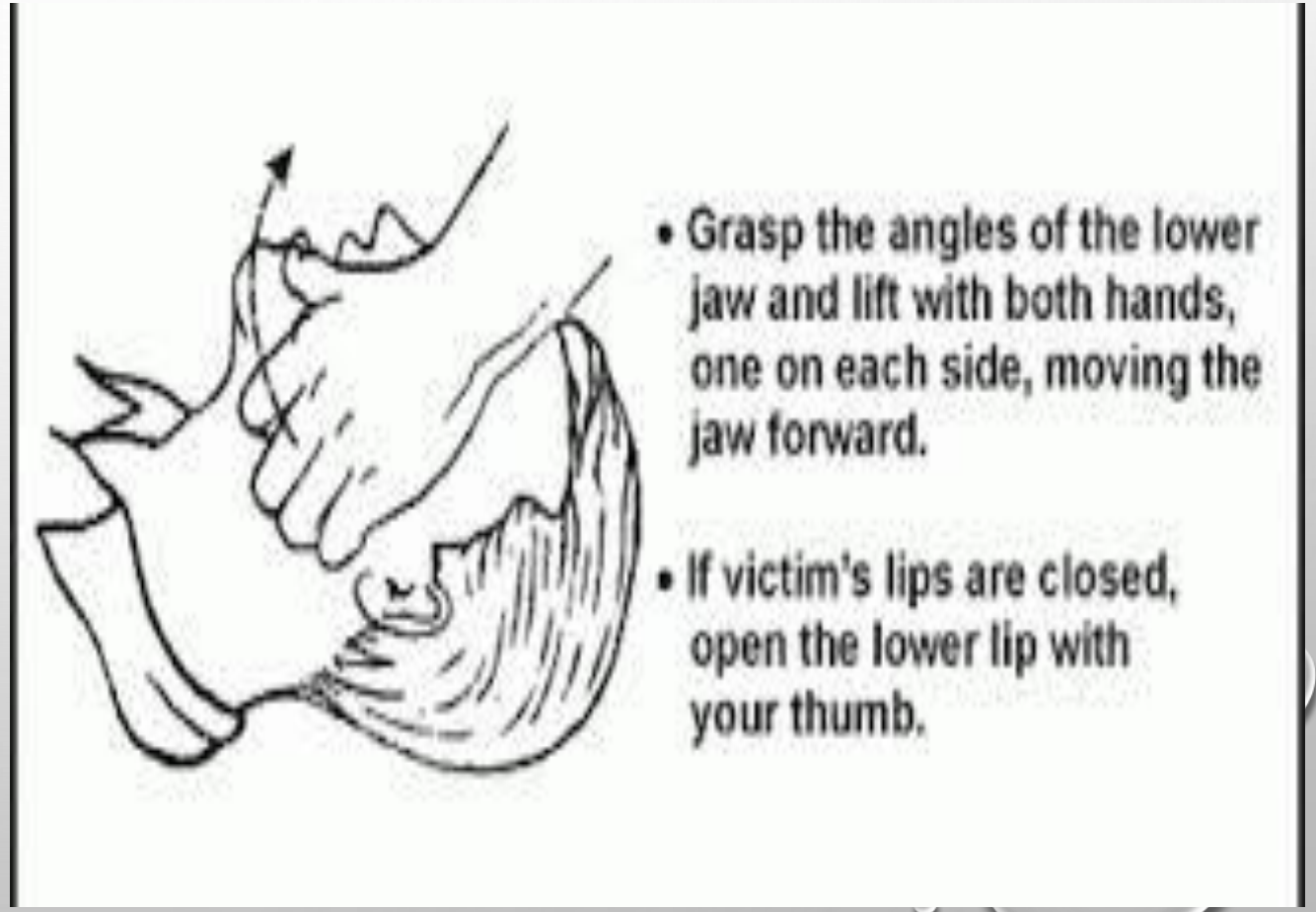
- Airway management is the cornerstone of resuscitation
- A patent airway is essential for adequate ventilation and oxygenation.

Manual Airway Maneuvers

Head tilt/chin Lift **Jaw thrust**

THE TRIPLE AIRWAY MANEUVER

THE JAW-THRUST MANEUVER



The triple airway maneuver

Oropharyngeal and Nasopharyngeal Airways

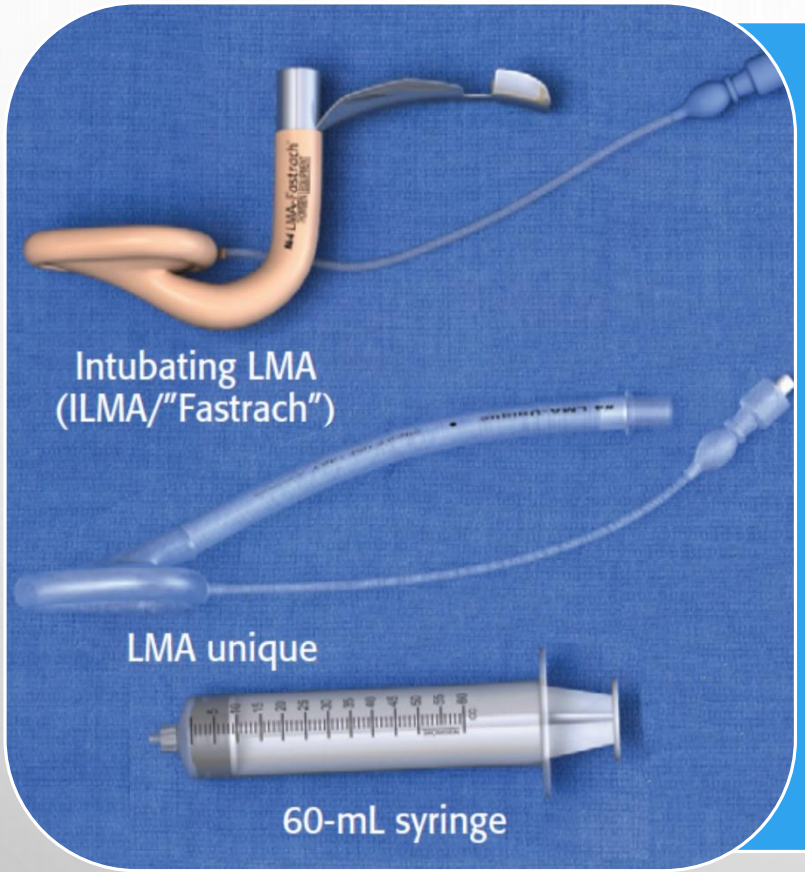
For oral airway: corner of the mouth to the earlobe or the angle of the mandible

For nasopharyngeal airways: a device of correct size will extend from the tip of the nose to the earlobe

BAG-MASK VENTILATION

ONE-HANDED TECHNIQUE

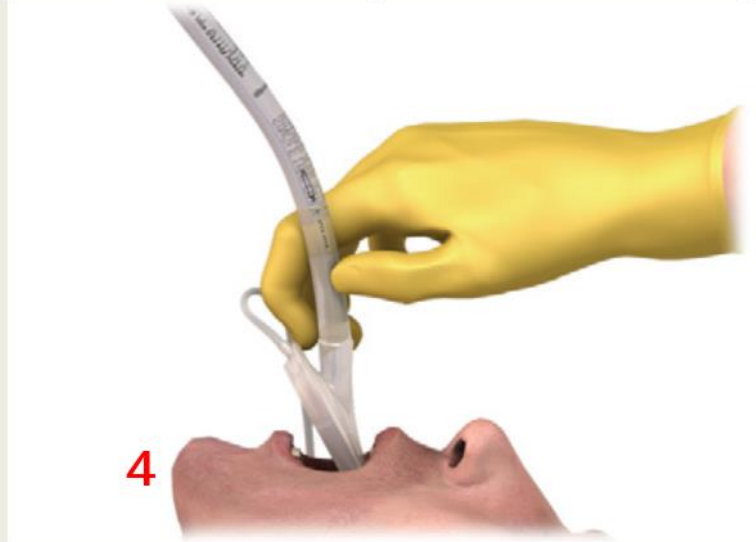
TWO-HANDED TECHNIQUE



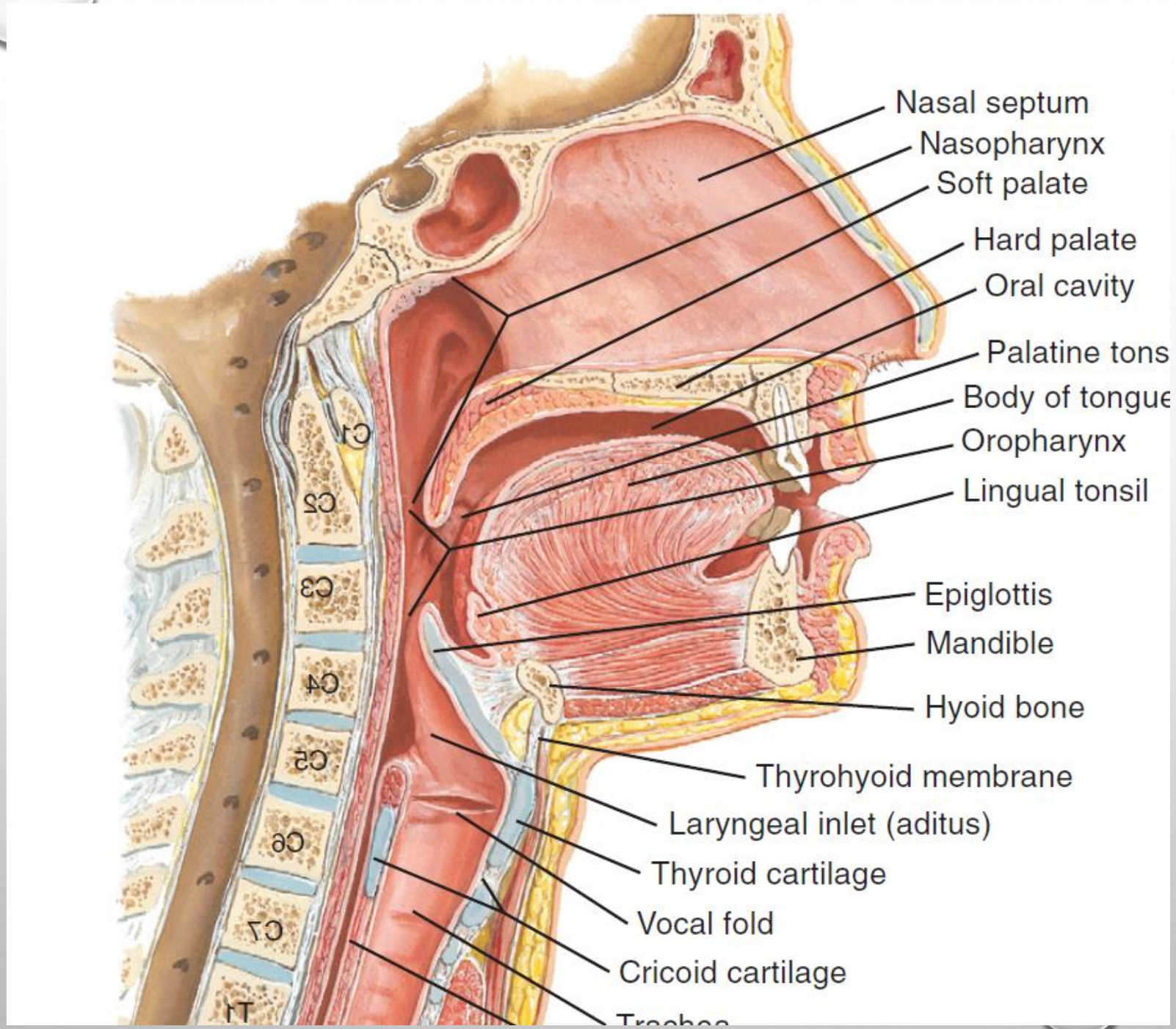
Laryngeal mask airway

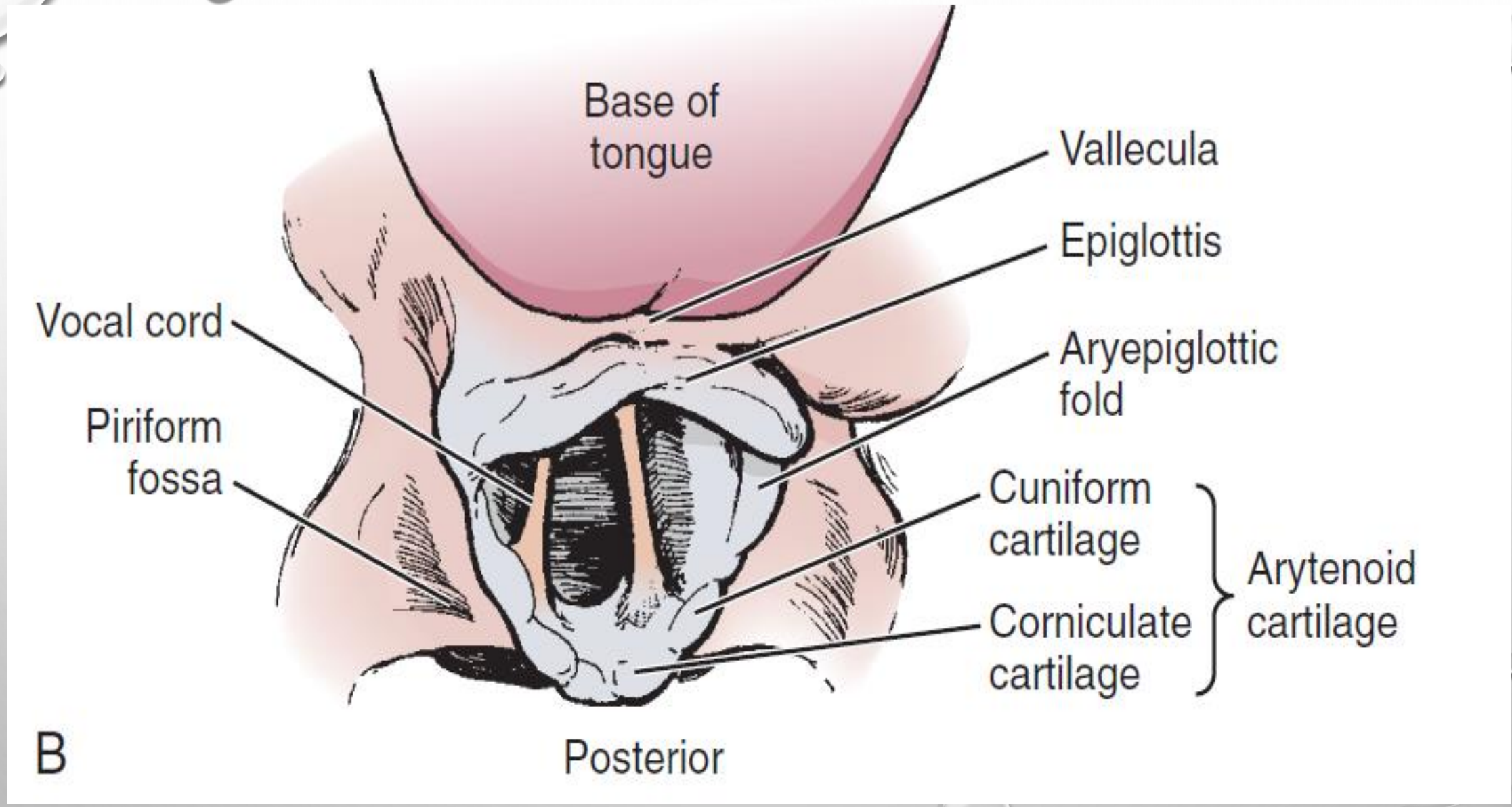
- Primary rescue adjuncts for rescue ventilation and difficult intubation
- Alternative to BMV or for intubation of difficult airways
- ***Size:***
  - **3**: 30-50kg
  - **4**: 50-70kg
  - **5**: 70-100kg
  - **6**: more than 100kg

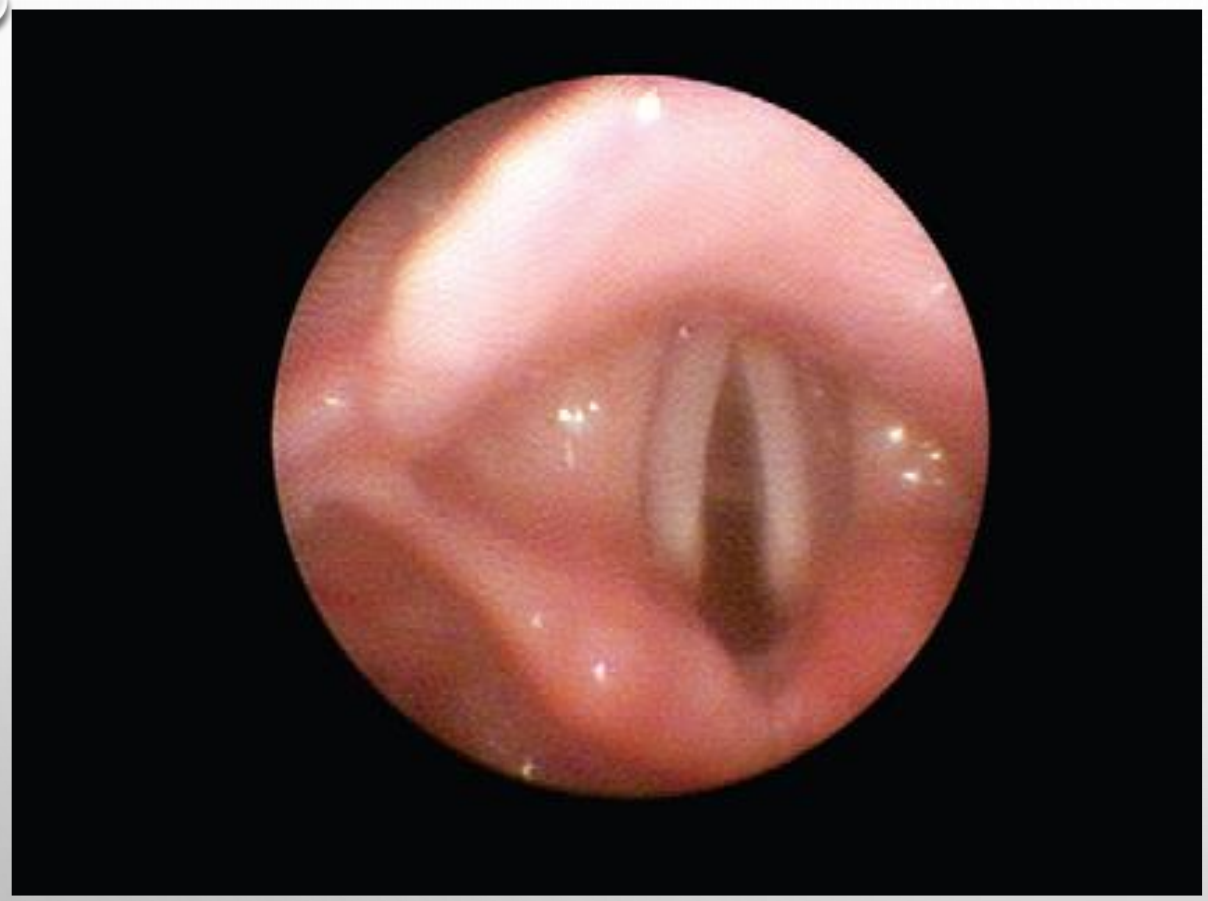
LARYNGEAL MASK AIRWAY

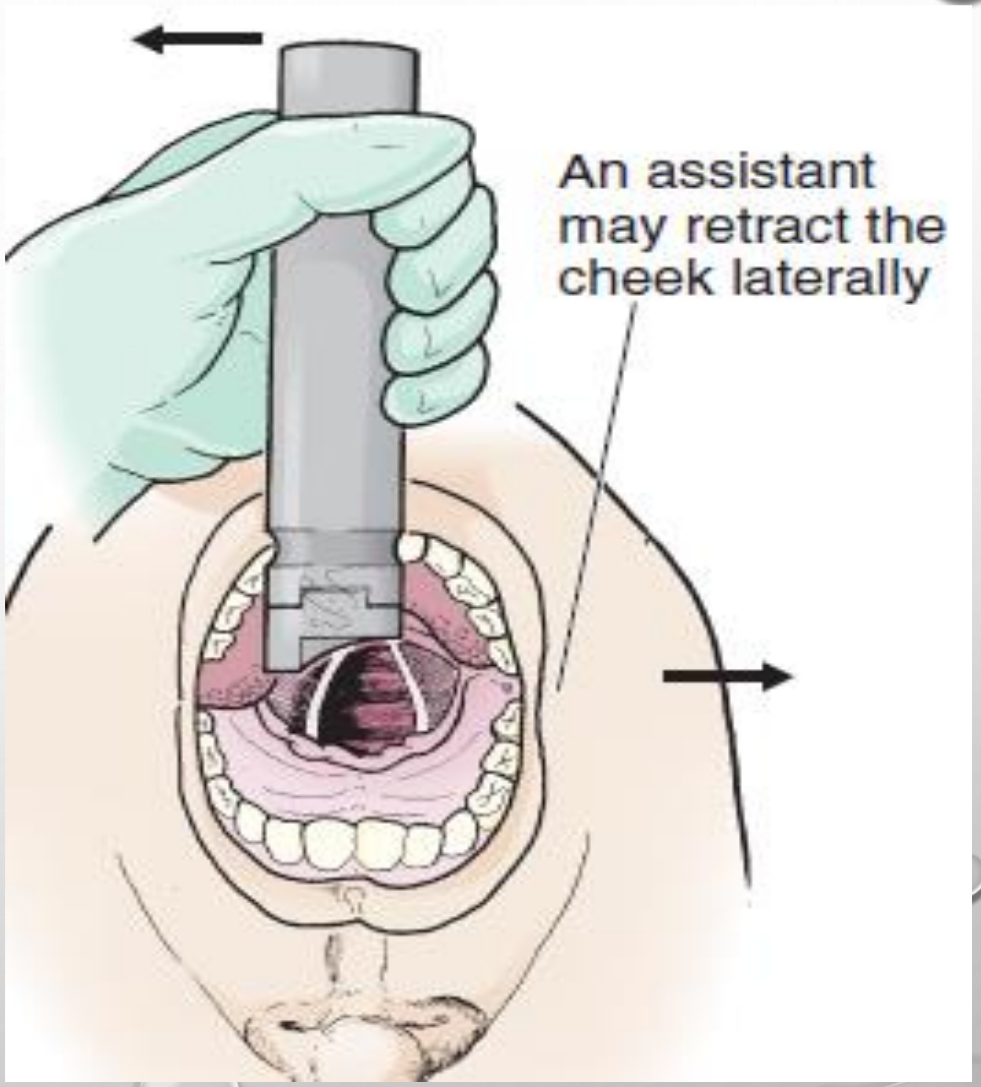



Laryngoscope
Bag-valve-mask
Nasal and oral airways
$PETCO_2$ detector
Tape
12-mL syringe
Endotracheal tube with stylet
Yankauer suction
Bougie


Nasal septum
Nasopharynx
Soft palate
Hard palate
Oral cavity
Palatine tons
Body of tongue
Oropharynx
Lingual tonsil
Epiglottis
Mandible
Hyoid bone
Thyrohyoid membrane
Laryngeal inlet (aditus)
Thyroid cartilage
Vocal fold
Cricoid cartilage
C1
C2
C3
C4
C5
C6
C7
T1


Base of tongue
Vallecula
Epiglottis
Aryepiglottic fold
Vocal cord
Piriform fossa
Cuniform cartilage
Corniculate cartilage
Arytenoid cartilage
B
Posterior




An assistant
may retract the
cheek laterally

Thanks