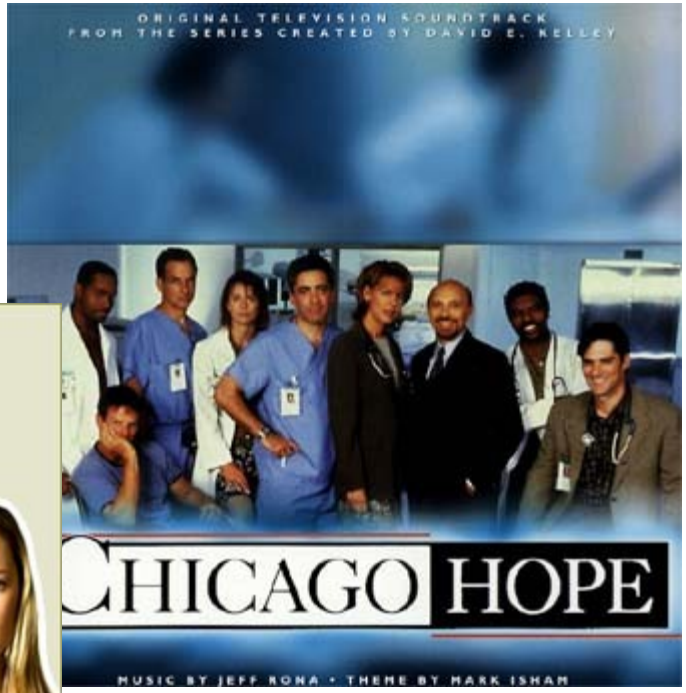
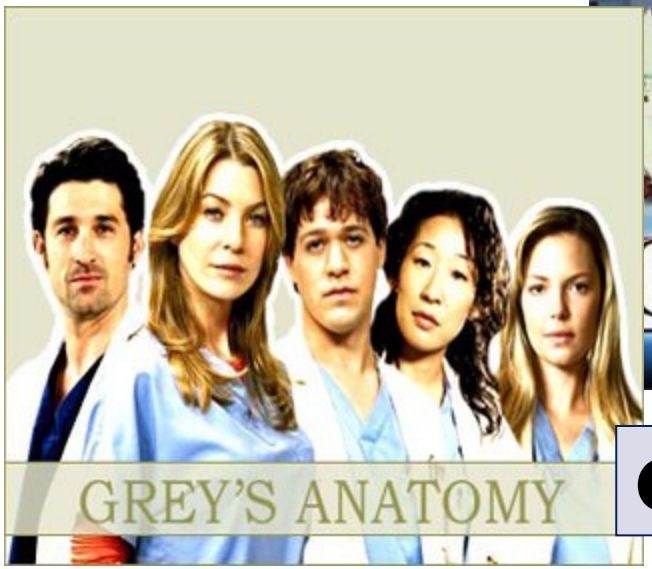
ADULT BASIC LIFE SUPPORT

Katarina Zadrazilova, FN Brno

- Sudden cardiac arrest is a leading cause of death in Europe
- 700 000 Europeans a year
- 40 % of SCA victims have VF
- Immediate CPR can double or triple survival





CPR Succese rate 77 % !

…Reality only 25%

European resuscitation council guidelines for resuscitation 2010

- www.erc.edu
- New guidelines every 5 years

Overview

- Adult BLS sequence

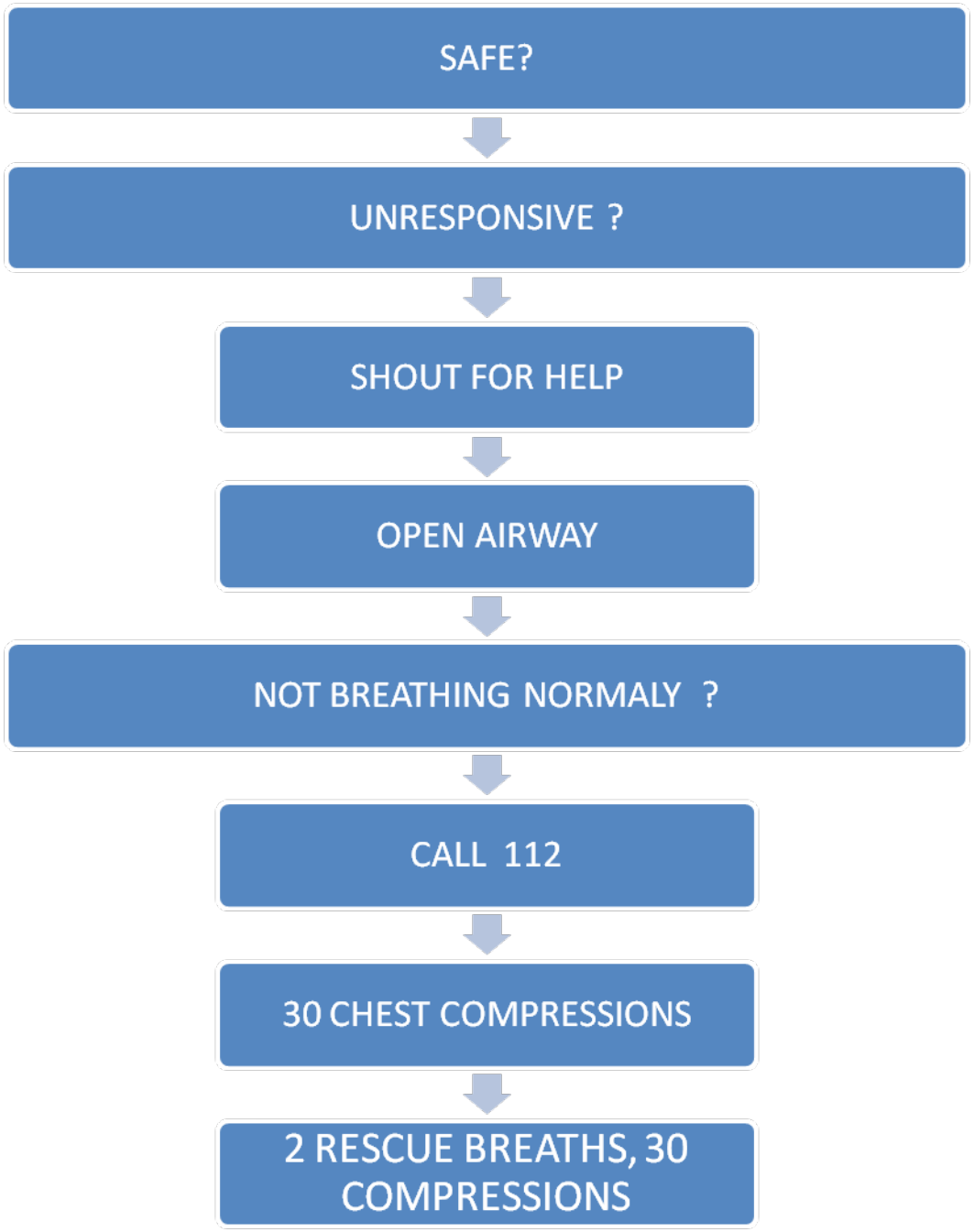
- Foreign-body airway obstruction/choking
- Airway management
- Ventilation

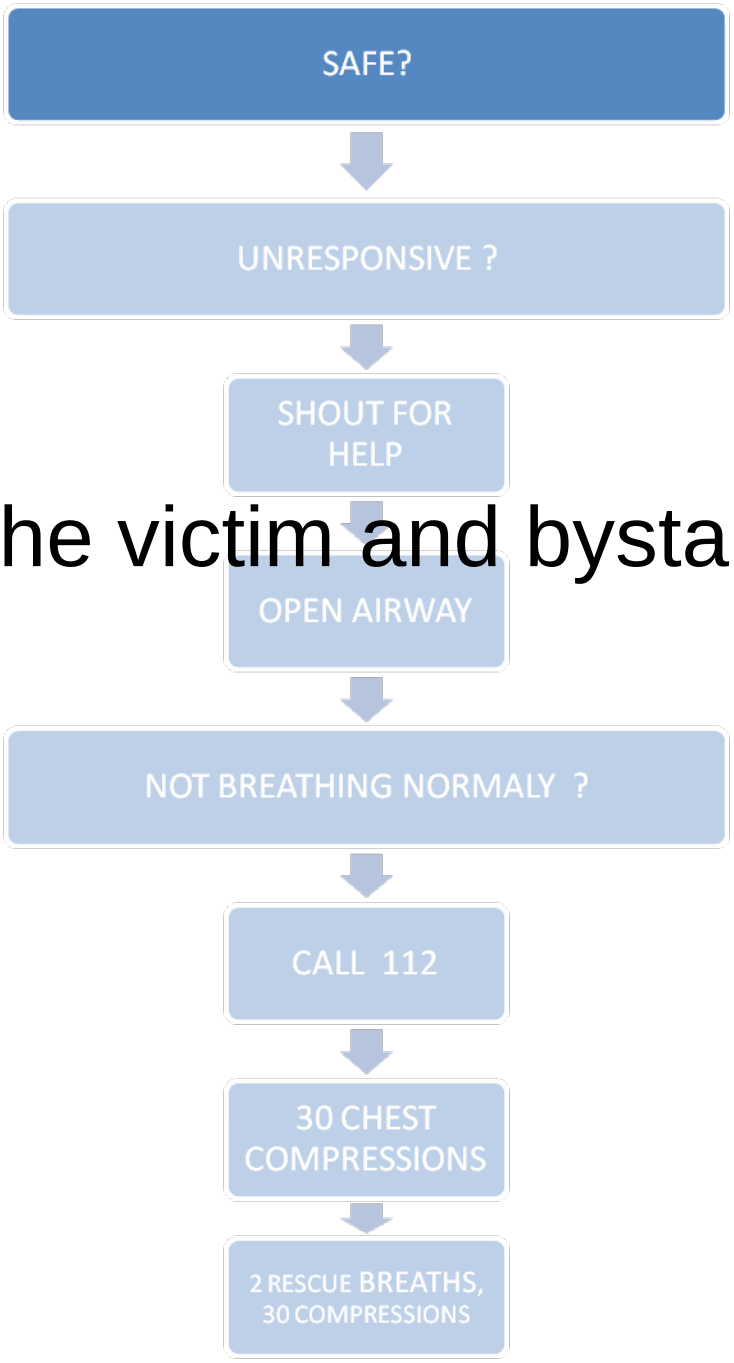
Basic life support

Maintaining airway patency and supporting breathing and the circulation without the use of equipment other then a protective device

Chain of survival

- Early recognition
- Early bystander CPR
- Early defibrillation
- Early Advanced life support


SAFE?
UNRESPONSIVE ?
SHOUT FOR HELP
OPEN AIRWAY
NOT BREATHING NORMALY ?
CALL 112
30 CHEST COMPRESSIONS
2 RESCUE BREATHS, 30 COMPRESSIONS



Make sure the victim and bystanders are safe

SAFE?

UNRESPONSIVE ?

SHOUT FOR HELP

IRWAY

G NORMALY ?

112

HEST
ESSIONS

BREATHS,
RESSIONS

ARE YOU ALL RIGTH ?

JSTE V POŘÁDKU ?

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LL 112

CHEST
RESSIONS

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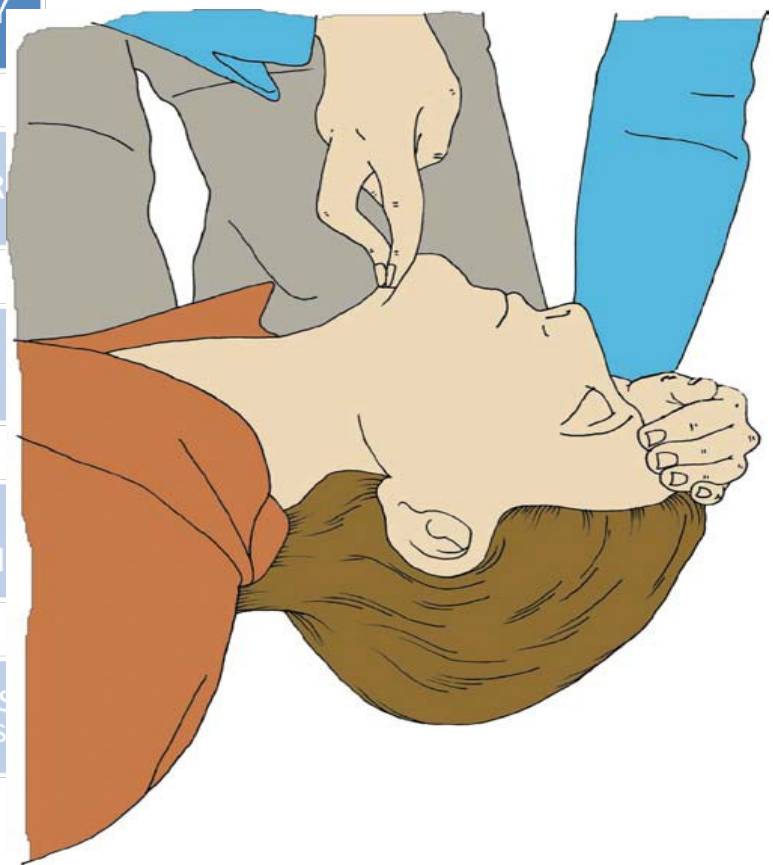
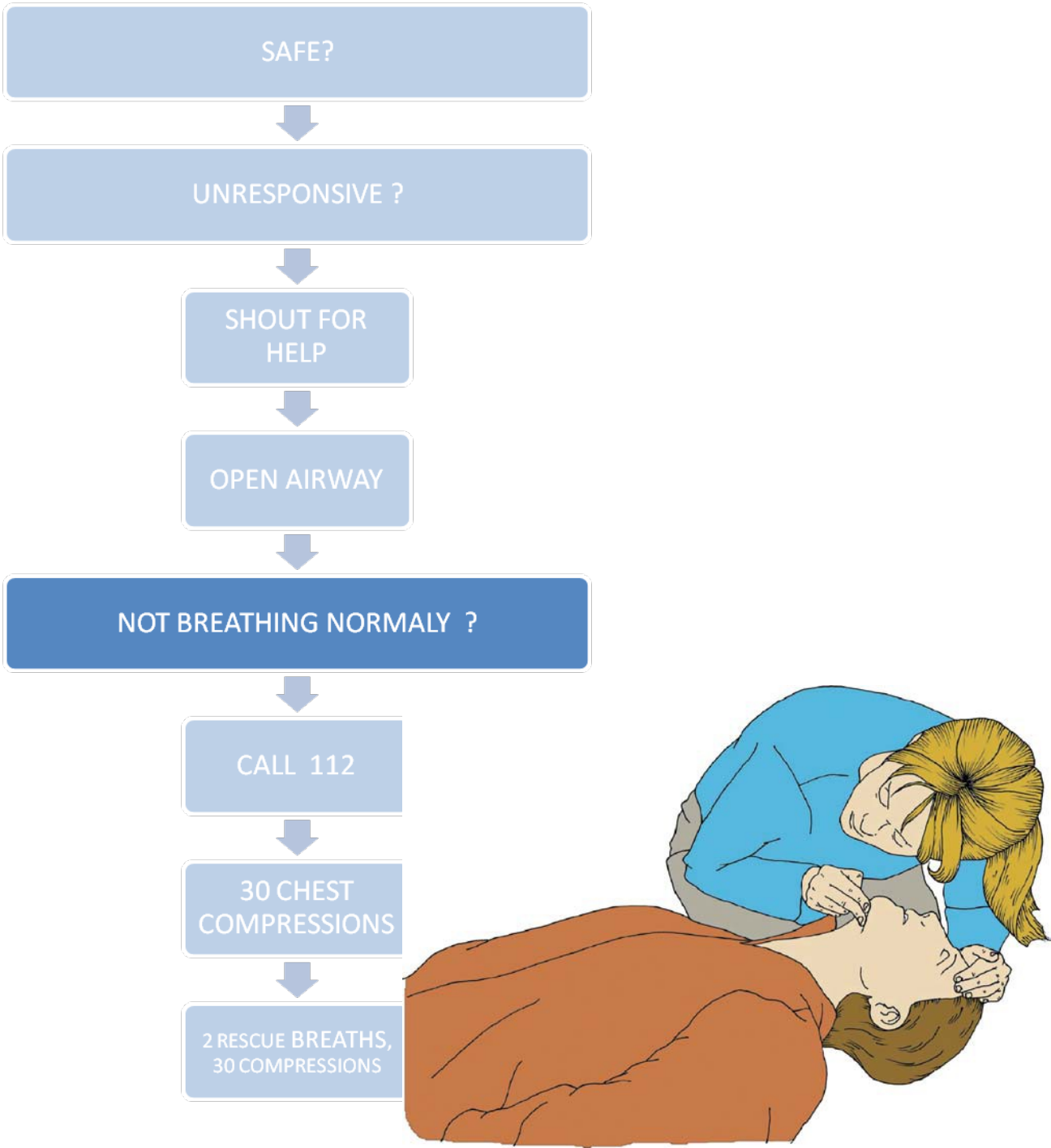
30 COMPRESSIONS

HEAD TILT
CHIN LIFT

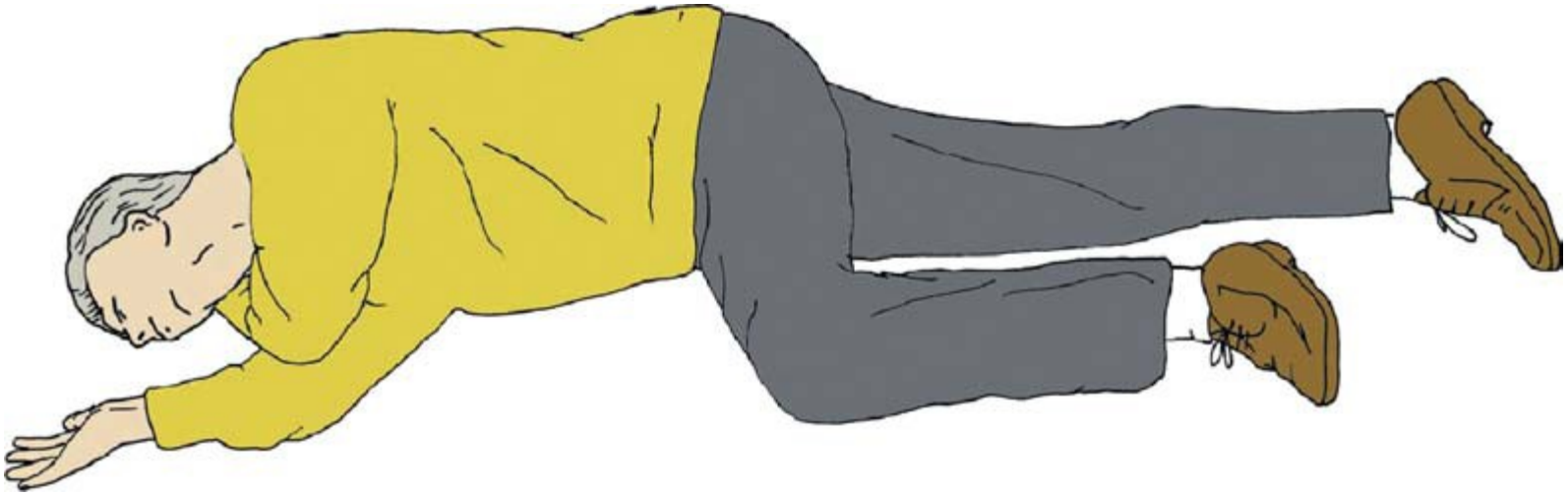


10 SEC
LOOK
LISTEN AND
FEEL



- If breathing normally

  Turn to recovery position and get help



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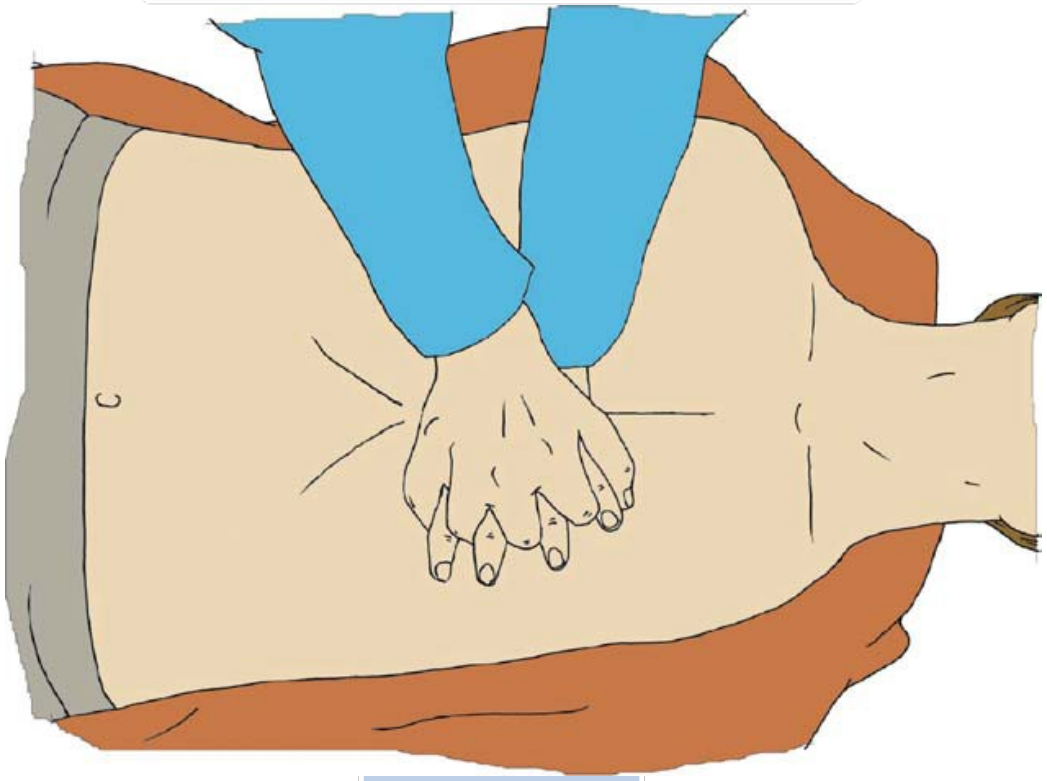
SAFE?



CALL 112

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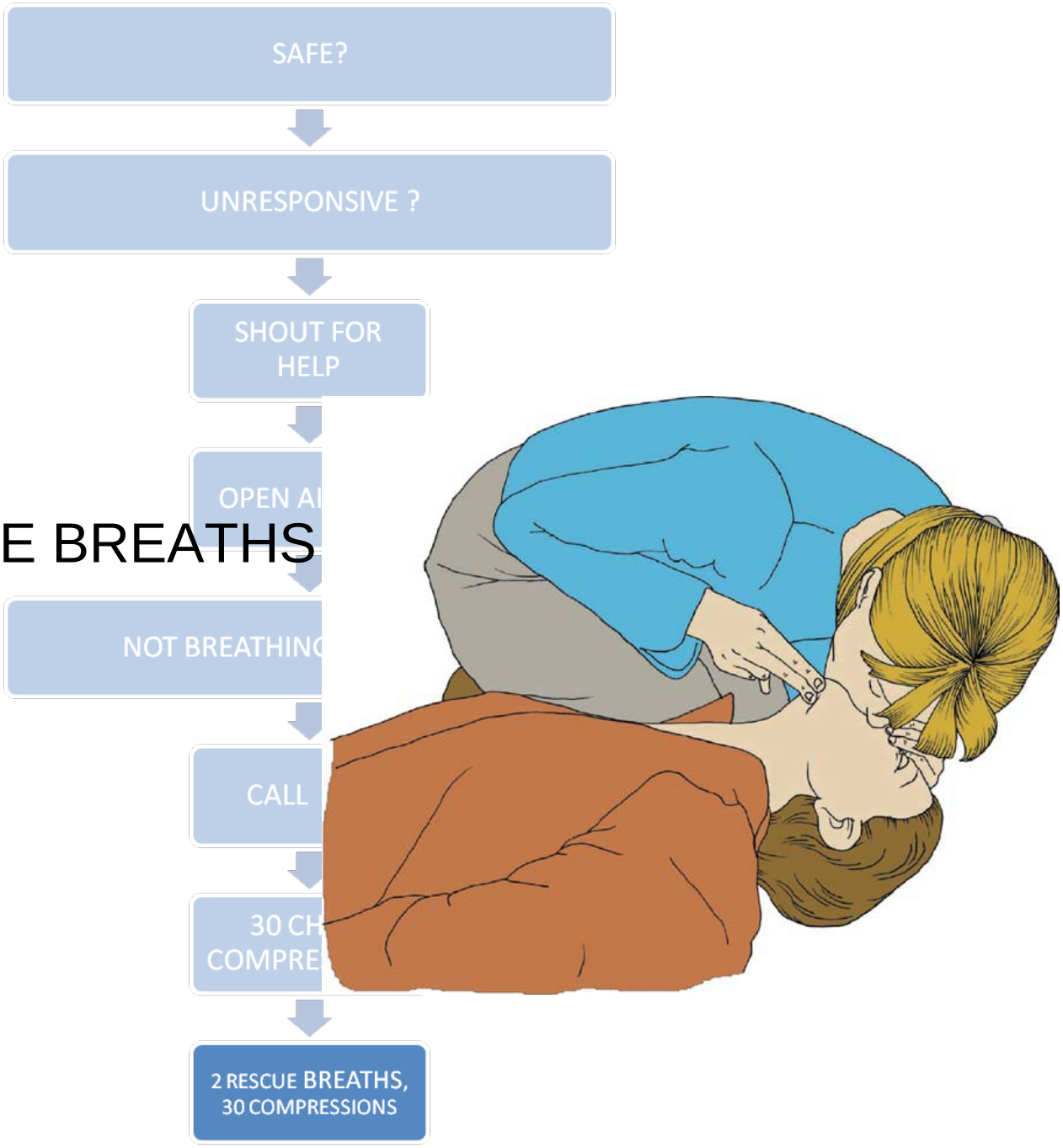
EFFECTIVE RESCUE BREATHS

ONTINUE CPR

ATIO 30 : 2

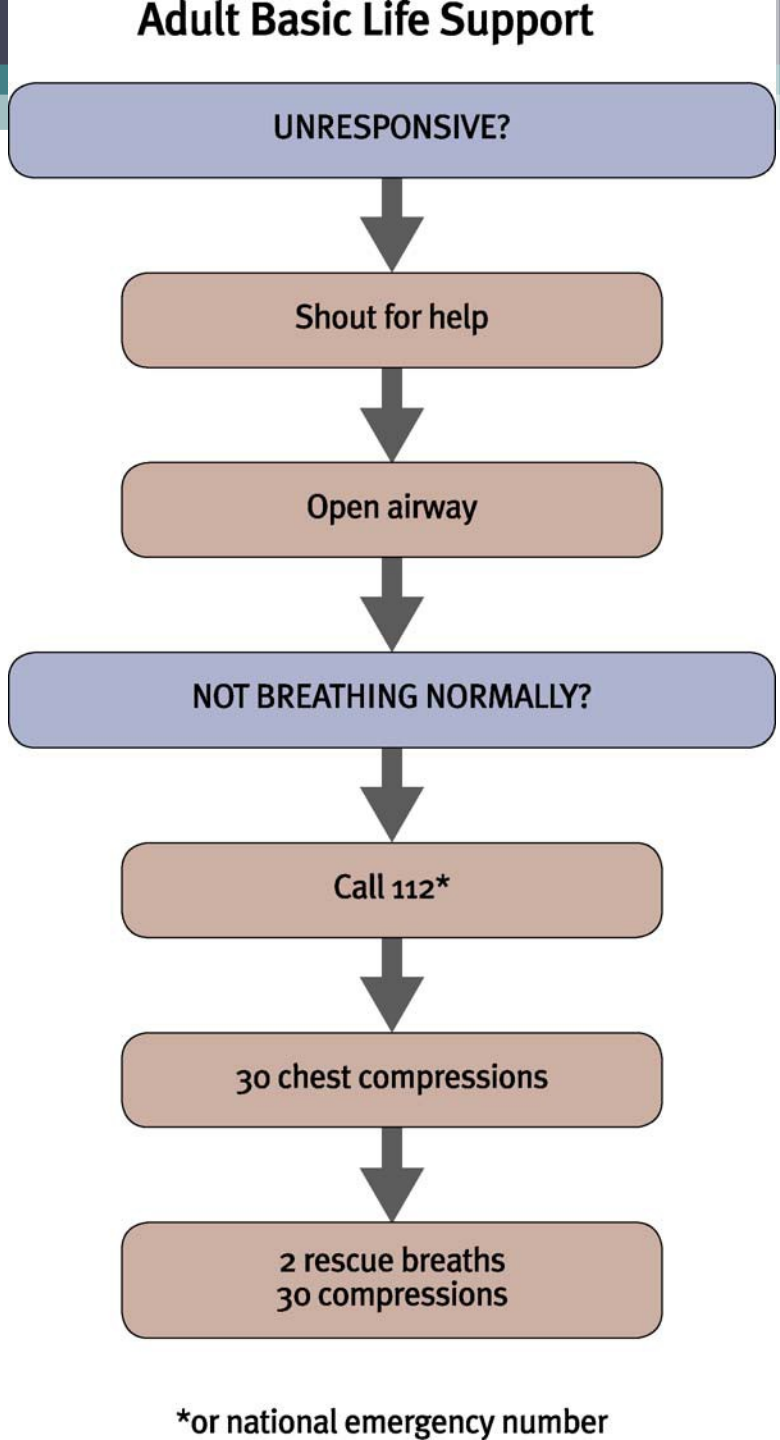


When to stop CPR

- Qualified help arrives and takes over
- The victim starts to breath normally
- You become exhausted

News BLS 2010

- in the centre of the victim's chest; (which is the lower half of the victim's breastbone (sternum))
- position yourself vertically above the victim's chest and press down on the sternum at least 5 cm (but not exceeding 6 cm);
- after each compression, release all the pressure on the chest without losing contact between your hands and the sternum;
- repeat at a rate of at least 100 min−1 (but not exceeding 120 min−1);



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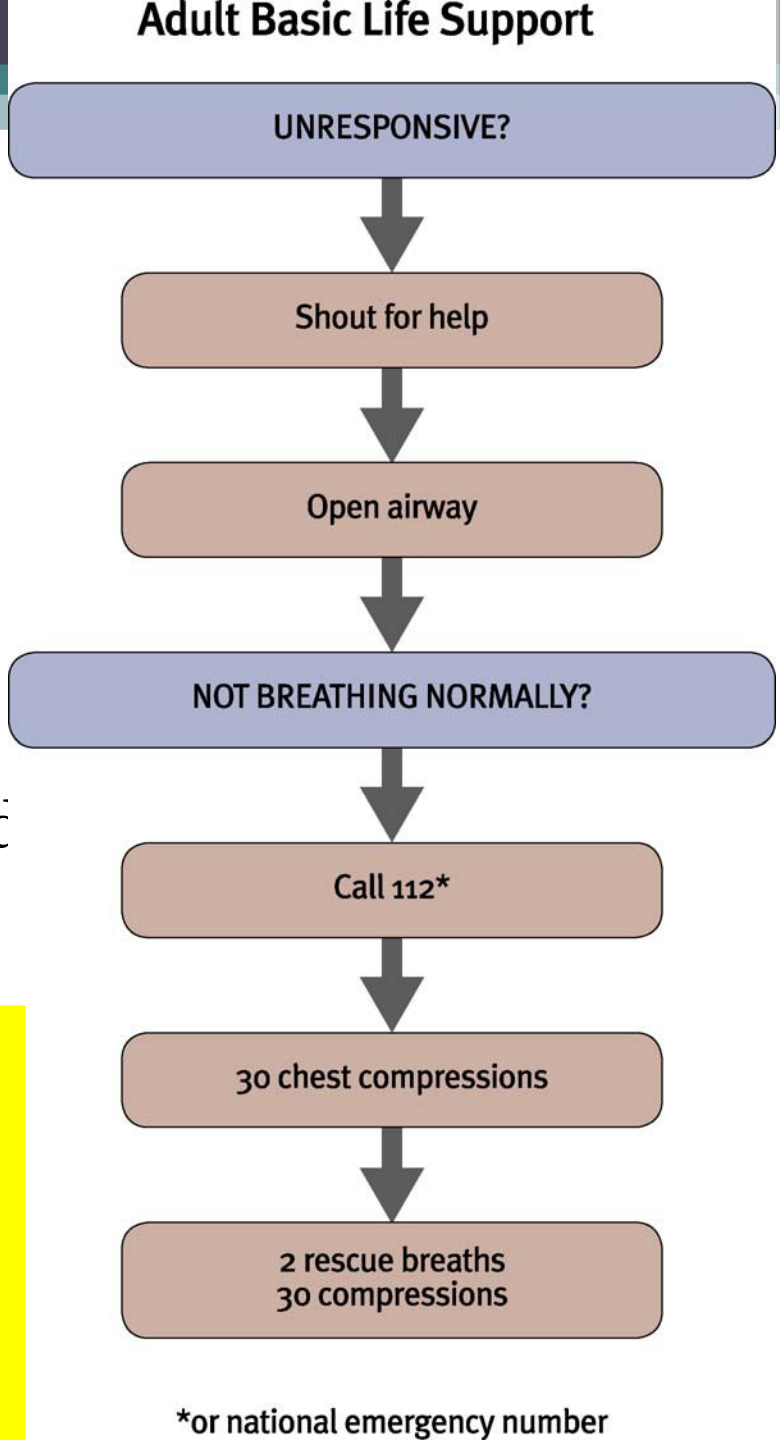
If your initial rescue breath does not make the chest rise as in normal breathing, then before your next attempt:

- look into the victim's mouth and remove any obstruction;
- recheck that there is adequate head tilt and chin lift;
- do not attempt more than two

Time should not be spent checking the mouth for foreign bodies unless attempted rescue breathing fails to make the chest rise.

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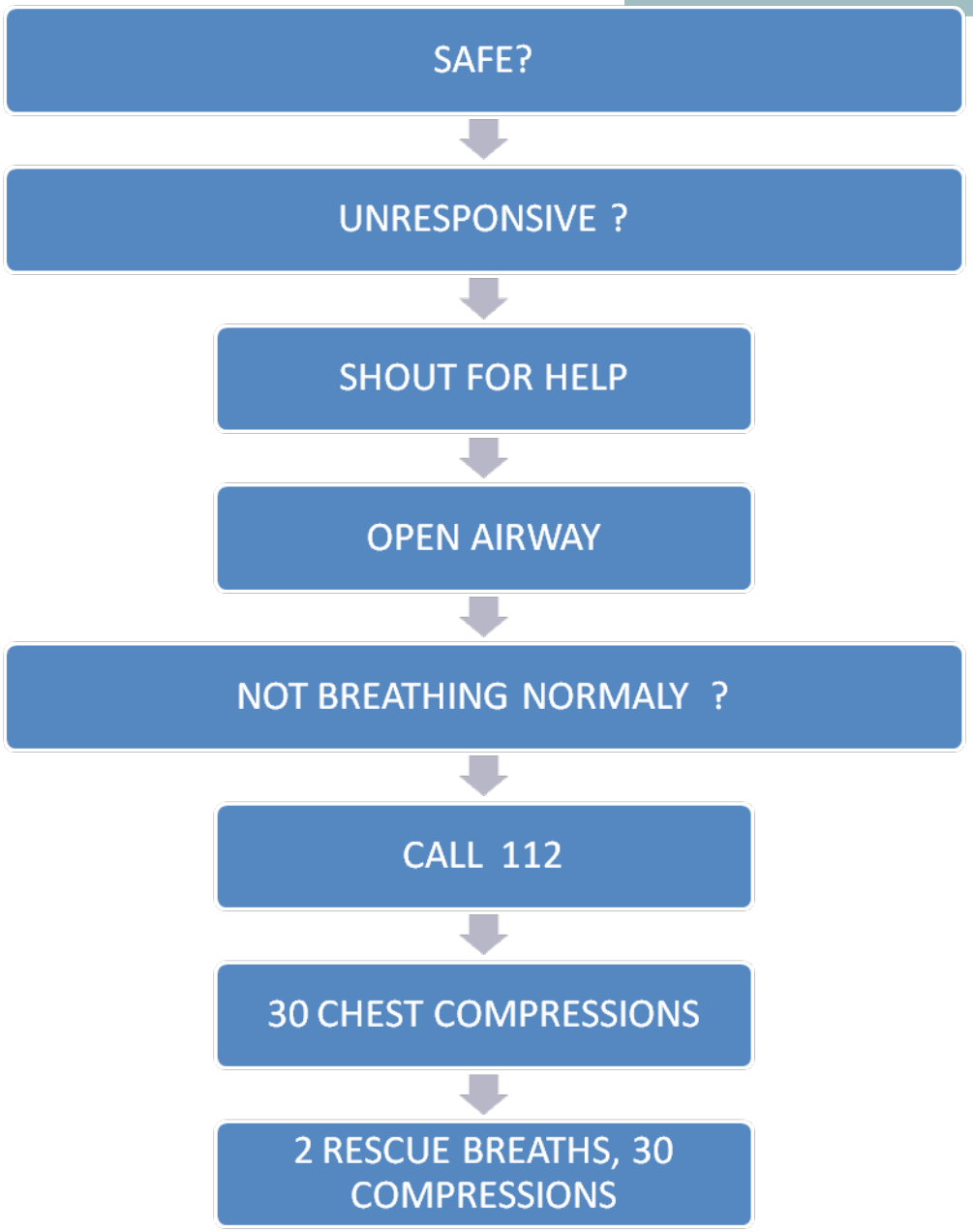
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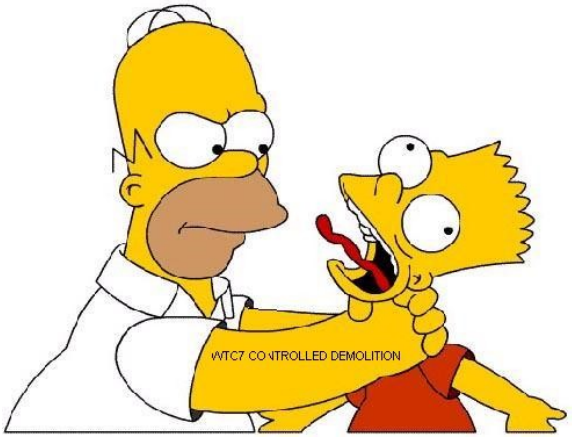
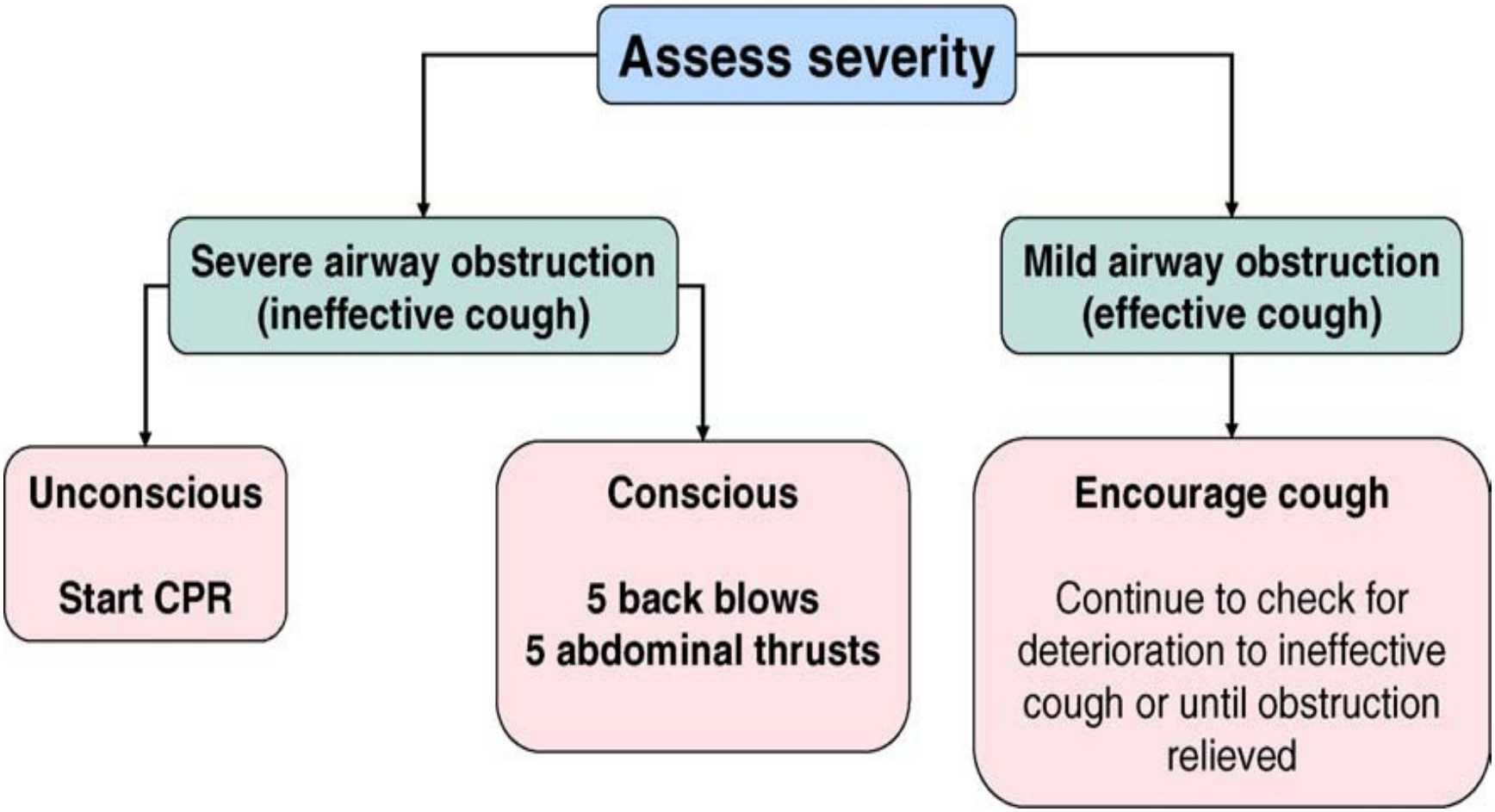
Foreign body airway obstruction (choking)

Causes of choking

- adults: fish, poultry
- kids: sweets, peanuts



Adult FBAO Treatment



Up to 5 sharp back blows

Abdominal thrusts

Up to 5 times, then alternate 5 back blows - 5 abdominal thrusts

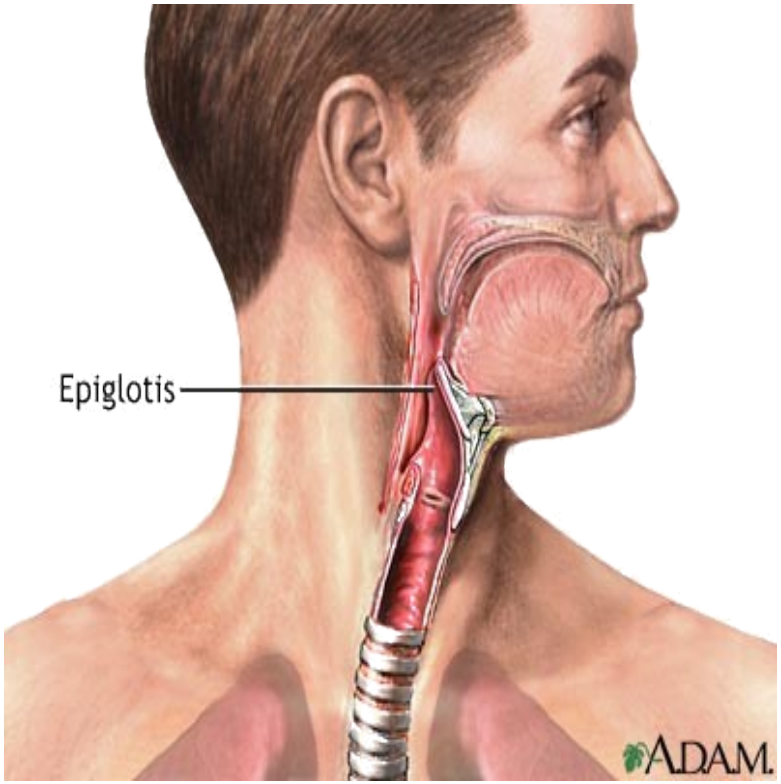
If unconscious – start CPR

AIRWAY MANAGEMENT AND VENTILATION

A for Airway

- Patients with cardiorespiratory arrest often have an obstructed airway
- Prompt control of the airway is essential to prevent secondary hypoxic damage to the brain and without oxygenation it may be impossible to restore spontaneous cardiac output

Causes of the airway obstruction



Cardiac arrest Coma Trauma	Tongue displacement
Anaphylaxis Foreign body Irritants	Tongue oedema Oropharnyx obstruction Laryngeal spasm
Foreign body	Laryngeal, tracheal or bronchial obstruction
Trauma	Laryngeal damage
Infection Anaphylaxis	Laryngeal oedema
Asthma Foreign body Irritants Anaphylaxis	Bronchospasm
Irritants Anaphylaxis Infection Near drowning Neurogenic Shock	Pulmonary oedema

Recognition of airway obstruction

LOOK, LISTEN AND FEEL

Partial obstruction

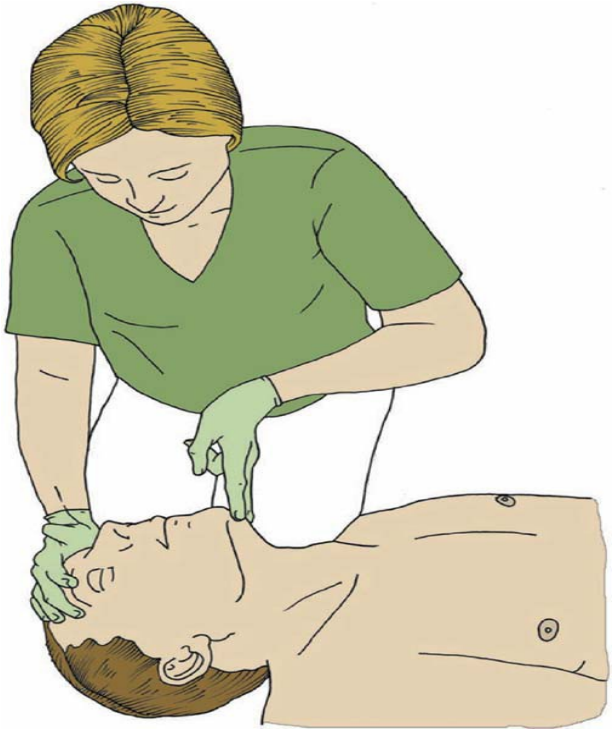
• Stridor	obstruction above larynx
• Wheeze	lower airway
• Gurgling	semisolid/liquid FB
• Snoring	soft palate/epiglotis
• Crowing	laryngeal spasm

Recognition of airway obstruction

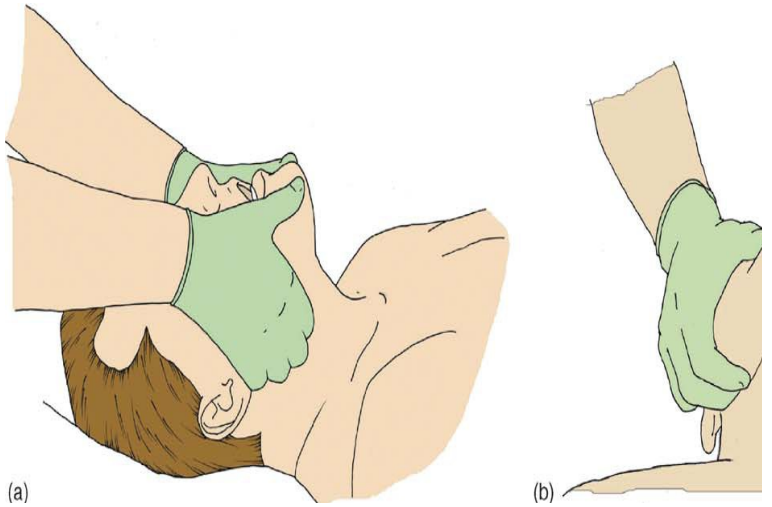
Complete obstruction

- Look for paradoxical chest and abdominal movement –´see-saw breathing´

Basic airway management



Head tilt chin lift



Jaw trust

Airway management with suspected cervical spine injury

Manual in line stabilization

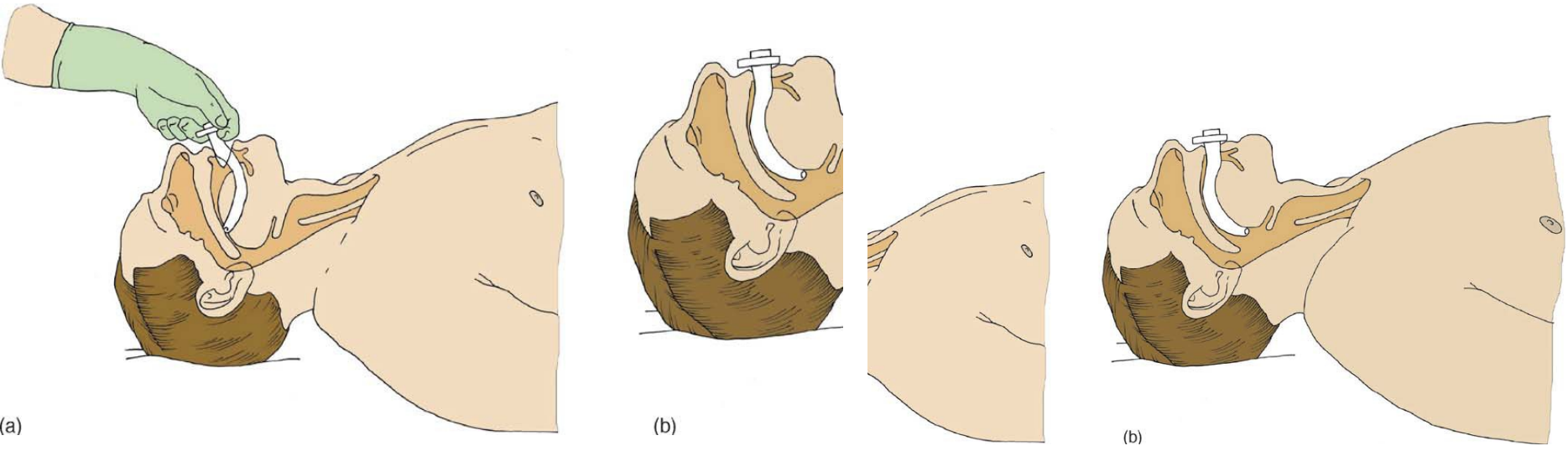
Airway adjuncts

- Oropharyngeal airways
  - Better in comatose patients

- Nasopharyngeal airways
  - Better tolerated by patient
  - Can cause nose bleed

CAREFUL! Both can cause airway obstruction !

Airway adjuncts



Insertion of oropharyngeal airway

Oxygen

- Give oxygen whenever it is available

More O_2 for brain

Type of oxygenation	Oxygen concentration
Mouth to mouth	17 %
Face mask	Up to 50%
Type of oxygenation	**Oxygen concentration**

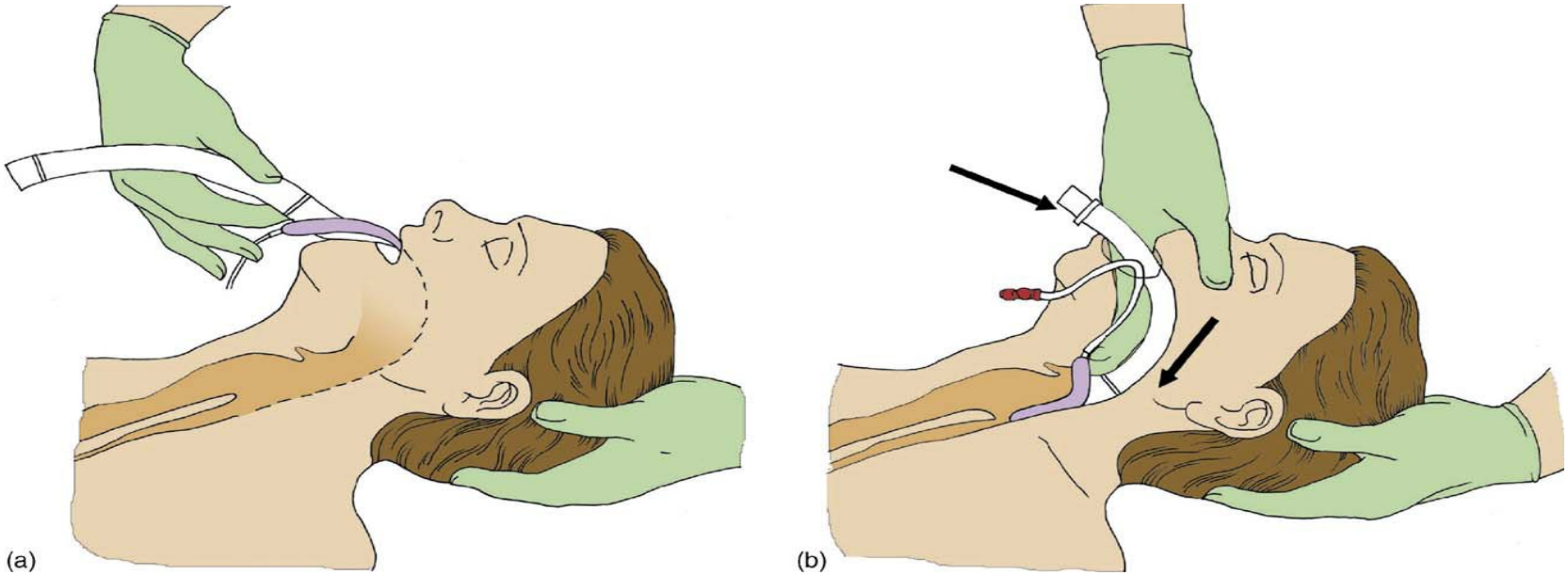
Alternative airway devices

- High incidence of complications without adequate training and experience
- Best technique depends on the circumstances and competence of the rescuer

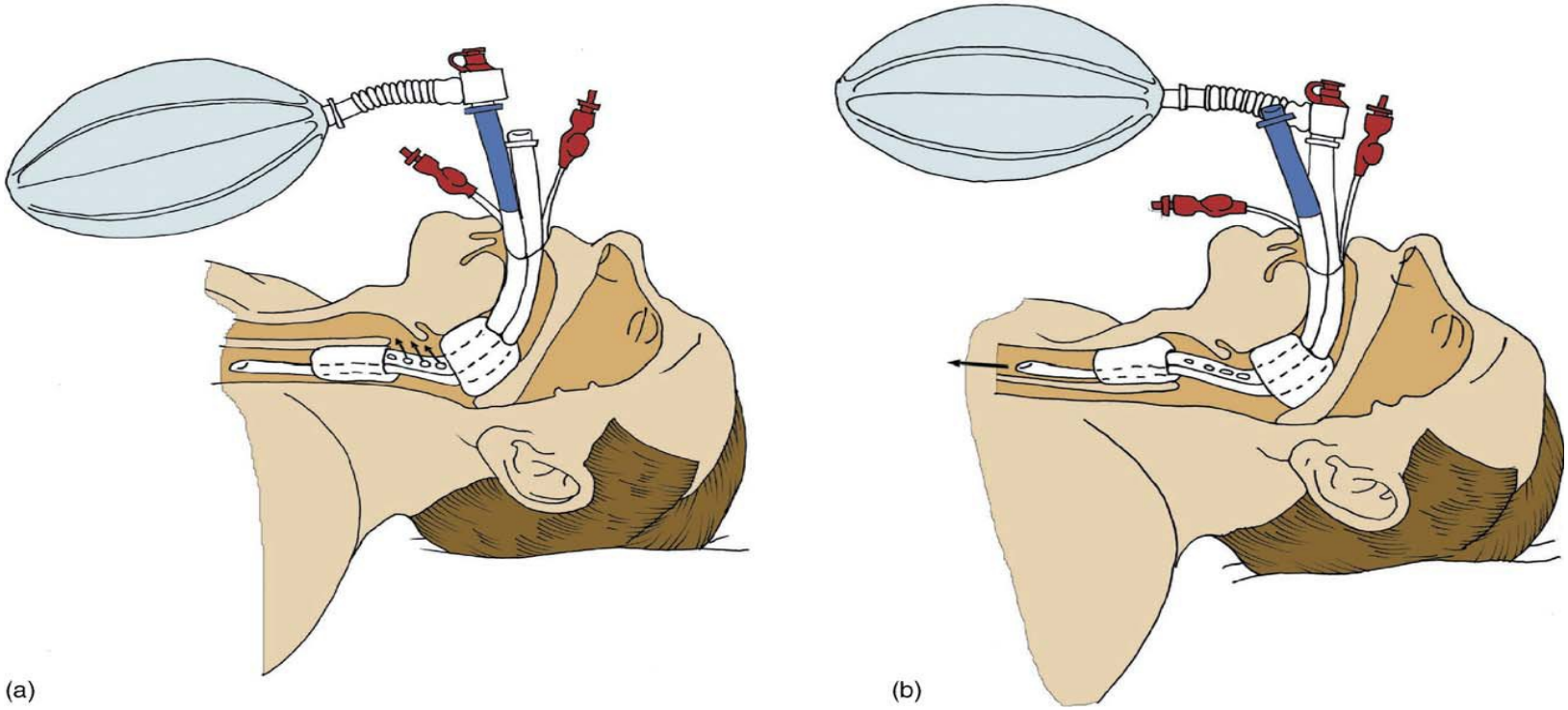
Alternative airway devices

- Laryngeal mask airway
- Combitube
- Tracheal intubation

Laryngeal mask airway

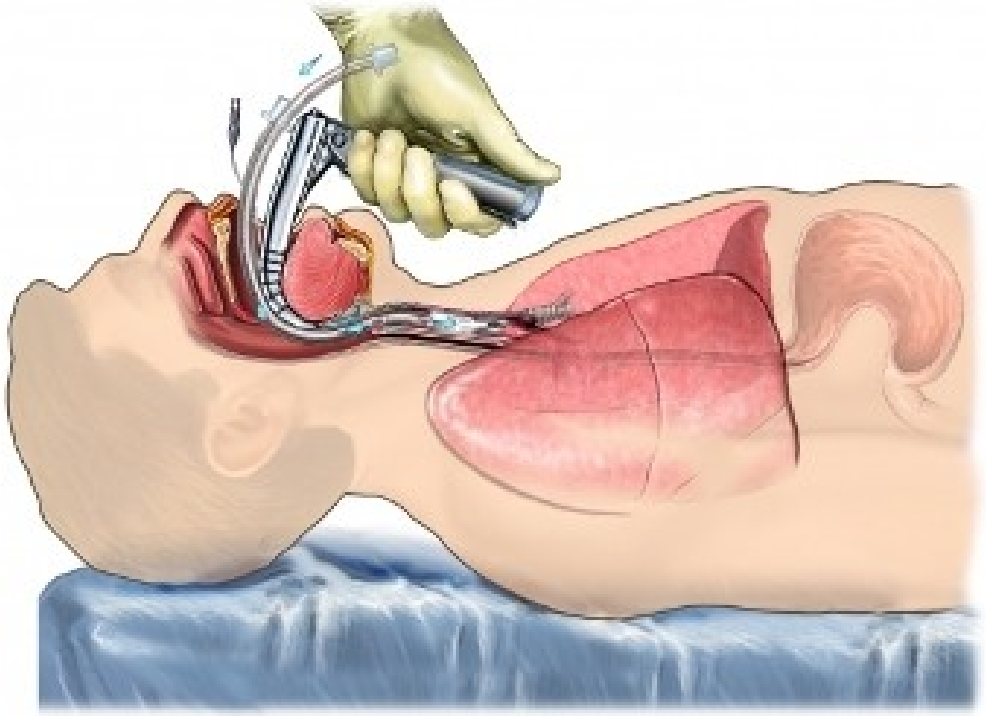


Combitube




THE
END
IS
NEAR

Gold standart – tracheal intubation

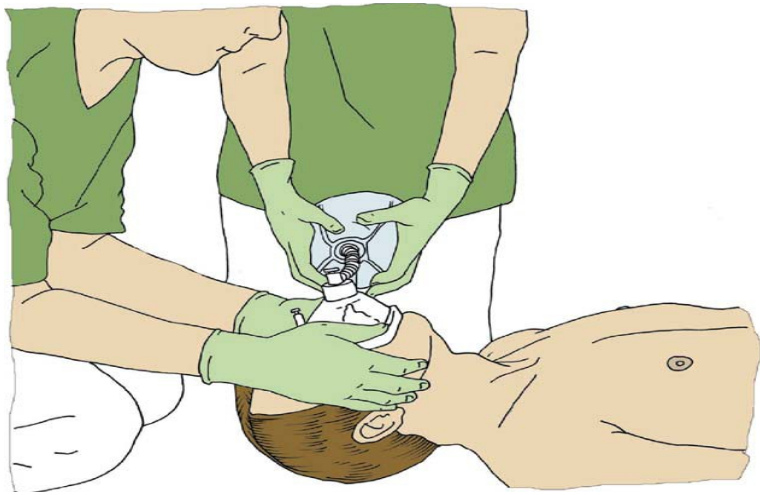


Gold standart – tracheal intubation

- Advantages:
  - Maintainance of patent airway
  - Protection from aspiration
  - Ability to ventilate reliably
  - Free the rescuers hands
  - Route for giving drugs
- Disadvantages
  - Unrecognised misplaces tracheal tube
  - Prolonged period without compressions

B for breathing

- Mouth to mouth
- Mouth to nose
- Mouth to protective device
- Using self inflating bag or ventilator



Ventilation

- Inspiration 1 sec
- Volume : enough to make the chest rise
  - Larger volumes lead to gastric inflation
- Once the tracheal tube is in place ventilate the lungs at a rate of 10 breaths/min and continue chest compressions without pausing during ventilation

SUMMARY

- Open the **airway**
- Look listen and feel for **breathing**
- Use airway adjuncts you're familiar with to enable ventilation
- Ventilation : chest compressions 2:30
  Until airway protected, then
  10 breaths / min and 100/min chest compressions

Questions ?