

Patient Assessment

The First 10 Minutes

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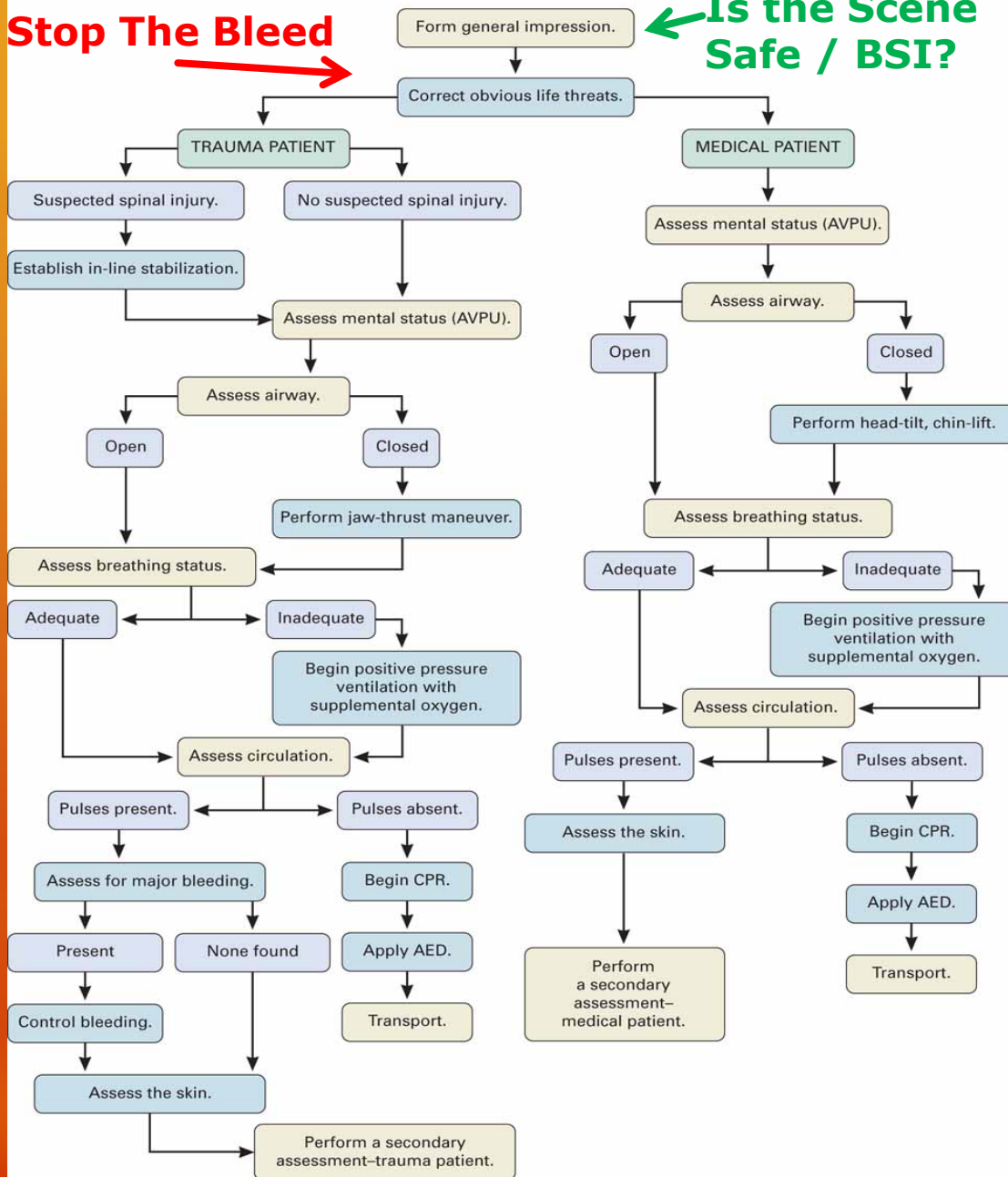
Patient Assessment

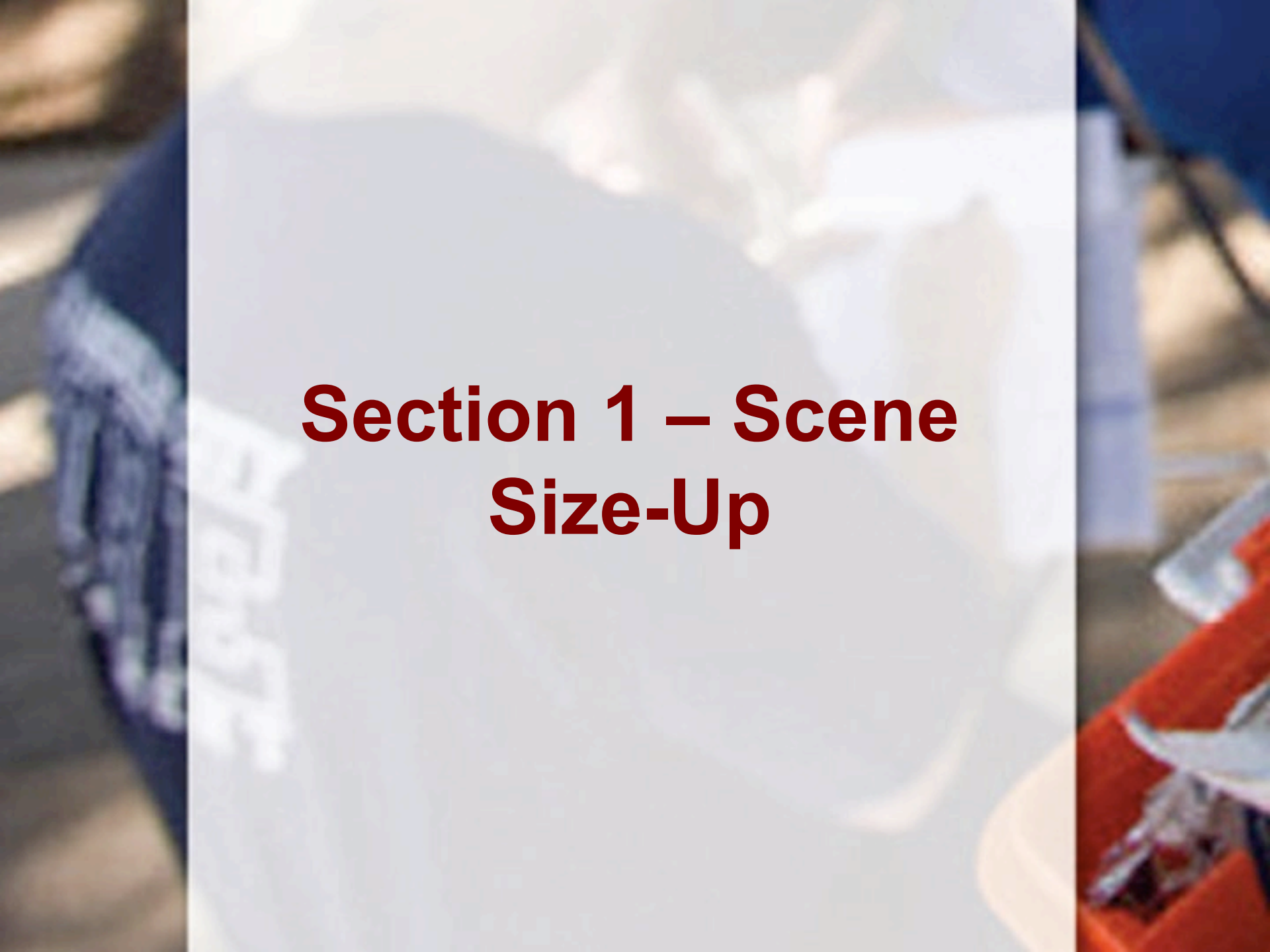
- The one skill that is performed on every patient.
- Good patient assessment is integral to quality patient care.
- Although patient assessment is taught in a modular format, you will develop your own system of patient assessment.

PRIMARY ASSESSMENT

Stop The Bleed

Is the Scene Safe / BSI?





**Section 1 – Scene
Size-Up**

Steps of the Scene Size-Up

- Standard Precautions
- Scene safety
- Mechanism of injury or nature of illness
- Number of patients
- Need for additional resources

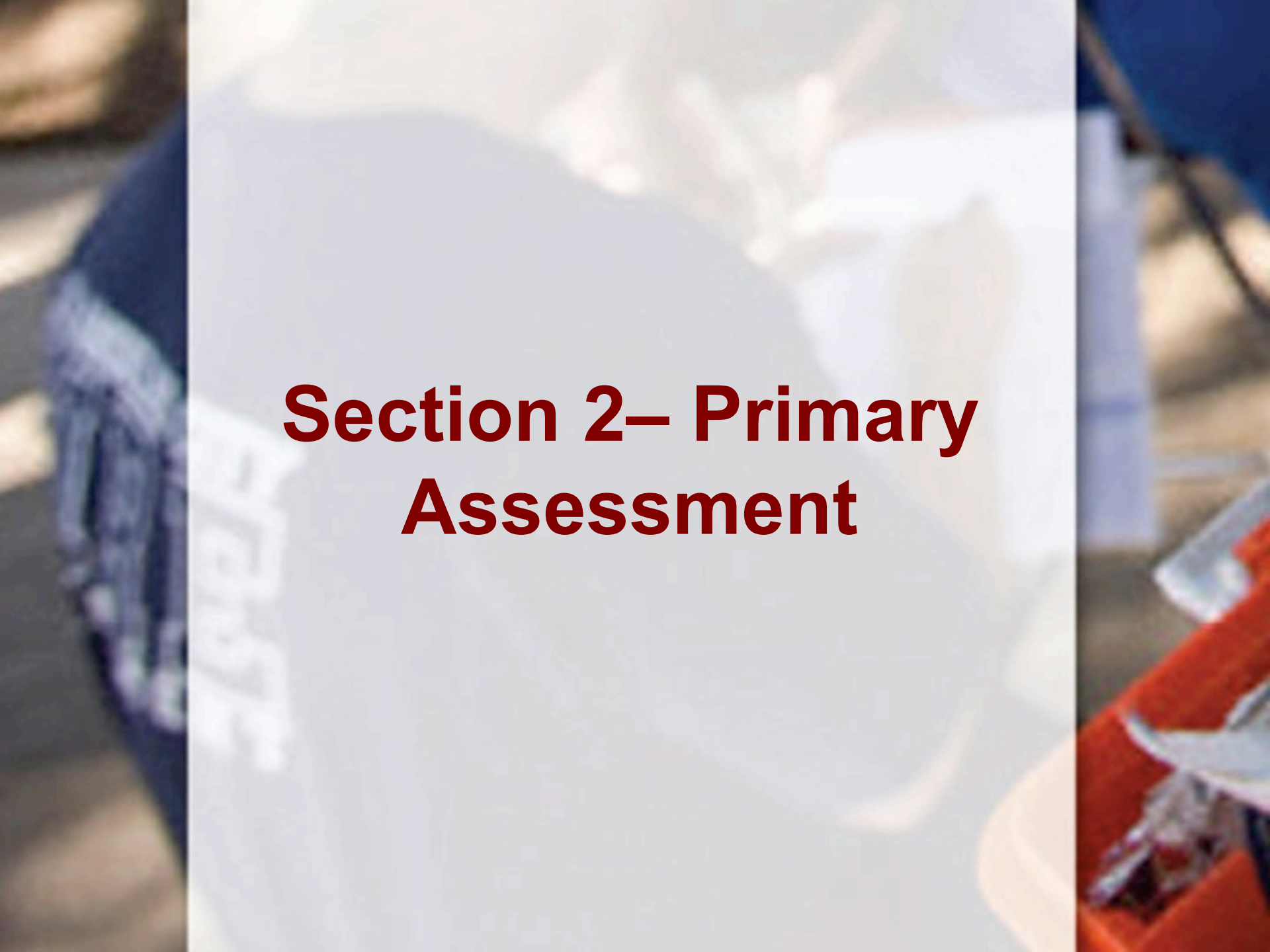


- Mechanism of injury (MOI)
- Kinetics of trauma



Bumpers

Airbags



Section 2– Primary Assessment

Establish Rapport



- Competence
- Confidence
- Compassion



- Bring order
- Introduce yourself
- Gain consent
- Position yourself
- Use communication skills
- Be courteous
- Use touch when appropriate

**REDUCE
ANXIETY**

Maintain Control



- Attempt to control the scene
- If it cannot be controlled, rapidly remove yourself and the patient

Steps of the Primary Assessment

- Form general impression of the patient
- Assess level of consciousness
- Assess the airway
- Assess breathing
- Assess circulation
- Establish patient priorities



Treat Immediate Life Threats at the time of detection as you progress through the Primary Assessment

Form a General Impression of the Patient

- First Impression
- Stable or unstable
- Chief complaint
- Original complaint may not be chief complaint
- People on scene may help for unresponsive patients





- Control major bleeding only
- Expose blood-soaked areas

Identify Major Bleeding



Establish In-Line Stabilization

- For suspected spine injury
- Neutral in-line position
- Maintain until EMS Arrives



Position the Patient for Assessment

- If the patient is prone, roll him to supine for better assessment
- Establish in-line stabilization first if spine injury is suspected



Assess the Level of Responsiveness



- A – Alert
- V – Verbal
- P – Pain
- U – Unresponsive

Mental Status

TABLE 10-2 *Glasgow Coma Scale*

| Eye Opening | | Verbal Response | | Motor Response | |
|-------------|--------|-------------------------|--------|--------------------|--------|
| | Points | | Points | | Points |
| Spontaneous | 4 | Oriented | 5 | Obeys commands | 6 |
| To voice | 3 | Confused | 4 | Localizes pain | 5 |
| To pain | 2 | Inappropriate words | 3 | Withdraws | 4 |
| None | 1 | Incomprehensible sounds | 2 | Abnormal flexion | 3* |
| | | Silent | 1 | Abnormal extension | 2** |
| | | | | No movement | 1 |



Flexion “Decorticate” posturing



Extension “Decerebrate” posturing

Stroke

B E F A S T

BALANCE



Sudden loss of balance?

EYES



Loss of vision in one or both eyes?

FACE



Face looks uneven?

ARM



Arm or leg weak/hanging down?

SPEECH



Speech slurred?
Trouble speaking or seem confused?

TERRIBLE HEADACHE



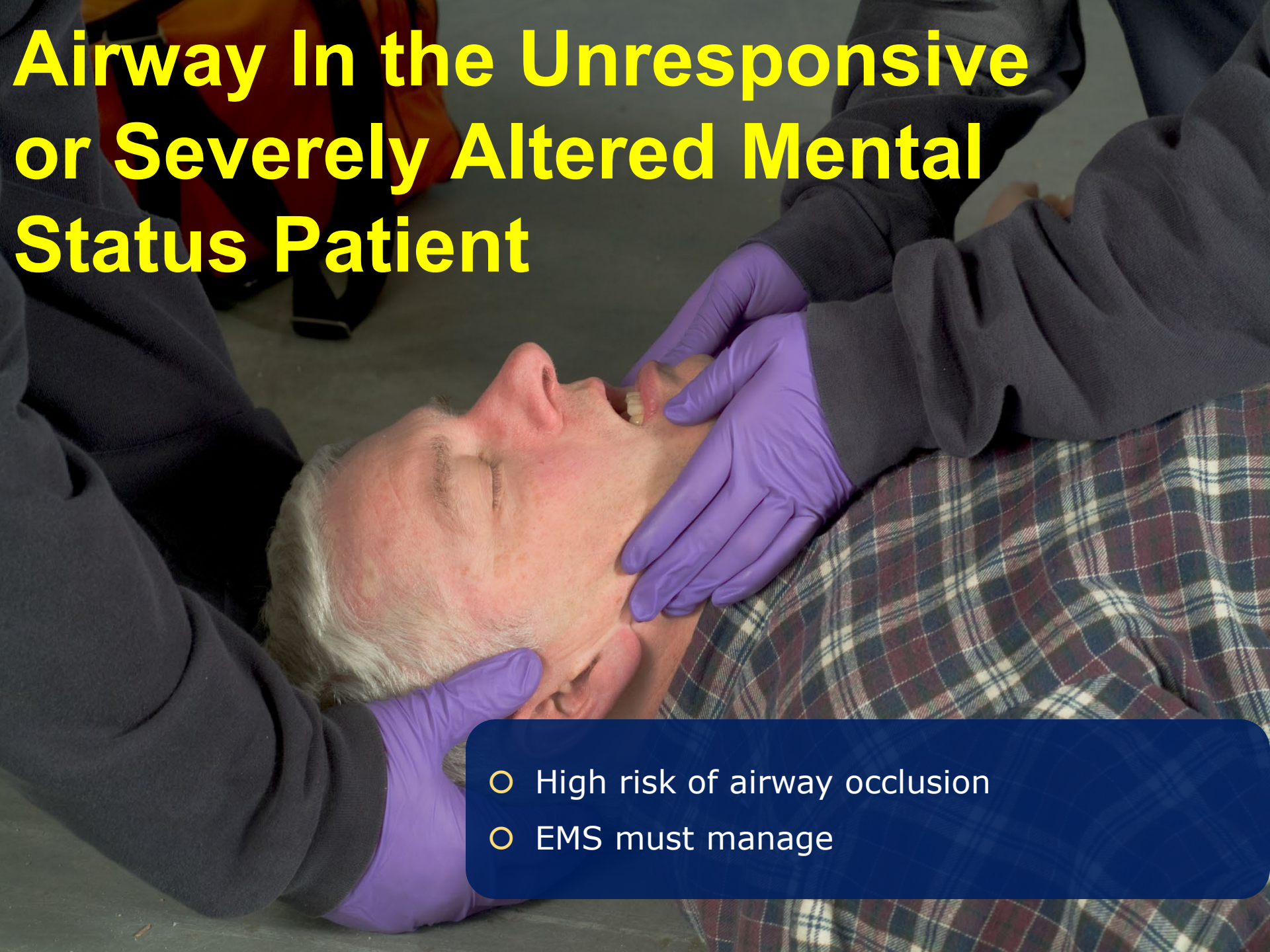
Thunder clap headache?
Worst headache of your life?

Airway In the Responsive Patient



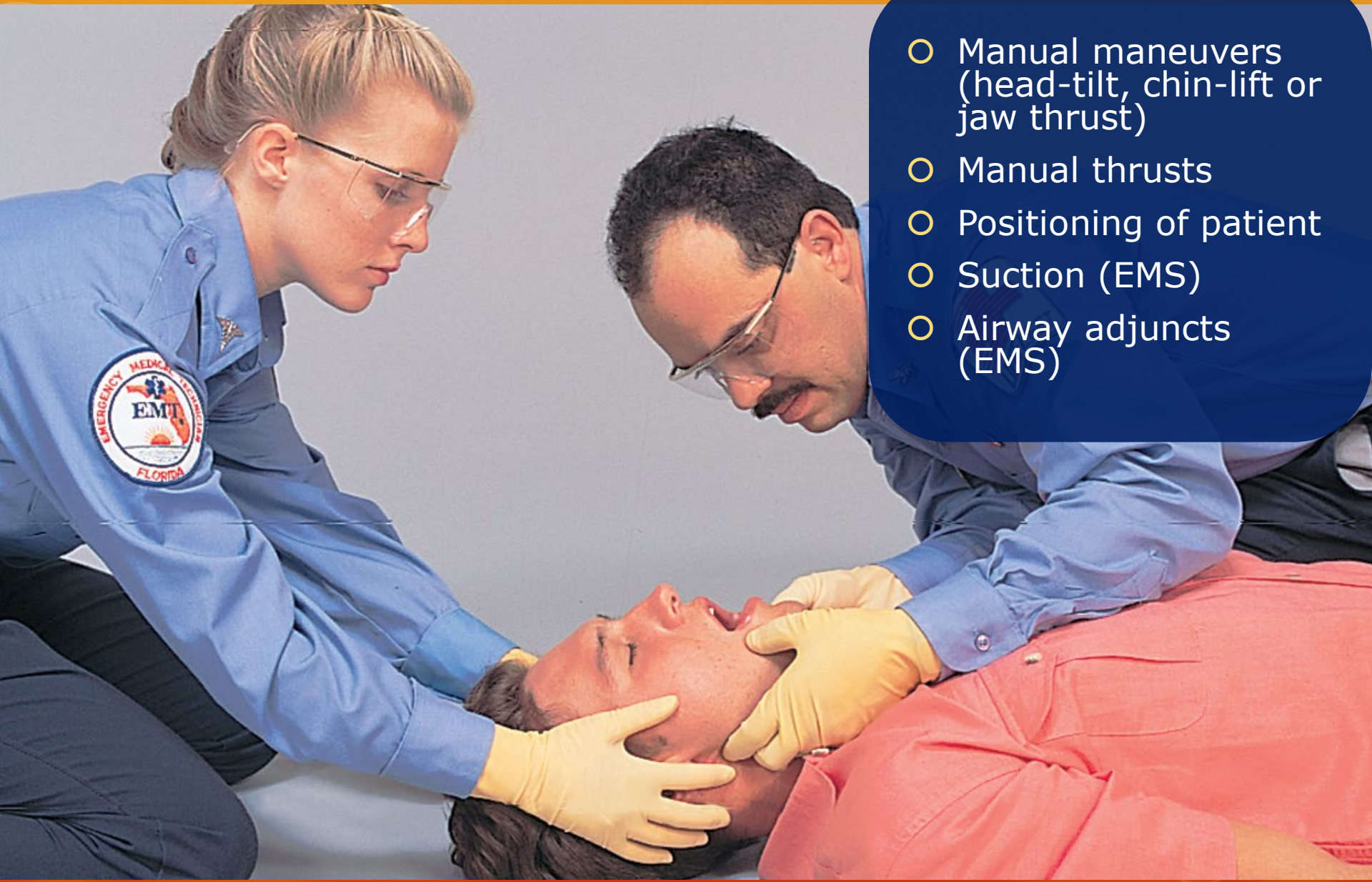
- *If the patient is alert and talking without difficulty, assume the airway is patent.
- *Stridor, gasping, difficulty speaking = possible partially blocked airway (foreign body or anatomical)

Airway In the Unresponsive or Severely Altered Mental Status Patient



- High risk of airway occlusion
- EMS must manage

Open the Airway



- Manual maneuvers (head-tilt, chin-lift or jaw thrust)
- Manual thrusts
- Positioning of patient
- Suction (EMS)
- Airway adjuncts (EMS)

Indications of Partial Airway Occlusion

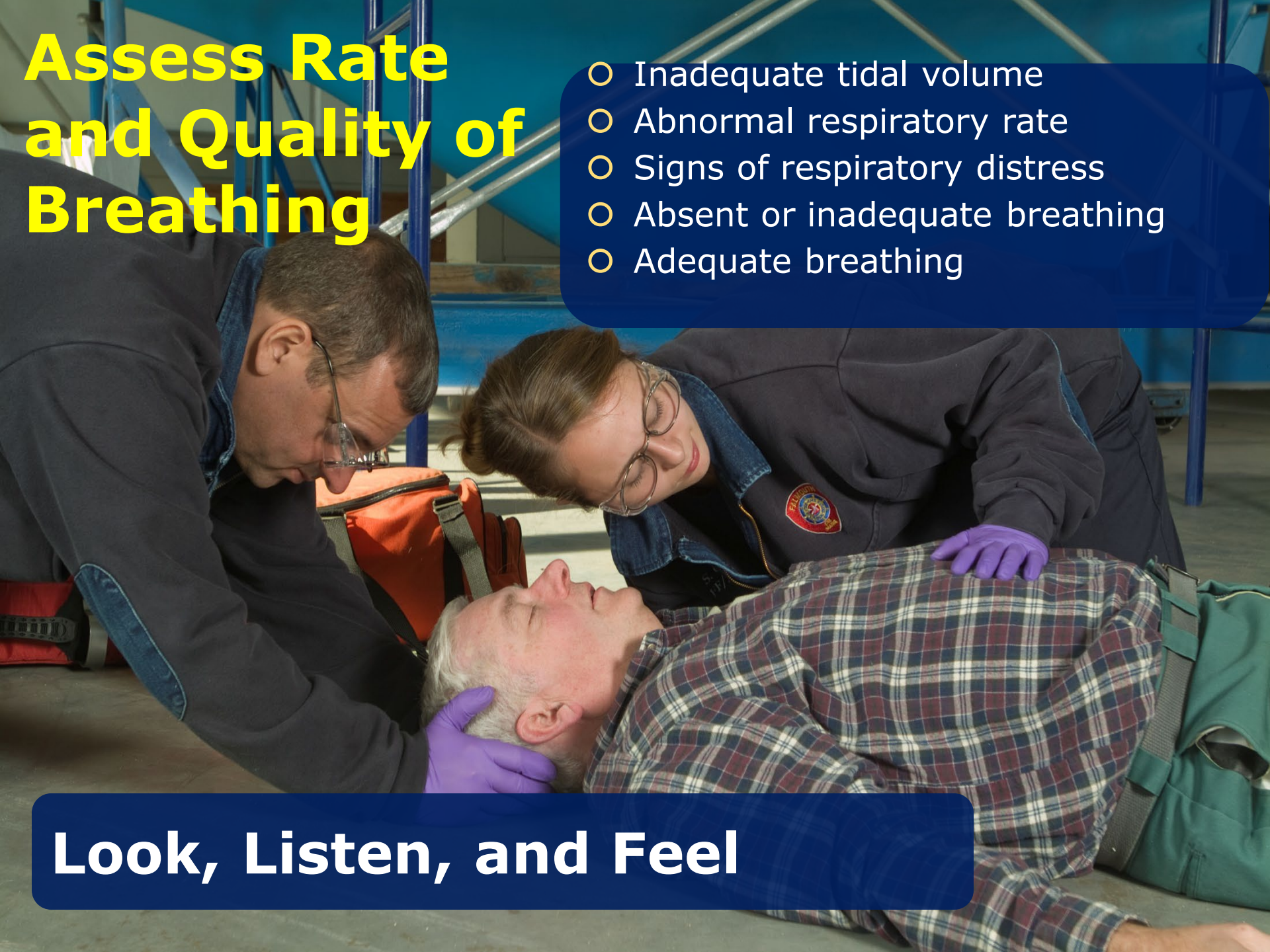


- Snoring
- Gurgling
- Crowing
- Stridor

Assess Rate and Quality of Breathing

- Inadequate tidal volume
- Abnormal respiratory rate
- Signs of respiratory distress
- Absent or inadequate breathing
- Adequate breathing

Look, Listen, and Feel



Breathing Rate

- The rate is calculated by counting the number of breaths in 30 seconds and multiplying by two
- General ranges for respirations
 - Adults: 12-20 breaths per minute
 - Children: 15-30
 - Infants: 20-40
 - Newborns: 30-60

Assess Circulation-Check Pulse



Pulse

- Assess the pulse
 - A pulse represents a pressure wave of blood created by the heart's contraction
 - Several locations for assessment
 - The rate is calculated by counting the number of beats in 15 seconds and multiplying by four

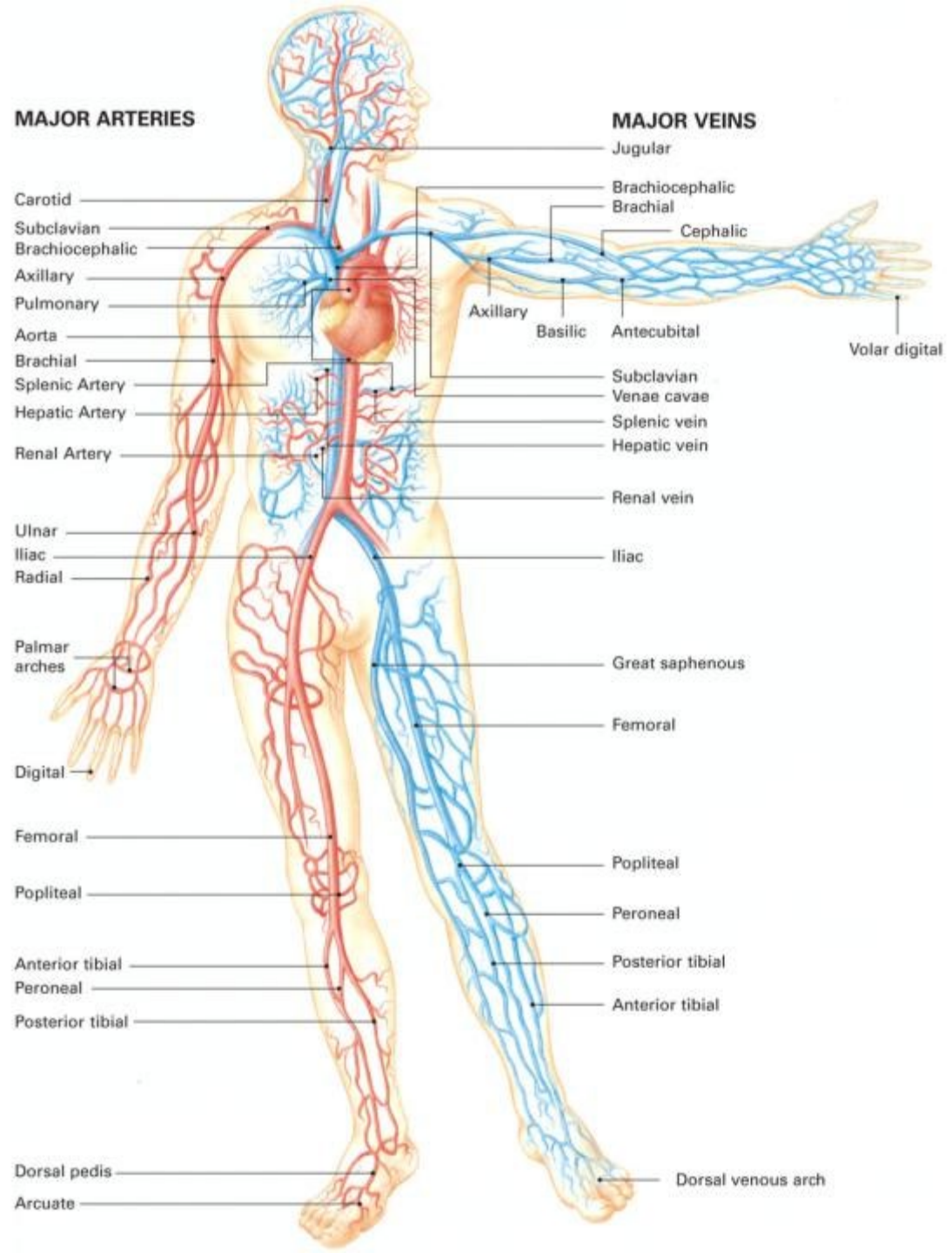
- Carotid ***
- Femoral
- Radial ***
- Brachial
- Popliteal
- Posterior tibial
- Dorsalis pedis

MAJOR ARTERIES

Carotid
 Subclavian
 Brachiocephalic
 Axillary
 Pulmonary
 Aorta
 Brachial
 Splenic Artery
 Hepatic Artery
 Renal Artery
 Ulnar
 Iliac
 Radial
 Palmar arches
 Digital
 Femoral
 Popliteal
 Anterior tibial
 Peroneal
 Posterior tibial
 Dorsal pedis
 Arcuate

MAJOR VEINS

Jugular
 Brachiocephalic
 Brachial
 Cephalic
 Volar digital
 Axillary
 Basilic
 Antecubital
 Subclavian
 Venae cavae
 Splenic vein
 Hepatic vein
 Renal vein
 Iliac
 Great saphenous
 Femoral
 Popliteal
 Peroneal
 Posterior tibial
 Anterior tibial
 Dorsal venous arch



Pulse

The radial pulse is felt on the wrist, just below the thumb



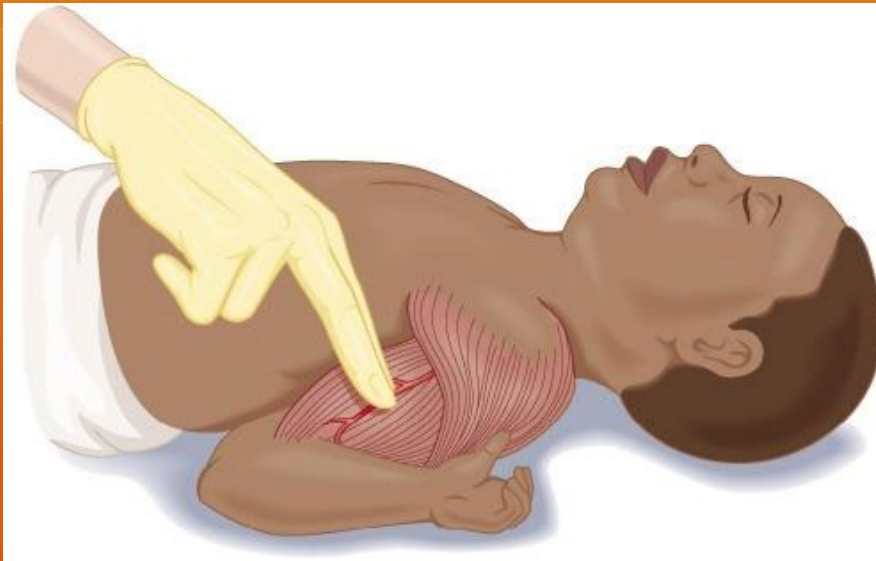
May use 2 or 3 fingers



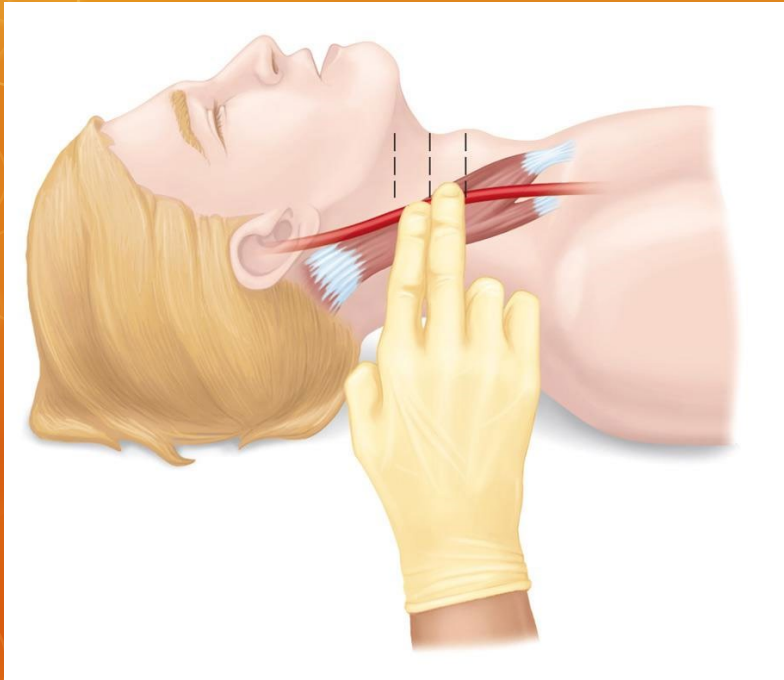
Locating a radial pulse

Pulse

In patients less than one year of age, assess for a pulse at the brachial location

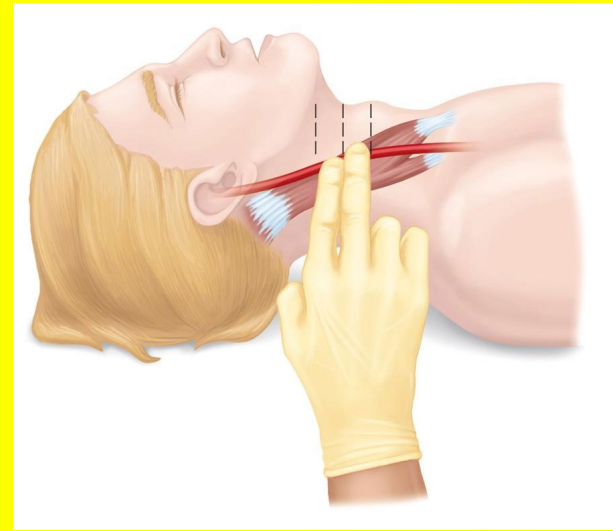


Pulse



Locating a
carotid
pulse





For unresponsive patients always assess the CAROTID ARTERY

RATE



- Average rate
- Tachycardia > 100
- Bradycardia < 60

Adult avg = 60-80 bpm

The younger
the patient, the
faster the rate

RATE




Use tips of 2 or 3 fingers: Never use thumb

Count # of beats in 15-seconds and multiply by four

A close-up photograph of a healthcare professional, likely a nurse or doctor, wearing blue scrubs and blue nitrile gloves. The professional is palpating the arm of a patient who is lying on a red surface. The professional's left hand is positioned higher on the arm, while the right hand is lower, near the elbow. A silver watch is visible on the professional's left wrist. The background is a light-colored, textured surface, possibly a hospital bed or floor.

Quality

- **Strength:** Strong or weak
- **Rhythm:** Regular or irregular

- 
- **Strong:** full and strong
 - **Bounding:** Abnormally strong
 - **Weak (thready):** not full or difficult to find and may be rapid

Strength

Skin

Assess Circulation - Perfusion

When you check the
Pulse...Check the Skin

Assess skin

- Color
- Temperature
- Condition
- Capillary Refill
- Signs of shock

Skin

- Appearance and condition is another indicator of the body's circulatory status
- Assess for:
 - **Color**
 - **Temperature**
 - **Condition**

Skin Color

- CHECK color: should be pink
 - Color of the nail beds
 - Oral mucosa
 - Conjunctiva
- In infants, children and dark skinned people check
 - Palms of the hands
 - Soles of feet

Jaundice



Pallor



Cyanosis

Low oxygen levels in the blood cause the lips, fingers, and toes to look blue (cyanotic)



ADAM

Mottling



Flushing



Abnormal Skin Colors

Skin Temperature & Condition



Assessment:
Use back of hand

Skin Temperature/Condition

Hot:

fever or exposure to heat

Cool:

inadequate circulation, shock or exposure to cold

Cold:

extreme exposure to cold or dead

Wet, moist or clammy:

shock or many other conditions

Diaphoresis:

strong autonomic activation

Abnormally dry:

spine injury or severe dehydration

Diaphoretic Skin



Skin

Capillary Refill

Skin

- Capillary refill
 - Amount of time for a compressed capillary bed to refill with blood
 - In infants less than 6 months old Sternum <3 sec.
 - Factors affecting response in older patients
 - cold environment,
 - preexisting conditions of poor circulation
 - certain medications

PROCEDURE

- Press firmly on skin or nail bed
- Compressed area blanches
- Count time it takes to return to normal color





- Normal capillary refill
- Infants, children Approx.: 2 seconds
- Male Adults: 2 seconds
- Female Adults: <3 seconds
- Elderly: 3 seconds

Pupils

Pupils

- Use a regular penlight
- Shine the light briefly, and at an angle to the pupil, and observe the response

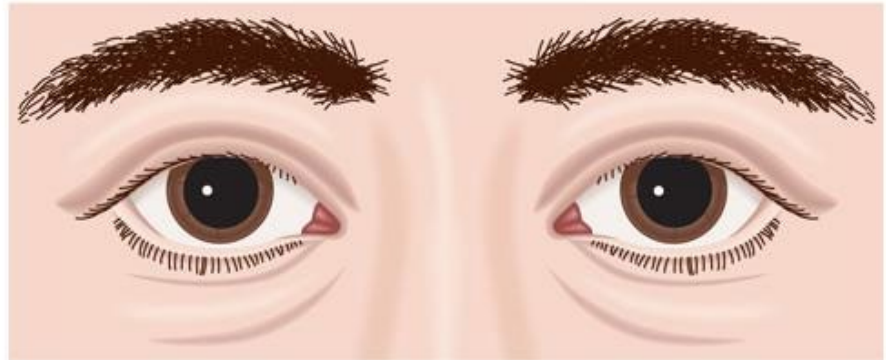


- **Size**
- **Equality**
- **Reactivity**

Findings may indicate underlying problems



Constricted pupils



Dilated pupils

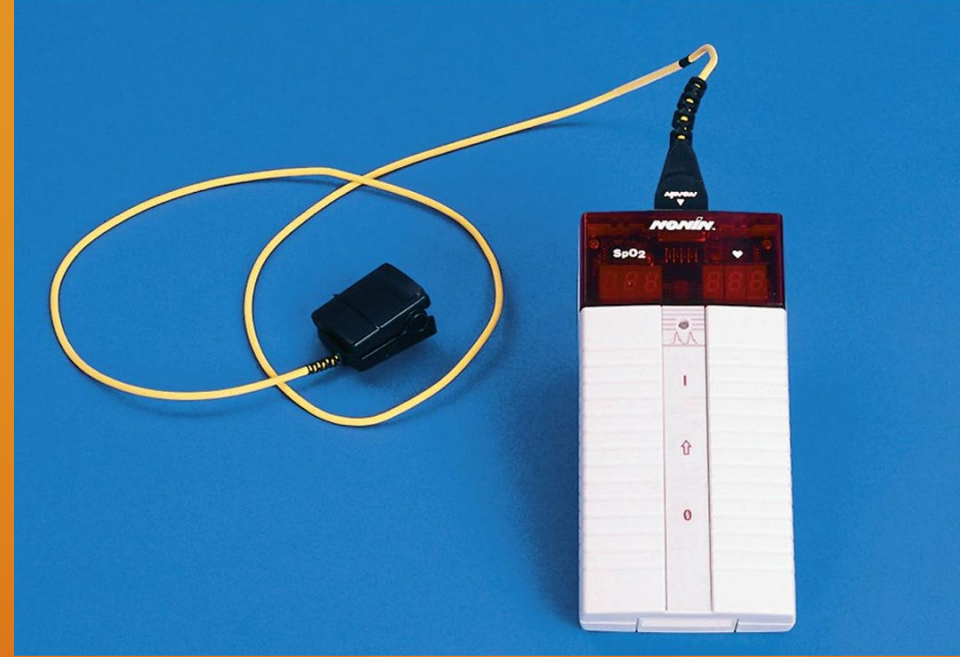


Unequal pupils

Pulse Oximeter: Assessing Oxygen Saturation

Pulse Oximetry

- Readings
 - 97% to 100% SpO₂ is normal
 - <95% SpO₂ indicate hypoxia and compromise
 - 90% or < is moderate to severe hypoxia



Method of measuring the percent of hemoglobin saturated with O₂

PROCEDURE

- Turn on
- Attach to patient
- (Infants: use toe or distal foot)
- Wait few seconds for reading to appear
- Compare HR with actual





Secondary Assessment

Secondary Assessment

- **Anatomical Approach**
 - Head-to-toe Assessment
 - May be Rapid or Detailed
- **Body Systems Approach**
 - Linking body systems together after an injury is identified.
 - Respiratory, Cardiovascular, Neurological, Musculoskeletal

D-CAP BTLS

- **D**eformities
- **C**ontusions
- **A**brasions
- **P**unctures/**P**enetrations
- **B**urns
- **T**enderness
- **L**acerations
- **S**welling





Preparing to Take the History



- Chief complaint
- Gather history from patient or family



- Identifying data
- Age, sex, race
- Dates and Times
- Complaints
- Signs/symptoms
- Treatments
- Illnesses
- Hospitalizations

SAMPLE HISTORY

The **SAMPLE** history is a medical history of the patient that you gather by asking questions indicated by the acronym

Standardized Approach to History Taking

The SAMPLE History



Signs and symptoms
Allergies
Medications
Pertinent past history
Last oral intake
Events leading to the injury

SAMPLE History

- **Signs and Symptoms**

- A **sign** is an **objective assessment** finding that you can see, hear, feel, or smell
- A **symptom** is a **subjective assessment** finding that you cannot observe, and must be described by the patient
- ASK
- What are you feeling?
- When and where did the first symptoms occur?

OPQRST

- Most relevant to medical patients
- Not all questions are relevant to every situation

Onset
Provocation
Quality
Radiation
Severity
Time

Use to further investigate signs and symptoms of chief complaint



OPQRST

O = ONSET

What were you doing when the problem started?

P = Provocation

Does anything make it better or worse?

Q = Quality

Can you describe what it feels like?

R = Radiation

Does the pain radiate anywhere?

S = Severity

On a scale of 0 to 10 with 0 being no pain and 10 being the worst pain you can imagine, how would you rate it?

T = Time

How long has this been going on?

SAMPLE History

- **Allergies**

- Medications
- Food
- Environmental agents
- Look for medical alert tags
 - Necklace
 - Anklet
 - Bracelet



SAMPLE History

Medications

Current medications taken by the patient

Prescription

Nonprescription (OTC or supplements)

Illicit



SAMPLE History

- **Pertinent past history**
 - Underlying medical problems
 - Past surgical procedures
 - History of significant trauma
 - If under a doctor's care at this time
- ASK
 - Do you have any medical problems?
 - Have you had any recent surgeries?

SAMPLE History

- **Last oral intake**

- Last ingestion of solid or liquid
- Approximate time and quantity of last ingestion

Very important if patient needs to go to operating room for definitive care



ASK: "When did you last eat or drink anything?"

SAMPLE History

- **Events** leading up to illness or injury
 - What was the patient doing prior to emergency?
 - Were there any unusual circumstances?
 - Did the patient experience any peculiar feelings?

Special Challenges

- Silent or overly talkative
- Pt. with multiple symptoms
- Anxious patient
- Angry/hostile pt.
- Intoxicated patient
- Crying patient
- Depressed patient
- Confusing behavior or history

- Confusing behavior or history
- Pt. with limited intelligence
- Language barrier
- Hearing or visual impairment
- Talking with friends or family
- Pediatric or elderly patients

Establish Patient Priorities

- Unstable versus stable
- Rapid transport versus secondary assessment on the scene



Summary – Scene Size-Up

- Standard Precautions
- Scene Safety
- MOI/NOI (Trauma? Or Medical?)
- Determine # of Patients
- Request Additional Resources if needed

Summary – Primary Survey Initial Assessment

- Form a **General Impression**
 - Establish In-Line Stabilization if needed
- Assess Level of Consciousness/Responsiveness (**AVPU**)
- **Airway** (assess and manage)
- **Breathing** (assess and manage)
- **Circulation** (assess for pulse, perfusion/skin, major bleeding)
- Establish **Patient Priority** (Transport Decision)

Summary - Reassessment

- Repeat the **Primary Assessment**.
- Reassess and record the **Vital Signs**.
- Repeat the **Secondary Assessment** for other complaints, injuries, or change in chief complaint.
- Check **Interventions**.
- Note **Trends** in the patient's condition.
- Repeat and record assessment findings every **5 minutes** for unstable patients, every **15 minutes** for stable patients.

References

- EMS1.com
- Prehospital Emergency Care, Ninth Edition