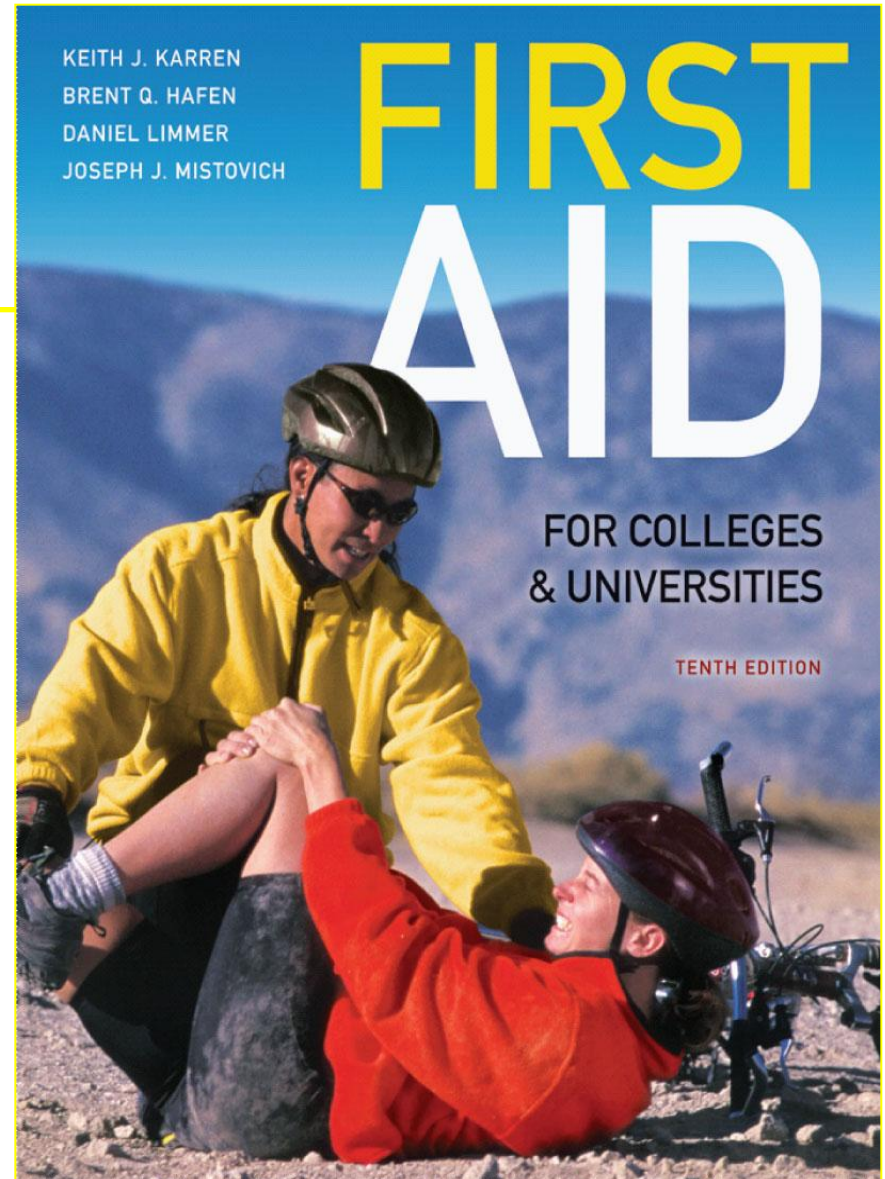


# Chapter 3

## Victim Assessment

Slide Presentation prepared by  
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# Learning Objectives

- Understand how to properly assess a victim.
- Describe how to establish rapport with a victim.
- Explain how to survey and control the scene.
- Describe and conduct a primary survey.
- Know how to conduct a neurologic (neuro) exam.

# Learning Objectives

- Explain how to determine the chief complaint.
- Understand the significance of vital signs.
- Explain how to take a history.
- Understand the sequence and practical application of a secondary survey.

# Introduction

- Victim assessment is one of the most critical aspects of providing first aid.
- Assessment is conducted to identify and care for immediate life threats to the airway, breathing, and circulation.
- Some injuries are obvious; some are hidden.
- A conscious victim may be able to guide you to the problem—but an unconscious victim will be of no help at all.

# Introduction

- The main goals of victim assessment are to
  - Protect yourself from injury.
  - Identify and correct life-threatening problems.
  - Render proper first aid care.
  - Prepare the victim for transport.

# The Victim Assessment Routine

In most cases, conduct victim assessment in this order:

- Size-up the scene.
- Establish rapport and control.
- Conduct a primary survey.
- Conduct a brief neurologic (*neuro*) exam.
- Determine the chief complaint.
- Assess vital signs.
- Look for medical information devices.
- Take a SAMPLE history.
- Conduct a secondary survey.

\*Note: You may need to adapt or change the sequence, depending on your experience and the specific emergency situation.

- **S** – Symptoms (Signs are important but they are objective.)
- **A** – Allergies
- **M** – Medications
- **P** – Past Medical History
- **L** – Last Oral Intake (Sometimes also Last Menstrual Cycle.)
- **E** – Events Leading Up To Present Illness / Injury

# Scene Size-Up

- Definition: an assessment of the scene and surroundings that will provide valuable information to the EMS.

The scene can provide clues to:

- 1- whether the victim is injured or ill,
- 2- the number of victims you may need to provide care for,
- 3- and what resources will be needed to effectively manage the victims and the scene.



# Conducting a Scene Size-Up

- First: ensure your personal safety
- Next: ensure the safety of the victim and bystanders

# There are five components of the scene size-up:

- Take body substance isolation precautions by using personal protective equipment (PPE).






- Assess the safety of the scene.

**Patient Assessment**

## Personal protection –

- Is it safe to approach the patient?
  - Crash/rescue scenes
  - Toxic substances - low oxygen areas
  - Crime scenes - potential for violence
  - Unstable surfaces: slope, ice, water, mud etc.



- Prior to approaching the victim, quickly scan the scene for any hazards, such as downed power lines, spilled fuel, weapons, or an unstable vehicle.

## Protection of bystanders

- If/when appropriate, help the bystander avoid becoming a patient.
  - Bystanders will sometimes approach or enter dangerous areas and suddenly compound your problems by becoming a patient.
  - Try to prevent this from happening!



# Scene safety

- If the scene is unsafe, make it safe.
  - Law enforcement
  - Fire department
  - Haz-mat Teams
- Otherwise, DO NOT ENTER!





- Determine whether the victim is injured or ill.

Patient  
Assessment

Mechanism of injury (Trauma)  
Nature of illness (Medical)

- Nature of illness (NOI) –
  - This can be determined from the patient, family or bystanders
    - Why EMS was activated.
      - Shortness of breath
      - Chest Pain
      - Abdominal Pain

## Mechanism of injury (Trauma)

- Mechanism of injury - determined from the patient, family or bystanders and inspection of the scene
  - What is the mechanism of injury
- MOI Examples:
  - Vehicle Crash
    - Speed at impact?
    - Rollover / Head-on / Rear End
  - Fall
    - How high and onto what?
  - GSW / Stabbing
    - What caliber gun?



- Determine the number of victims.

Patient  
Assessment

### Scene Size-up

- Determine the total number of patients. If there are more patients than the responding unit can effectively handle, Obtain additional help prior to contact with patients:
  - law enforcement, fire, rescue, ALS, utilities.
- The EMT is less likely to call for help if involved in patient care so make sure you call for help early.

- Determine the resources needed.



# Establish Rapport and Control

- To establish critical rapport with a potentially scared, anxious, angry or in-shock victim, use the Three C's
  - Competence
  - Confidence
  - Compassion

# Establish Rapport and Control

- Observe clues at the scene.
- Ask the victim's name, and use it.
- Identify yourself.
- Provide your credentials.
- Tell the victim what you want to do.
- Obtain the victim's consent, if possible.
- Maintain eye contact.
- Speak calmly and deliberately.
- Give orders quietly.
- Speak slowly and distinctly.

# Establish Rapport and Control

- say something like, I'm trained in first aid care. I'd like to help you. Is that all right?"
- Tell the victim your level of care and what you'd like to do.
- Throughout the assessment and care, continue to call the victim by name, maintain eye contact, speak calmly and deliberately, and give orders quietly.
- People under stress or in medical shock process information more slowly, so speak distinctly and allow time for the victim or bystanders to respond.

# Advices to establish control, do the following:

- Move smoothly and deliberately.
- Position yourself at a comfortable level in relation to the victim. Stay where the victim can see you without twisting his or her neck.
- Keep your eye level above that of the victim.
- Conduct your survey in an unhurried, systematic way.
- Emotions escalate quickly in tense situations, so keep your voice calm and quiet.
- If there is more than one victim, determine which victim(s) needs the most immediate care.

# Conducting the Primary Survey

- Major goal of the primary survey is to check for life-threatening problems to the airway, breathing, and circulation.
- There are two main types of patients you will encounter—those who appear to have a pulse and those who don't. (Your primary survey will vary based on this important determination).
- Every second the body is without breath it's closer to death.
- Compression and defibrillation are the most valuable tools to use when a victim appears lifeless.

# Conducting the Primary Survey

- The CAB approach to resuscitation: Circulation, Airway, Breathing
- Alternative is ABC: Airway, Breathing, Circulation
- Look for any signs of life/breathing; movement, speech, other indications of life
- Scan the chest for any signs of breathing.
- Breathing should be purposeful and adequate
- *Agonal* respirations = dying breaths; occasional, gasping, ineffective breaths

## Approach to the Patient

Check for responsiveness  
Perform a quick scan for breathing

Appears lifeless:  
Unresponsive  
Not breathing or  
ineffective, agonal or gasping breaths

Active EMS and call for an AED

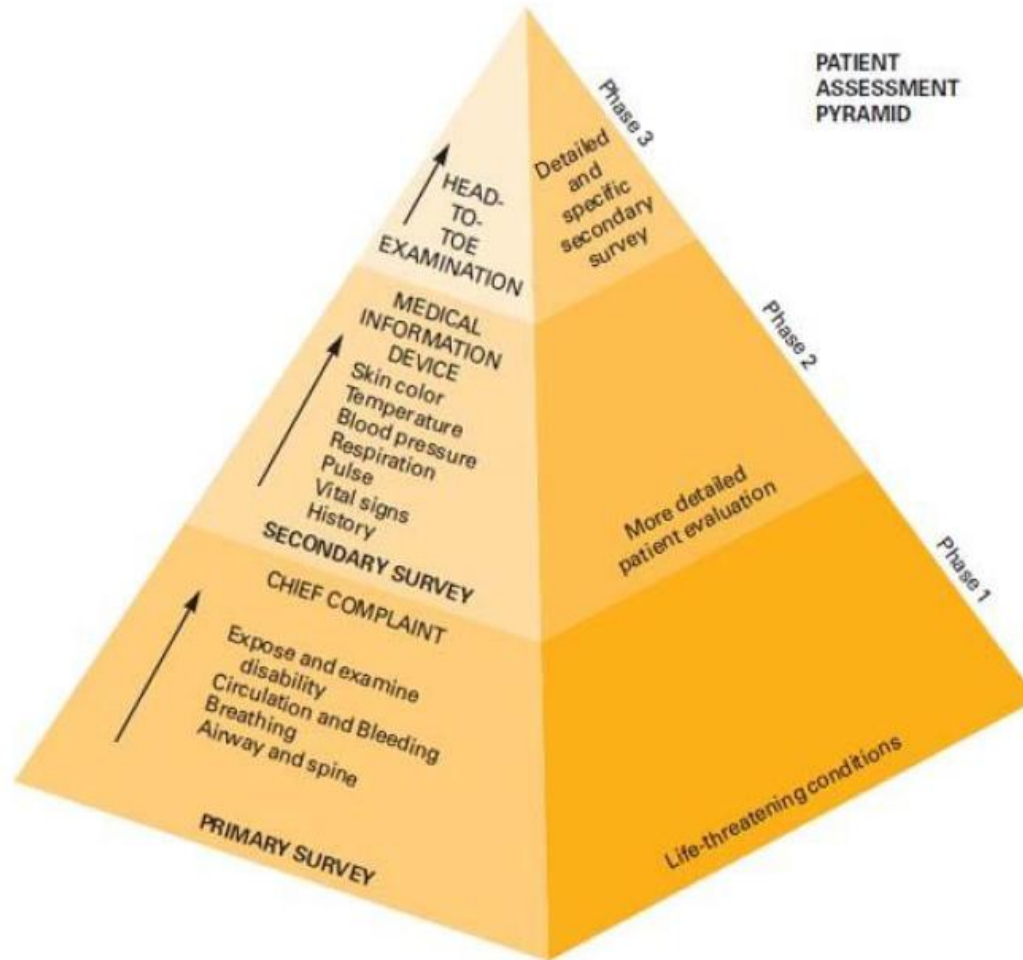
If no pulse, apply AED  
and follow prompts

Signs of life:  
Responsiveness  
or  
Breathing

Airway

Breathing

Circulation



**FIGURE 3.2** Remember the order of the primary and secondary surveys. Adapted from "Pyramid of Life" by Ray Johnson, *JEMS*. June, 1985, pp. 56-58.



# Conducting the Primary Survey

- If victim is conscious, ask what happened. This will reveal airway status, adequacy of breathing, mental status, mechanism of illness.
- Ask the victim where it hurts. This will reveal likely points of injury.
- Visually scan the victim for general appearance, pale skin, blueness (cyanosis), and sweating.

# Conducting the Primary Survey

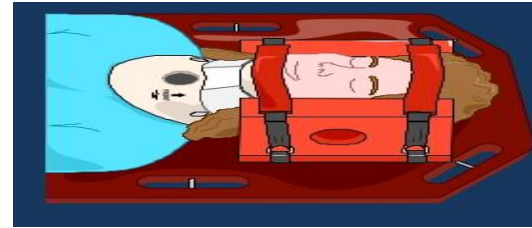
- ABCDs =
  - Airway
  - Breathing
  - Circulation
  - Disability
- These constitute the rest of the primary survey after you've completed the previous steps and determined whether the victim has a serious medical or trauma condition.
- Always suspect a possible spinal injury in the victim who is unresponsive or who has an altered mental status. Do nothing that could aggravate possible spinal injury.

# ABCDs

- Airway (and spine stabilization): Determine whether the airway is open
- If the victim is conscious and talking without difficulty, the airway is open.
- If the airway is not clear: (snoring, strider, gurgling, audible wheezing).
- If the airway is not open, use either the head-tilt/chin-lift maneuver or the modified jaw-thrust maneuver to open it



- If you suspect the victim has any possibility of a spinal injury, establish manual in-line spinal stabilization by bringing the victim's head and neck into



a neutral in-line position.

- Have someone at the scene hold the victim's head so that the nose is in line with the navel (belly button) and the neck is not bent forward or backward.
- Instruct the victim not to move his or her head or neck.

Suspect spinal injury if the victim

- Has a head or neck injury
- Is involved in any type of crash
- Falls from a height greater than their own height
- Complains of pain to the neck or back
- Complains of tingling, numbness, or unusual sensation in the extremities

Take precautions for spine injury when there is a mechanism of injury and the victim:

- Appears to be intoxicated
- Has an altered mental status
- Is older than sixty-five years of age

# ABCDs

- Breathing: a person who is responsive and talking with ease is breathing adequately
- Two measures determine breathing adequacy
  - Rate: must not be too slow or too fast (Rates below 8 to 10 and above 40 usually don't bring enough air into the lungs to support life.)
  - Depth: Victim must breath deeply enough to move air to all parts of the lungs. (Adequate breathing is that which moves the chest cavity significantly when you observe or feel for movement).
- If the victim is not breathing spontaneously or not breathing adequately and has a pulse, begin artificial breathing immediately; continue until the victim is breathing spontaneously or until you are relieved by trained emergency personnel

# Assessing Respiration

## ASSESSING RESPIRATION

Observe the person for 10 to 15 seconds. If the person is breathing, keep the airway open and check for pulses. Absence of respiration calls for rescue breathing.

**LOOK** for chest movement.  
**LISTEN** for sounds of air movement.  
**FEEL** For any exhalation of warm air on your cheek.





# Signs of Respiratory Distress

## SIGNS AND SYMPTOMS OF RESPIRATORY DISTRESS

Wheezing, coughing, gurgling,  
high-pitched shrills, or  
other unusual noises

Dizziness, fainting, restlessness,  
anxiety, confusion, combativeness

Unable to speak in full  
sentences without  
catching breath

Bluish coloring

Flaring nostrils



Straining abdominal  
muscles

- Circulation

- Check the radial pulse; pulses that are weak, too fast, or too slow, are of concern.
- Check the carotid pulse if the victim is unresponsive or you can't find the radial pulse.
- If the victim is breathing and has a pulse, continue by checking for serious or profuse bleeding. Inspect for pools of blood or bloodsoaked clothing.



- If you find major bleeding control it via direct pressure. Spurting blood or flowing hemorrhage is the only type of bleeding that should be treated during this stage.
- Spurting or steady flow bleeding is the only kind of bleeding that should be treated during the primary survey.
- Note the victim's skin color, temperature, and condition. Skin that is moist, cool, and pale may indicate shock. This is a serious condition. Cyanosis (bluish color) is a sign of hypoxia and is also serious.

- Remember that victims who are lifeless and without adequate breathing should receive compressions immediately.

- Disability: Injuries to the brain generally result in an altered mental status or unresponsiveness, which usually indicates decreased oxygen to the brain or brain injury.
- There are four general levels of consciousness that can determine a victim's mental disorientation or disability
  - Alertness (victim's eyes are open)
  - Responsiveness to verbal stimuli
  - Responsiveness to pain (grimaces, or jerks away when pinched).
  - Unresponsiveness

- If the victim has an altered mental status and adequate breathing, he or she should be placed in a lateral recumbent position to protect the airway.



Right Lateral Recumbent



Left Lateral Recumbent

- If a spine injury is suspected, keep the victim in a supine position, maintaining the head and neck in a neutral inline position.

# Conducting the Neuro Exam

- A *neuro* (neurologic) exam checks
  - Mental status
  - Motor function (e.g., voluntary movement)
  - Sensory function (what the victim can feel)

# Conducting the Neuro Exam

- Talk to the victim. Can he answer the question “What time is it?” If the victim is a child, observe their voluntary movements and interest in surroundings.
- Monitor the victim’s speech for vagueness, slurring, or garbled words.



# Conducting the Neuro Exam

- If the victim can't speak, determine whether he can understand simple commands.
- If the victim has an altered mental status, determine how easily he can be aroused with a small pain stimulus (such as a pinch on the wrist).



Test whether the victim can understand you by stating, "Squeeze my hand," and waiting for a response.

# Chief Complaint and Vital Signs

- The answer to the question “Tell me where you hurt” is the chief complaint. Most chief complaints are characterized by pain or abnormal structure or function and can be pinpointed using observations made by the victim.
- Even if injury is obvious, it’s important to ask.



- Vital signs (pulse, respiration, relative skin temperature) should be taken repeatedly at five-minute intervals.
- Changes in vital signs reflect both changes in the victim's condition and the effectiveness of your first aid care.
- Use your senses—sight, hearing, and touch—to determine pulse, respiration, and the temperature and color of the victim's skin.
- Inspect the victim for medical devices such as Medic Alert tags or bracelets. These are often worn by people with hidden medical conditions.

# Pulse

- The pulse is the pressure wave generated when the heart beats; it reflects the rhythm, rate, and relative strength of the heart.
- take the pulse at any point where an artery crosses over a bone or lies near the skin, but the best place in a conscious victim is at the wrist.
- If the victim is unconscious, take the pulse at the carotid artery (in the groove of the neck).

When you take the pulse, note its:

- Rate: Normal heart rate range is 60 to 100 beats per minute for an adult, 80 to 150 for a child, and 120 to 160 for a newborn.
- Strength: A normal pulse is full and strong.
- Rhythm: A normal pulse is regular.

# Respiration (Breathing)

- One respiration consists of one inhalation and one exhalation. Normal respirations are easy and spontaneous, without pain or effort.
- The normal range is 12 to 20 breaths per minute for an adult, 15 to 30 for a child, and 30 to 50 for a newborn.

- Place your hand on the victim's chest, and feel for chest movement.
- Do not tell the victim you are assessing the respirations because this may alter the rate.
- The chest should move up with each breath.



Cardinal signs of respiratory distress include:

- flaring of the nostrils;
- use of accessory muscles in the neck, chest, and abdomen;
- fast breathing;
- increased heart rate;
- pale and cool skin;
- sweating;
- and decreasing mental status.



# Temperature and Skin Color

- Assess relative skin temperature by placing the back of your hand against the skin of the victim's forehead, neck, or abdomen.



- Normal skin is fairly dry, as well as normal in temperature.
- Hot skin temperature can be caused by fever, heat stroke, or a hot environment.
- Low skin temperature can be caused by shock, spinal injury, heat exhaustion, or exposure to cold.

Skin color can tell you a lot about a victim:

- Paleness (white tone) may be caused by shock, poor circulation, or heart attack.
- Redness may be caused by high blood pressure, spinal cord injury, alcohol abuse, sunburn, heat stroke, fever, or infectious disease.
- Blueness (cyanosis) may be caused by suffocation, lack of oxygen, heart attack, or poisoning. (fingertips and around the mouth).

- Capillary refill is one method of checking circulation.
- This procedure is performed by squeezing one of the victim's fingernails or toenails.
- When the nail is squeezed, the tissue under the nail turns white. When the pressure is released, color returns to the tissue.
- By measuring the time it takes for color to return under the nail, you are obtaining capillary refill.

- Two seconds or less is considered within normal limits for infants, children, and adult males. Females have an upper limit for normal refill of less than three seconds, and the upper limit for geriatrics (aged sixty-five years or older) is four seconds.
- If refill time is delayed, suspect shock or decreased blood flow to that extremity.
- Measure capillary refill time by counting “One one thousand, two one thousand,” and so on.

# Looking for Medical Information Devices

- While taking vital signs, inspect for medical identification devices, such as a Medic Alert tag, necklace, or bracelet.



- These medical information devices list the victim's medical problem and/or medications and an emergency twenty-four-hour number
- you can call for more information.
- Medical identification tags are often worn by people with hidden medical conditions, such as heart problems, diabetes, epilepsy, or allergies or by those on special medications such as Coumadin, a drug that lengthens the time for blood clotting.

# Taking a History

- Assess the scene; note the placement of the victim or objects for clues.
- Ask questions, preferably open-ended ones unless the situation is urgent.
- If the victim is unresponsive, confused, or a child, talk to family, friends, or others accompanying the victim.



# Taking a SAMPLE History

- **S** = *Signs and symptoms* the victim complains of
- **A** = What is the victim *allergic* to?
- **M** = What *medications* does the victim take?
- **P** = What is the victim's *pertinent past* medical history?
- **L** = When was the *last* time the victim had something to eat or drink?
- **E** = What were the *events* prior to the incident?

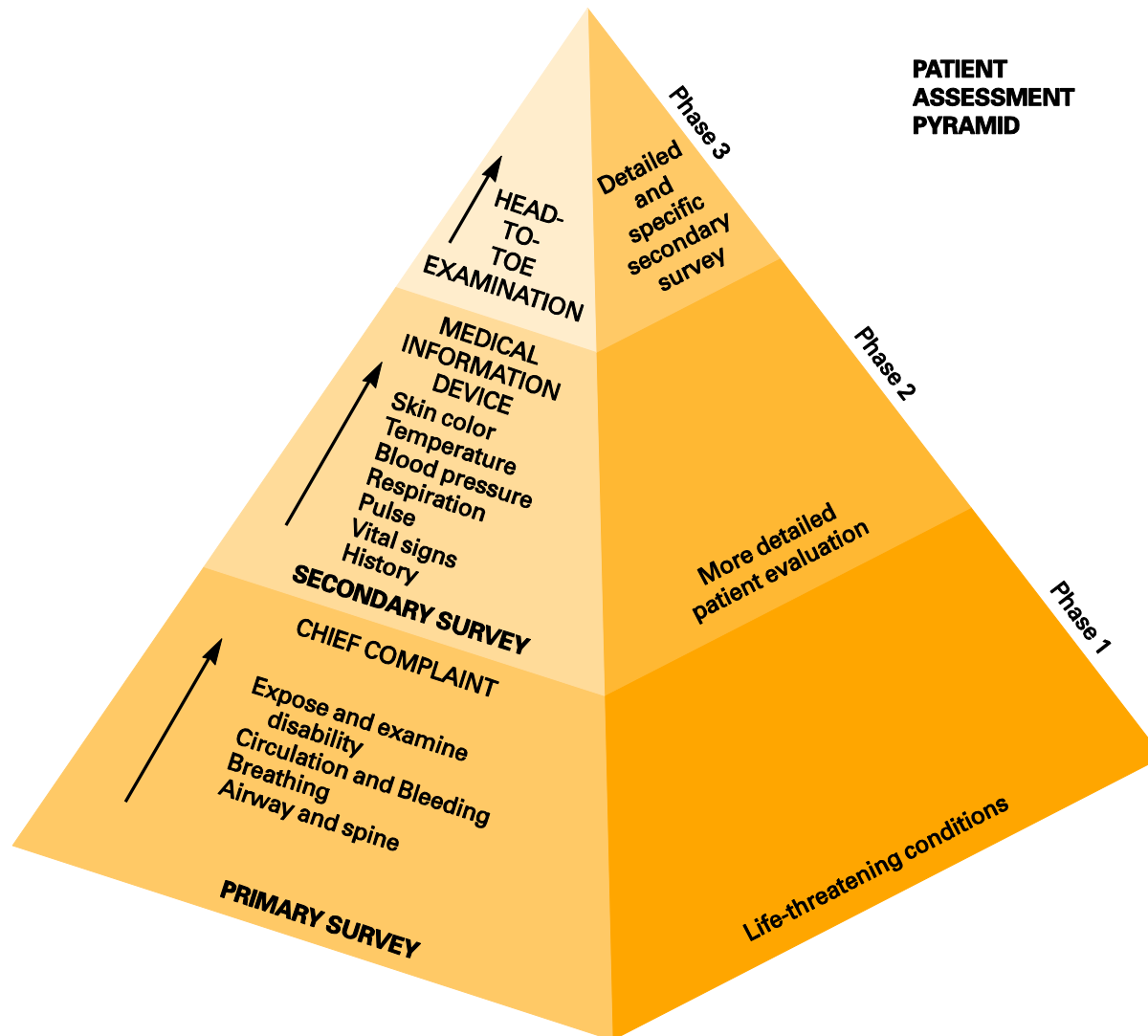
# Conducting the Secondary Survey

- The secondary survey is a closer look at the victim once life-threatening conditions are controlled and vital signs are recorded.
- Conduct a full-body inspection of the victim. Use your senses to collect additional information.
- Explain your actions. Speak calmly. Keep the victim's head and neck aligned.

# Conducting the Secondary Survey

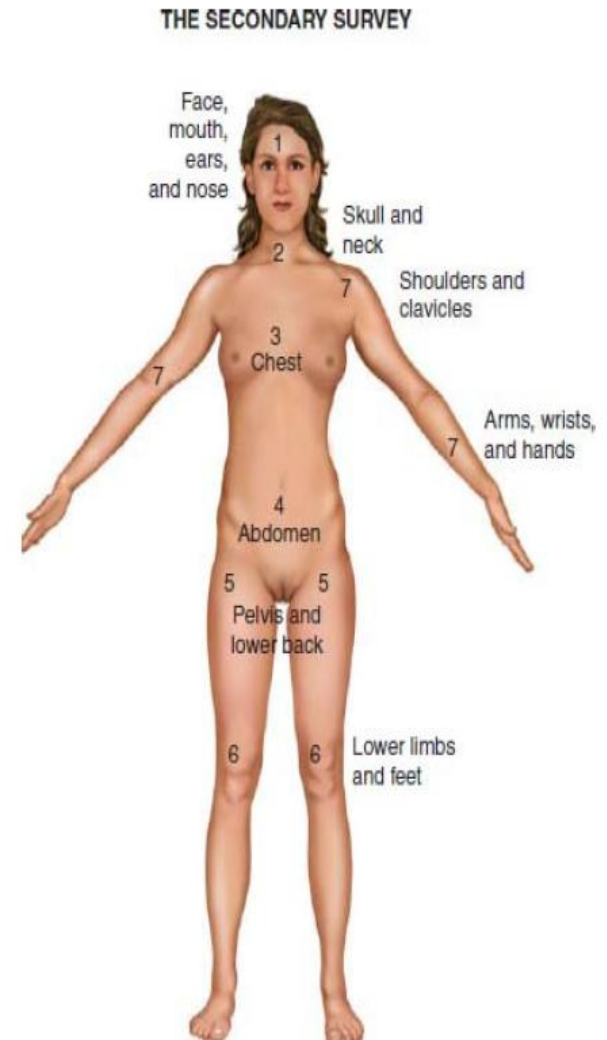
- *Look* for deformities, wounds, bleeding, discoloration, penetrations, neck openings, unusual chest movement.
- *Listen* for unusual breathings, sounds, or sensations.
- *Feel* for unusual masses, swelling, hardness, stiffness, muscle spasms, pulsations, tenderness, temperature.
- *Smell* for unusual odors on the victim's breath, body, or clothes.

# Primary and Secondary Surveys



# Conducting the Secondary Survey

- Inspect the following
  - Face
  - Mouth
  - Ears
  - Nose
  - Skull and neck
  - Chest
  - Abdomen
  - Pelvic region
  - Back
  - Lower and upper extremities



# Summary

- To begin victim assessment, establish rapport and obtain the victim's consent, if possible.
- During the primary survey, check for life-threatening injuries involving the airway, breathing, and circulation.
- During the primary survey, only control bleeding that is spurting or is a steady flow hemorrhage.

# Summary

- In the brief neuro exam check for mental status, motor function, and sensory function.
- The chief complaint (the answer to the question “where does it hurt?”) points to the most likely area of injury.
- Use your senses (look, listen, feel, smell) to assess vital signs, including pulse, respiration, temperature, and skin color.

# Summary

- When taking a history, use open-ended questions unless the circumstances are urgent. Remember to use the SAMPLE approach.
- The secondary survey is a full-body assessment to check for less obvious injuries and medical problems.