Chapter 5
Baseline Vital Signs and SAMPLE History

Overview

- Baseline Vital Signs
  - Breathing
  - Skin
  - Pupils
  - Blood Pressure
  - Vital Sign Reassessment

- SAMPLE History
The process of comparing sets of vital signs or other assessment information over time

*A single set of vital signs does not provide as much information as does a trend in the patient’s vital signs.*

Vital Signs
- Breathing
- Skin
- Pupils
- Blood pressure

Breathing
- Assess both rate and quality
Breathing

- Rate
  - Determined by counting the number of breaths in a 30-second period and multiplying by 2


care should be taken not to inform the patient—this may cause them to influence the rate

Breathing

- Quality
  - Can be determined while assessing the rate
    - Normal
      - Average chest wall motion, not using accessory muscles
    - Shallow
      - Slight chest or abdominal wall motion
    - Labored
      - An increase in the effort of breathing
        - Often characterized by the use of accessory muscles
    - Noisy
      - An increase in the audible sound of breathing

Labored Breathing

- Accessory muscles may be used during labored breathing

  - Neck muscles
  - Chest muscles
  - Intercostal muscles
  - Abdominal muscles
Labored Breathing
- Retractions may indicate labored breathing

Breathing
- Abnormal respiratory sounds
  - Grunting
  - Stridor
  - Snoring
  - Wheezing
  - Gurgling
  - Crowing

Pulse
- Pulse points
Assess for rate and quality

Rate
- Rate is the number of beats felt in 30 seconds multiplied by 2
- Quality
  - Strong
  - Weak
  - Regular
  - Irregular

If peripheral pulse is not palpable, assess carotid pulse

Assess the brachial pulse in infants
Skin

- Assess color, temperature, and condition
- In patients younger than 6 years of age, capillary refill should be evaluated

Skin

- Color
  - Assessed in the nail beds, oral mucosa, and conjunctiva
  - In infants and children, use the palms of hands and soles of feet

Skin

- Color findings
  - Normal
    - Pink
    - Normal perfusion
  - Abnormal
    - Pale
      - Poor perfusion (impaired blood flow)
    - Cyanotic (blue-gray)
      - Inadequate oxygenation or poor perfusion
    - Flushed (red)
      - Exposure to heat or carbon monoxide poisoning
    - Jaundice (yellow)
      - Liver abnormalities
Skin

- Temperature
  - Assessed by placing the back of your hand on the patient’s skin
  - When the EMT wears gloves, it may be necessary to pull the back of the glove down to assess skin temperature and condition.

Skin

- Temperature findings
  - Normal skin
    - Warm
  - Abnormal skin temperatures
    - Hot
      - Fever or an exposure to heat
    - Cool
      - Poor perfusion or exposure to cold
    - Cold
      - Extreme exposure to cold

Skin

- Condition
  - Normal
    - Dry
  - Abnormal
    - Wet
    - Moist
    - Dry
Capillary Refill

- Assess capillary refill in infants and children younger than 6 years of age
- Press on the patient’s skin or nail beds and determine time for return to initial color
- Normal capillary refill in infants and children is < 2 seconds
- Abnormal capillary refill in infants and children is > 2 seconds

_Capillary refill cannot be accurately assessed under extreme temperature conditions._

Pupils

- Pupils are assessed by briefly shining a light into the patient’s eyes and determining size and reactivity

Pupils

- Assessment findings
  - Size
    - Dilated (very big)
    - Normal
    - Constricted (small)
    - Equal or unequal
  - Reactivity
    - Reactive—change when exposed to light
    - Nonreactive—do not change when exposed to light
    - Equally or unequally reactive
Pupils

- Constricted pupils

Pupils

- Dilated pupils

Pupils

- Unequal pupils
Blood Pressure

- Assess systolic and diastolic pressures
  - Systolic blood pressure is the first distinct sound of blood flowing through the artery as the pressure in the blood pressure cuff is released
  - Diastolic blood pressure is the point during deflation of the blood pressure cuff at which sounds of the pulse beat disappear

You might not have time to measure the blood pressure until the patient is en route to the hospital.

Blood Pressure

- Two methods of obtaining blood pressure
  - Auscultation
    - Listen for the systolic and diastolic sounds
  - Palpation
    - Measured by feeling for return of pulse with deflation of the cuff
Blood pressure should be measured in all patients older than 3 years of age.

Video Clip: Measuring Blood Pressure by Auscultation

Video Clip: Palpation of Blood Pressure
The general assessment of the infant or child patient, such as sick-appearing, in respiratory distress, or unresponsive, is more valuable than vital sign numbers.

Vital Sign Reassessment

- Vital signs should be assessed and recorded every 15 minutes (at a minimum) in a stable patient
- Vital signs should be assessed and recorded every 5 minutes in the unstable patient
- Vital signs should be assessed following all medical interventions

SAMPLE History

- S Signs and Symptoms
- A Allergies
- M Medications
- P Past medical history
- L Last oral intake
- E Events leading to injury or illness
Signs/Symptoms

- **Sign**
  - Any condition, medical or trauma, that can be seen and identified by the EMT

  *Bleeding, noisy breathing, and deformities are examples of signs.*

- **Symptom**
  - Any condition described by the patient that cannot be seen by the EMT

  *Chest pain, nausea, and shortness of breath are examples of symptoms.*

Allergies

- Medications
- Food
- Environmental allergies
- Consider medical identification tag
Medications

- Prescription
  - Current
  - Recent
- Birth control pills
- Nonprescription
  - Current
  - Recent
  - Consider medical identification tag

Be careful not to phrase this as “Do you take any drugs?” or “What drugs do you currently take?” The word “drug” has different meanings for different patients.

Pertinent Past History

- Medical
- Surgical
- Trauma
- Consider medical identification tag

Last Oral Intake

- Solid or liquid
- Time
- Quantity
Events Leading to Injury or Illness

- Chest pain with exertion
- Chest pain while at rest

Summary

- Baseline Vital Signs
  - Breathing
  - Skin
  - Pupils
  - Blood Pressure
  - Vital Sign Reassessment
- SAMPLE History