

**DIVERSIFIED
HEALTH
OCCUPATIONS**

Seventh Edition



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Chapter 15

Vital Signs

15:1 Measuring and Recording Vital Signs (VS)

- Record information about the basic body conditions
- Main vital signs (VS)
 - Temperature
 - Pulse
 - Respiration
 - Blood pressure

Other Assessments

- Pain—patients asked to rate on scale of 1 to 10 (1 is minimal and 10 is severe)
- Color of skin
- Size of pupils and reaction to light
- Level of consciousness
- Response to stimuli

VS Readings

- Accuracy is essential
- Report abnormality or change
- If unable to get reading, ask another person to check

15:2 Measuring and Recording Temperature

- Measures balance between heat lost and heat produced in the body
- Heat produced by metabolism of food and by muscle and gland activity
- Homeostasis: constant state of balance in the body
- Conversion between Fahrenheit and Celsius temperature

Variations in Body Temperature

- Normal range
- Causes of variations
- Temperature measurements—oral, rectal (often used on infants/children), axillary or groin, aural, and temporal
- Abnormal conditions affecting temperature

Thermometers

- Clinical thermometers
 - Glass
 - Electronic
 - Tympanic
 - Temporal
 - Plastic or paper
- Reading thermometers and recording results

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Thermometers

(continued)

- Avoid factors that could alter or change temperature
- Cleaning thermometers
- Paper/plastic sheath on glass thermometer

15:3 Measuring and Recording Pulse

- Pressure of the blood pushing against the wall of an artery as the heart beats and rests
- Major arterial or pulse sites
- Pulse rate
- Pulse rhythm
- Pulse volume

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Measuring and Recording Pulse

(continued)

- Factors that change pulse rate
- Basic principles for taking radial pulse
- Recording information

15:4 Measuring and Recording Respirations

- Measures the breathing of a patient
- Process of taking in oxygen and expelling carbon dioxide from the lungs and respiratory tract
- One respiration: one inspiration (breathing in) and one expiration (breathing out)

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Measuring and Recording Respirations

(continued)

- Normal respiratory rate
- Character of respirations
- Rhythm of respirations
- Abnormal respirations
- Voluntary control of respirations
- Record information

15:5 Graphing TPR

- Graphic sheets are special records used for recording TPR
- Presents a visual diagram
- Uses
- Color codes
- Factors affecting VS are often noted on the graph

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Graphing TPR

(continued)

- Graphic charts are legal records
- To correct an error
- Basic principles for completing

15:6 Measuring and Recording Apical Pulse

- Pulse count taken at the apex of the heart with a stethoscope
- Reasons for taking an apical pulse
- Protect the patient's privacy and avoid exposure
- Heart sounds
- Abnormal sounds or beats

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Measuring and Recording Apical Pulse *(continued)*

- Pulse deficit
- Use the stethoscope
- Placement of stethoscope
- Measuring apical pulse
- Record all information

15:7 Measuring and Recording Blood Pressure

- Measurement of the pressure the blood exerts on the walls of the arteries during the various stages of heart activity
- Measured in millimeters of mercury on a sphygmomanometer
- Measurements read at two points

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Measuring and Recording Blood Pressure

(continued)

- Systolic pressure
- Diastolic pressure
- Pulse pressure
- Hypertension—high blood pressure
- Hypotension—low blood pressure
- Factors influencing blood pressure readings (high or low)

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Measuring and Recording Blood Pressure

(continued)

- Individual factors can all influence blood pressure readings
- Types of sphygmomanometers
 - Mercury
 - Aneroid
 - Electronic

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Measuring and Recording Blood Pressure

(continued)

- Factors to follow for accurate readings
- Record all required information
- Do not discuss the reading with the patient; it's the doctor's responsibility

Summary

- Vital signs are major indicators of body function
- Accuracy of measurement and recording of vital signs
- The health care worker needs to be alert and report any abnormalities