UNIT 18

Body Temperature

PROCEDURE

MEASURING AN ORAL TEMPERATURE (GLASS THERMOMETER)

Note: The guidelines for this procedure vary slightly from state to state, and from one facility to the next. Your instructor will inform you if the sequence in your state or facility differs from the procedure listed here. Know and follow the required sequence for your facility and state.

1. Carry out initial procedure actions.
2. Assemble equipment on a tray:
   - Gloves (standard precautions)
   - Container with clean thermometers
   - Container for used thermometers
   - Cotton balls
   - Container for soiled tissues
   - Container with tissues
   - Pad and pencil
   - Watch with second hand
3. Have the patient rest in a comfortable position in a bed or chair. Put on gloves.
4. Remove the thermometer from the container by holding the stem end. Rinse the thermometer with cold water and wipe with tissue from stem to bulb end if the thermometer has been in disinfectant. Check to be sure the thermometer is intact. Read the center column. It should register below 96°F. If necessary, shake it down. (To shake down (Figure A), move away from tables and other hard objects. Grasp the stem tightly between your thumb and fingers. Shake down with a downward motion.) If used in your facility, place the thermometer in a disposable plastic cover sheath.
5. Ask the patient if he or she has had anything to eat or drink or has smoked within the last 15 minutes. Wait 15 minutes before taking an oral temperature if the answer is yes.
6. Insert the bulb end of the thermometer under the patient's tongue, toward the side of the mouth (Figure B). Tell the patient to hold the thermometer gently with lips closed for 3 minutes.

continues
7. Remove the thermometer, holding it by the stem. Wipe from stem end toward bulb end.
8. Discard tissue in the proper container.
9. Read the thermometer and record the temperature on a pad (Figure C).
10. Place the thermometer in the container for used thermometers. If the thermometer is to be reused for this patient:
    ● Wash it twice in cold water and soap with two separate cotton balls, wiping from stem to bulb.
    ● Rinse and dry it.
    ● Return it to the individual disinfectant-filled holder.
    ● Remove gloves and discard according to facility policy.
11. Carry out ending procedure actions.
12. Report any unusual variations to the nurse at once.

Cleaning Glass Thermometers

Glass thermometers are reusable. Therefore, they must be cleaned and disinfected between uses. If each patient has an individual thermometer kept in solution at the bedside, you must clean and disinfect it after each use. If a general supply of thermometers is used to determine routine temperature, they too must be disinfected before reuse.

Each used thermometer must be carefully washed with soapy, cold, running water to remove saliva or other body secretions. It must be rinsed to remove the soap and then carefully dried before disinfecting.

Remember that glass breaks very easily, so be careful when washing and drying thermometers. Check each one for chips before putting it into disinfectant and before using a thermometer with a patient.
MEASURING A RECTAL TEMPERATURE (GLASS THERMOMETER)

**Note:** The guidelines for this procedure vary slightly from state to state, and from one facility to the next. Your instructor will inform you if the sequence in your state or facility differs from the procedure listed here. Know and follow the required sequence for your facility and state.

1. Carry out initial procedure actions.
2. Assemble equipment on a tray:
   - Container with clean rectal thermometer
   - Container for used thermometers
   - Container for soiled tissues
   - Lubricant
   - Container with tissues
   - Pad and pencil
   - Watch with second hand
   - Gloves (standard precautions)
3. Put up opposite side rail. Lower backrest of bed. Ask the patient to turn to the left side, if possible. Assist the patient if necessary.
4. Place a small amount of lubricant on a tissue.
5. Put gloves on. Remove the thermometer from the container by holding the stem end. Read the liquid column. Be sure it registers below 96ºF. Check the condition of the thermometer.
6. Apply a small amount of lubricant to the bulb with a tissue, or cover the thermometer with a pre-lubricated sheath.
7. Fold the top bedclothes back to expose the patient's anal area.
8. (Refer to figure.) Separate the buttocks with one hand. Insert the thermometer gently into the rectum 1 1/2 inches. Hold in place. Adjust the bedclothes for privacy as soon as the thermometer is inserted.
9. The thermometer should remain inserted for 3 minutes, or according to facility policy. Hold the thermometer in place for the full time.
10. Remove the thermometer, holding it by the stem. Wipe from stem toward bulb end, or remove and discard sheath.
11. Discard tissue in the proper container.
12. Read the thermometer. Record the reading on a pad.
13. Wipe the lubricant from the patient. Discard tissue.
14. Place the thermometer in the container for used thermometers. If the thermometer is to be reused for this patient:
   a. Wash it in cold water and soap.
   b. Rinse and dry it.
   c. Return it to the individual disinfectant-filled holder.
15. Remove gloves and discard according to facility policy.
16. Lower the opposite side rail.
17. Carry out ending procedure actions.

**Note:** Remember, when a rectal temperature is recorded, you must add (R) after the reading.

**ALERT**
Always hold the rectal thermometer in place. Never leave the patient unattended during the rectal temperature procedure.
MEASURING AN AXILLARY OR GROIN TEMPERATURE (GLASS THERMOMETER)

1. Carry out initial procedure actions.

2. Assemble equipment on a tray:
   - Gloves (standard precautions)
   - Container with clean oral thermometers
   - Container for used thermometers
   - Container for soiled tissues
   - Container with tissues
   - Disposable sheath, if used
   - Pad and pencil
   - Watch with a second hand

3. Shake the thermometer down to below 96°F. Cover the thermometer with a disposable sheath, if used.

4. Wipe the area dry and place the thermometer. Put on gloves if the groin area is used for temperature measurement.
   a. The patient's arm is held close to the body if an axillary site is used (refer to figures).
   b. The thermometer must be in the fold against the body if the groin site is used.
   c. Hold the thermometer in place for 10 minutes.
   d. Remove, wipe (or discard sheath, if used), and read the thermometer. Note the reading on a pad.
   e. Shake the thermometer down.
   f. Clean and replace as with an oral thermometer if the thermometer is to be reused.

5. If the groin area was used, remove gloves and discard according to facility policy.

6. Carry out ending procedure actions.

Safety ALERT

Remember that the axillary method of taking a temperature is the least accurate method. Use it only when other methods are impractical or unavailable. Hold the glass thermometer in place for a full 10 minutes. Do not leave the bedside during this procedure.
The formulas for making conversions are listed in the following table.

<table>
<thead>
<tr>
<th>To Convert</th>
<th>To</th>
<th>Multiply by</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degrees Fahrenheit</td>
<td>Degrees Celsius</td>
<td>5/9 (after subtracting 32)</td>
</tr>
<tr>
<td>Degrees Celsius</td>
<td>Degrees Fahrenheit</td>
<td>9/5 (then add 32)</td>
</tr>
</tbody>
</table>

### EXPLORING THE WEB

**Description**

- Alaris Medical—Facts about Tympanic Thermometers and Cross-Contamination
- Best Practice—Vital Signs
- Body temperature
- Braun—Measurement Methods (Methods of Temperature Measurement)
- Consumption Advice—Mercury and Fish Advisories—U.S. EPA
  - [http://www.epa.gov/waterscience/fish/advisory.html](http://www.epa.gov/waterscience/fish/advisory.html)
- Environmental and safety products lists (mercury)
  - [http://www.premierinc.com/all/safety/resources/lists/index.jsp](http://www.premierinc.com/all/safety/resources/lists/index.jsp)
- Health Care without Harm
  - [http://www.mercuryfreehealthcare.org/](http://www.mercuryfreehealthcare.org/)
- The Issue—Mercury
- Mercury-Free at NIH
- Mercury pollution prevention
- Mercury Thermometers and Your Family’s Health
  - [http://www.noharm.org/library/docs/Mercury_Thermometers_and_Your_Familys_Health.htm](http://www.noharm.org/library/docs/Mercury_Thermometers_and_Your_Familys_Health.htm)
- Nurse Aide Skill: Temperature, Pulse, and Respiration
6 UNIT 18 Body Temperature

<table>
<thead>
<tr>
<th>Resource</th>
<th>URL</th>
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<tr>
<td>Sustainable Hospitals</td>
<td><a href="http://www.sustainablehospitals.org/cgi-bin/D8_Index.cgi">http://www.sustainablehospitals.org/cgi-bin/D8_Index.cgi</a></td>
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<tr>
<td>Temperature Regulation of the Human Body</td>
<td><a href="http://hyperphysics.phy-astr.gsu.edu/hbase/thermo/heatreg.html">http://hyperphysics.phy-astr.gsu.edu/hbase/thermo/heatreg.html</a></td>
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<tr>
<td>US Environmental Protection Agency—Mercury</td>
<td><a href="http://www.epa.gov/mercury/index.htm">http://www.epa.gov/mercury/index.htm</a></td>
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<tr>
<td>Information and Resources</td>
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<td>Wong on Web Sites of Temperature</td>
<td><a href="http://www.us.elsevierhealth.com/WOW/op019.html">http://www.us.elsevierhealth.com/WOW/op019.html</a></td>
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