มหาวิทยาลัยราชภัฏนครปฐม

Child and Adolescent Nursing Practicum

Topic 9

Fever & Tepid Sponge

By

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Objectives of learning

The topic aims to develop in students an understanding of, and an ability to provide nursing care to children with fever.

Background

Feverish illness in children:

- It is the most common reason for children to be taken to the doctor
- It is a cause of concern for parents
- Fever occurs in response to infection, injury, or inflammation and has many causes.
- It can be a result of a simple self-limiting infection or a life-threatening disorder.

DEFINITION OF FEVER

• Fever is an elevation of body temperature that exceeds the normal daily variation, in conjunction with an increase in hypothalamic set point.

- **Rectal temperature > 38.0°C (100.4°F)**
- **Oral temperature > 37.5°C (99.5°F)**
- **Axillary (armpit) temperature > 37.2°C (99.0°F)**
  (Note: not reliable in child < 6 months old
- **Ear (tympanic) temperature > 38.0°C (100.4°F)**
- **Temporal artery (TA) temperature > 38.0°C(100.4°F)**

Verywell / Kelly Miller

AAP's Thermometer Recommendations by Age

AAP's Thermometer Recommendations by Age			
Type	**Location**	**Age**	**Reliability**
Digital multiuse	Rectal	Birth to 3 years	High
Digital multiuse	Oral*	4 years+	High
Digital multiuse	Axillary	Any	Low; most appropriate for general screening
Temporal	Side of the forehead	3 months+	Moderate
Tympanic	Ear	6 months+	Moderate

**Discard old rectal thermometer and buy a new one for oral use.*

https://www.verywellhealth.com/how-to-use-a-thermometer-to-check-for-fever-770610#oral-thermometer-use

Oral Thermometer Use

Oral thermometers are not the best option for young children, who may not be able to keep their mouths closed long enough to get a good reading.

To use an oral thermometer:

1. Wash your hands before handling the thermometer.
2. Place it under the tongue.
3. Make sure the mouth stays closed the entire time.
4. Wait approximately five minutes (manual thermometer) or for the beep (digital thermometer).

Axillary Thermometer Use

While this is the least accurate way to get a child's temperature, it's often used in schools and daycare to avoid spreading germs.

To use an axillary thermometer:

1. Place the thermometer under the arm with the tip in the deepest crease of the armpit.
2. Wait approximately 5-7 minutes (manual thermometer) or for the beep (digital thermometer).

Rectal Thermometer Use

Rectal thermometers are specifically designed with short tips that allow them to get a proper reading without going too far into the body. This method should be used for infants or those whose temperature cannot be taken any other way.

To use a rectal thermometer:

1. Use lubrication, such as petroleum jelly, to ease insertion.
2. Place the thermometer's tip in the rectum.
3. Wait approximately five minutes (manual thermometer) or for the beep (digital thermometer).

Rectal Thermometer Use

- Cleaning Your Thermometer
- Wash your thermometer before and after use with **cold water**, then **rubbing alcohol**. **Rinse thoroughly** to remove the alcohol.

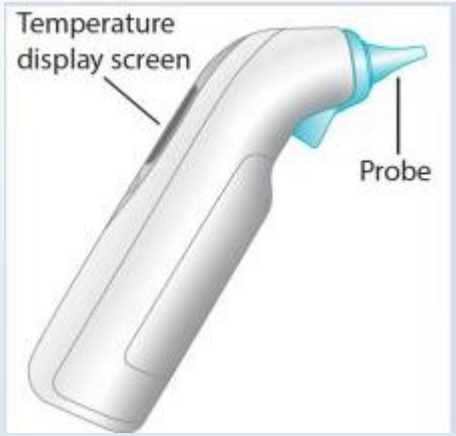
Tympanic Thermometer Use

These in-the-ear thermometers are very popular, especially among parents of small children, since they're faster than regular digital thermometers and are easy to use. However, tympanic thermometers can be difficult to use on babies and are often inaccurate because their ear canals are so small.

To use a tympanic thermometer:

1. Pull the top of earlobe up and back
2. Place the tip of the thermometer (covered with probe cover) in the ear-canal opening. (Be sure you are pointing the probe into the ear canal opening and not at the wall of the ear.)
3. Press the button until it beeps.

Make sure excess earwax isn't built up before using this method, as it can cause less accurate results.



Use the following definitions to help put your child's level of fever into perspective

37.8° - 39°C Low grade fevers: beneficial, desirable range

39.0° - 40°C Mild fever: still beneficial

> 40°C Moderate fever: causes discomfort, but harmless

> 40.6°C High fever: higher risk of bacterial infections

> Over 41.1°C Very high fever: important to bring it down

> 42.3°C Dangerous fever: fever itself can harm brain

Cause of Fever

- Colds and viral infections : The onset of symptoms (runny nose, cough, diarrhea, etc.) are often delayed.
- Roseola infantum : Fever may be the only symptom for 2 or 3 days.
- The cause of the fever often can't be determined during the first 24 hours

APPROACH TO FEVER

- Personal History
- Underlying Diseases:
  - Splenectomy
  - Surgical Implantation of Prosthesis
  - Immunodeficiency
  - Chronic Diseases: Chronic Heart Diseases • Chronic Lung Diseases

APPROACH TO FEVER

- Drug History: Antipyretics, Immunosuppressants, Antibiotics
- Family History: TB in the Family, Recent Infection in the Family
- Associated Symptoms: Shaking chills, Ear pain, Ear drainage, Hearing loss, Visual and Eye Symptoms, Sore Throat, Chest and Pulmonary Symptoms, Abdominal Symptoms, Back pain, Joint or Skeletal pain

Clinical assessment of the child with fever

- Check for any immediately life-threatening features.
- Use traffic light system to check for symptoms and signs that predict the risk of serious illness.
- Look for a source of fever and check symptoms and signs associated with specific diseases.
- Measure and record temperature, heart rate, respiratory rate, capillary refill time and assess for dehydration.

The Traffic Light System

Tool for identifying the likelihood of serious illness

Children with only symptoms and signs in the '**green**' column are at **low risk**

Children with one or more symptom or sign in the '**amber**' column are at **intermediate risk**

Children with one or more symptom or sign in the '**red**' column are at **high risk**

Traffic light system:

Colour	Normal colour of skin, lips and tongue
Activity	Responds normally to social cues Content/smiles Stays awake or awakens quickly Strong/normal cry/not crying
Hydration	Normal skin and eyes Moist mucous membranes
Other	None of the amber or red symptoms or signs

Traffic light system:

Colour	Pallor reported by parent/carer
Activity	Not responding normally to social cues Wakes only with prolonged stimulation Decreased activity No smile
Respiratory	Nasal flaring Tachypnoea: RR> 50/min age 6-12 months, RR> 40/min age >12 months Oxygen saturation ≤ 95% in air Crackles
Hydration	Dry mucous membranes Poor feeding in infants CRT ≥3 seconds Reduced urine output
Other	Fever for ≥5 days Swelling of a limb or joint Non-weight bearing/not using an extremity A new lump >2cm

Traffic light system:

Colour	Pale/mottled/ashen/blue
Activity	No response to social cues Appears ill to a healthcare professional Unable to rouse or if roused does not stay awake Weak/high pitched/continuous cry
Respiratory	Grunting Tachypnoea: RR>60 /min Moderate or severe chest indrawing
Hydration	Reduced skin turgor
Other	Age 0-3 months, temperature ≥38°C Age 3-6 months, temperature ≥39°C Non blanching rash Neck stiffness Focal neurological signs Bile-stained vomiting Bulging fontanelle Status epilepticus Focal seizures

General Nursing Care to Treat Fever

- Drinking plenty of clear fluids to replace fluids lost by sweating, vomiting or diarrhea – either water, or an oral rehydration solution which contains electrolytes.
- Changing clothing and bed linen frequently.
- Tepid sponge (but don't use cold water, as this can increase core body temperature by cooling the skin and causing shivering).
- Keeping clothes and blankets to a minimum.
- Avoiding hot water bottles or electric blankets (which may raise body temperature further).
- Ventilating the room.

Emergency Care & Disposition

1. Removing excessive clothing and blankets: radiation
2. Acetaminophen10 to 15 mg/kg q 4 hrs (5 dose in 24 hrs)
3. Ibuprofen 5 to 10 mg/kg q 6 hrs (40 mg/kg in 24 hrs)
4. Antibiotic Rx : amoxicillin 40-50 mg/kg twice daily
5. Full septic workup : CBC, blood culture, lumbar puncture, urine culture, chest x-ray

Drugs to lower fever

- Fever Medicine Give acetaminophen or ibuprofen for fevers above 39°C, if your child is uncomfortable.
- The goal of fever therapy is to bring the temperature down to a comfortable level.
- Remember, the fever medicine usually lowers the fever by 1 to 2°C.
- Avoid aspirin. (Reason: risk of Reye's syndrome, a rare but severe brain disease)

Drugs to lower fever

- Acetaminophen is generally a first-line antipyretic due to being well tolerated with minimal side effects.
- Pediatric dose for Acetaminophen: 10-15mg/kg q4-6h.
- Ibuprofen dose: • 5-10 mg/kg/dose orally every 6 to 8 hours as needed

Sponging (Tepid sponge)

https://www.shutterstock.com/th/search/tepid+sponge

Sponging (Tepid sponge)

- Sponge for fever > 40°C that doesn't come down with acetaminophen or ibuprofen AND causes discomfort.
- If your child shivers or becomes cold, stop sponging or increase the water temperature. (NOTE: Sponging is optional for high fevers, not required)
- **Always give fever medicine first**

https://www.shutterstock.com/th/search/tepid+sponge

PURPOSE of Tepid Sponge

- Tepid sponge helps to reduce the temperature more than 38.5 ◦C, normally use with antipyretic drug
- To stimulate circulation
- To decrease toxicity
- Nervousness and delirium
- To soothe the nerves and promote sleep

PRELIMINARY ASSESSMENT

Check

- The doctors order for any specific instructions
- General condition and diagnosis
- Self-care ability of the patient
- Assess the duration of application
- For contraindication to application
- Articles available in the ward

PREPARATION OF THE PATIENT AND ENVIRONMENT

1) Bath basin with warm or room temperature water 29.4-32.2°C. (Do not use alcohol)
2) 2-4 small towel
3) 1 big size towel
4) Turn on electric fan, Air con.
5) Explain the sequence of the procedure
6) Provide privacy

Tepid Sponge Procedure

1) wash hands.
2) Cover patient with blanket, remove gown, and close windows and doors.
3) Test the water temperature. Place washcloths in water and then apply wet cloths to each axilla and groin.
4) Gently sponge an extremity for about 5 minutes. If the patient is in tub, gently sponge water over his upper torso, chest, and back.
5) Continue sponge bath to other extremities, back, and buttocks for 3 to 5 minutes each. Determine temperature every 15 minutes.
6) Change water; reapply freshly moistened washcloths to axilla and groin as necessary.

Tepid Sponge Procedure

7) Continue with sponge bath until body temperature falls slightly above normal 15-20 minutes.

8) Dry patient thoroughly, and cover with light blanket or sheet.

9) Return equipment to storage, clean area, and change bed linens as necessary. Wash hands.

10) Record time procedure was started, when ended, vital signs, and patient's response.

AFTER CARE

1. Remove the sponge clothes from the axilla and groin. Discard it in kidney tray
2. Dry the body with bath towel
3. Remove the wet sheet
4. Replace the gown and remove the bath blanket
5. Observe for any symptoms of chill or any other abnormality
6. If needed give him hot drinks
7. Position the patient comfortably in the bed
8. Replace the articles after cleaning
9. Wash hands
10. Record the procedure in the nurse's record sheet and vital signs in TPR sheet


เช็ดตัวลดไข้ ให้ลูกน้อยไข้ลง
เตรียมอุปกรณ์
กะละมังใส่น้ำครึ่งหนึ่ง
(อุณหภูมิปกติ)
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ผืน
ผ้าเช็ดตัว
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มาเริ่มเช็ดตัวกัน
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ปิดพัดลม
เครื่องปรับอากาศ
ถอดเสื้อผ้า
หนูออกให้หมด
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Thank you

Do not forget to do hw.