
Fever

DEFINITION

A fever is a body temperature at or above 100.4 °F (38 °C).

PATHOPHYSIOLOGY

A healthy person's body temperature fluctuates between 97 °F and 100.3 °F , with the average being 98.6 °F (37 °C). The body maintains stability within this range by balancing the heat produced by metabolism with the heat lost to the environment.

The "thermostat" that controls this process is located in the hypothalamus, a small structure located deep within the brain. The nervous system constantly relays information about the body's temperature to the thermostat, which in turn activates different physical responses designed to cool or warm the body, depending on the circumstances. These responses include:

- decreasing or increasing the flow of blood from the body's core, where it is warmed, to the surface, where it is cooled;
- slowing down or speeding up the rate at which the body turns food into energy (metabolic rate);
- inducing shivering, which generates heat through muscle contraction; and
- inducing sweating, which cools the body through evaporation.

A fever occurs primarily in response to an infection.

SIGNS & SYMPTOMS

- Body temperature above the normal range
- Hot, flushed skin
- Increased heart rate
- Increased respiratory rate
- Loss of appetite
- Malaise or weakness
- Seizures with higher temperatures

ASSESSMENT:

- Identify the triggering factors.
- Monitor the patient's HR, BP, and especially the tympanic or rectal temperature.
- Monitor fluid intake and urine output.
- Review serum electrolytes, especially serum sodium.

NURSING INTERVENTIONS

- Adjust and monitor environmental factors like room temperature and bed linens as indicated.
- Eliminate excess clothing and covers.
- Give antipyretic medications as prescribed.
- Ready oxygen therapy for extreme cases.
- Provide chlorpromazine (Thorazine) and diazepam (Valium) when excessive shivering occurs.
- Encourage ample fluid intake by mouth.
- Provide additional cooling mechanisms commensurate with the significance of temperature elevation and related manifestations:
 - Noninvasive: cooling mattress, cold packs applied to major blood vessels
 - Evaporative cooling: cool with a tepid bath; do not use rubbing alcohol.
 - Modify cooling measures based on the patient's physical response.
 - Start intravenous normal saline solutions or as indicated.
 - Provide high caloric diet or as indicated by the physician.

PATIENT TEACHING

- Educate patient and family members about the signs and symptoms of hyperthermia and help in identifying factors related to occurrence of fever.
- Discuss importance of increased fluid intake to avoid dehydration.

CULTURAL CONSIDERATIONS

- Assess for the influence of cultural beliefs, norms, and values of the patient's experiences with fevers.
- Discuss with the patient those aspects of his or her daily activities that will remain unchanged, and work with patient to adapt cultural core .
- Validate the patient's feelings regarding the impact of current lifestyle, finances, and transportation on ability to redesign toward healthier personal habits.

COORDINATING CARE WITH NURSING ASSISTANT

- Ambulate patient as tolerated with doctor's order three times daily.
- Encourage frequent rest periods and teach patient to pace activity.
- Encourage small frequent meals.

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