RAMA UNIVERSITY

www.ramauniversity.ac.in

FACULTY OF NURSING

FEVER

M.Raghavendran M.Sc (N).,

Asso.Prof.,

Rama University

Fever

- Fever (also known as pyrexia) is a frequent medical sign that describes an increase in internal body temperature to levels above normal
- Fever is most accurately characterized as a temporary elevation in the body's thermoregulatory set-point, usually by about 1–2 °C.

Fever

- A systematic, non specific defensive response caused by infection from bacteria and virus, indicated by abnormal high body temperature.

Fever: Mechanism

- Hypothalamus is body's thermostat, usually set at 37^{o}C.
  - Phagocytosis
  - Destruction of bacteria and release of LPS (lipopolysacchride, an endotoxin)
  - Interleukin-1 released by the macrophage reset the hypothalamus to a high temp, producing fever (body generates extra heat)

Fever: Mechanism

Hypothalamus response

The brain's heat effector mechanisms via the autonomic nervous system. These may be:

- Increased heat production by increased muscle tone, shivering and hormones like epinephrine.
- Prevention of heat loss, such as vasoconstriction

Types

Fever is generally classified for convenience as:

Grade	°C	°F
Low-grade	38-39	100.4-102.2
Moderate	39-40	102.2-104.0
High-grade	40-42	104.0-107.6
Hyperpyrexia	>42	>107.6

Fever

- Beneficial effects of fever:
  - Speed up metabolism for tissue repair
  - Increases the antiviral effect of interferons
  - increased mobility of leukocytes
  - enhanced leukocytes phagocytosis
  - endotoxin effects decreased
  - increased proliferation of T Cells

Fever: causes

- Infectious disease
- allergic reactions
- Immunological diseases
- Metabolic disorders
- Tissue destruction
- Drug fever

Fever: Objectives of Rx

- The increased body temperature is reduced to the extent that subjective symptoms alleviate but the beneficial effects remain.
- In practice this usually means that the body temperature decreases by 1 - 1.5ºC, 1 - 2 hours after drug administration.

Fever: Symptomatic Rx

- Fever is associated with other symptoms that cause considerable discomfort, such as muscle pains, headache, nausea, aches, a feeling of nausea and noticeable tiredness.
- The fever is markedly high (over 39 - 39.5ºC).

Fever: Symptomatic Rx

- The child has a tendency for febrile convulsions. (The rise of fever is prevented by giving antipyretic drugs in time. In recurrent febrile convulsions diazepam is also used).
- Patient has a serious primary disease, for example severe heart, lung or kidney disease. In these cases fever may be harmful.

Fever: Investigations

- GC, skin, resp tract & the lymph nodes.
- Examine the ears with otoscope to detect acute otitis media.
- A urine sample from all with high fever but no clear focus of infection.

Fever: Investigations

- A chest X-ray in necessary if respiratory rate is more than 40/min, general condition is impaired, respiratory difficulty

Fever: General Rx

- Sufficient fluid intake
- Light, tasty food
- Avoidance of physical strain. Absolute bed rest is not needed.
- Reducing the room temperature artificially or removing clothing to the point of discomfort is unnecessary and even harmful.

Fever: Medical Rx

- The antipyretic should be taken only when necessary. Regular use of fever medication should be avoided in all except for those who are prone to febrile convulsions.