



**Al-Mustaqbal University**  
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قسم علوم الأنظمة الطبية الذكية

**Subject: Body Temperature**

**Level: first**

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## **Body Temperature**

The normal human body temperature range is typically stated as 37 °C

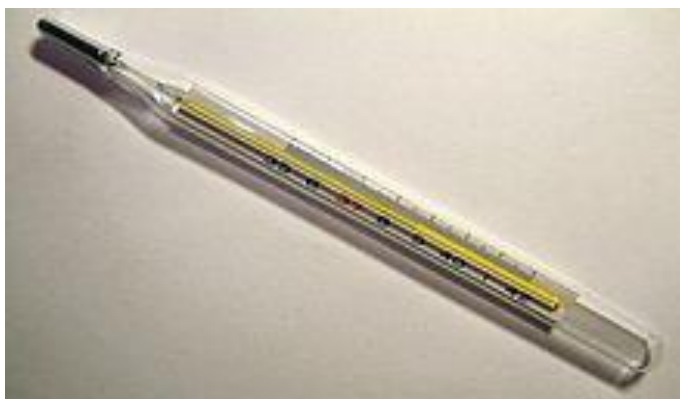
Human body temperature varies

**It depends On**

- 1- sex, age, time of day
- 2- exertion level, health status (such as illness)
- 3- what part of the body the measurement is taken at
- 4- state of consciousness (waking, sleeping), and emotions.

Body temperature is kept in the normal range by a **homeostatic function** known as **thermoregulation**, in which adjustment of temperature is **triggered by the central nervous system**

## **Methods of measurement**



(Figure -1) A medical **thermometer** showing a temperature



Taking a human's temperature is an **initial part** of a full clinical examination.

There are various types of **medical thermometers**, as well as sites used for measurement, including:

- In the rectum
- In the mouth
- Under the arm
- In the ear
- On the skin of the forehead over the temporal artery

### **How is body temperature controlled?**

Our internal body temperature is regulated by a part of our brain called the **hypothalamus**. The hypothalamus checks our current temperature and compares it with the normal temperature of about 37°C. If our temperature is too low, the hypothalamus makes sure that the body generates and maintains **heat**. If, on the other hand, our current body temperature is too high, **heat is given off or sweat is produced to cool the skin**.

### **What causes a fever?**

People get a fever when their brain sets the body temperature higher than normal. **This may happen as a reaction to germs such as viruses or bacteria**, but it can also happen as **a reaction to substances that are made by the body, such as prostaglandins**. Our body produces prostaglandins to fight off germs.



\*A body temperature of **38°C** or more is considered to be a **fever** in **adults**.

\*Temperatures **above 39.5°C** are considered to be a **high fever**.

\* **Very high fever is defined as any temperature above 41°C.**

## **Symptoms of Fever**

Symptoms of a fever can be constant or intermittent (come and go). They include: -

- Feeling warm or hot
- Skin warm to touch
- Flushed face
- Tired eyes
- Chills



# Symptoms of a Fever



Tired eyes



Skin warm  
to touch



Feeling warm  
or hot

Chills



Flushed face