

Fever Guidelines

Fever is one of the most common medical signs and is characterized by an elevation of body temperature above the normal range.

Normal body temperature is a range, for example, medically frail elderly have a decreased ability to generate body heat, so a “normal” temperature of 37.2°C (99°F) may represent a clinically significant fever. It is important to determine a normal body temperature when the resident is healthy and use this as a comparison since normal body temperatures tend to decrease with age.

When taking a body temperature, keep in mind the variations depending on age, time of day, activity level, measurement device and technique.

Why measure in the ear?

Ear thermometers measure infra-red heat released from the tympanic membrane, which shares the same blood supply as the temperature control region of the brain. Therefore, ear temperatures are considered to reflect core body temperature. Your core body temperature is the temperature of the vital organs. Changes in the body temperature are reflected sooner in the ear than other sites.



The displayed ear temperature is the actual measured ear canal temperature plus a mathematical adjustment to approximate the familiar oral range.

Fever in Younger Adults (Age 18 to 64)

Temperature Measurement	Degree Celsius	Degree Fahrenheit
Mouth	Single reading $\geq 38.3^{\circ}\text{C}$ or Persistently $> 38.0^{\circ}\text{C}$ for 1 hour	$\geq 101^{\circ}\text{F}$ or $> 100.4^{\circ}\text{F}$
Ear (Tympanic Membrane)	$> 38.0^{\circ}\text{C}$	$> 100.4^{\circ}\text{F}$
Axilla (Under the Arm)	$> 37.5^{\circ}\text{C}$	$> 99.5^{\circ}\text{F}$

Fever in Older Adults (Age ≥ 65)

Temperature Measurement	Degree Celsius	Degree Fahrenheit
Mouth	Single reading $\geq 37.8^{\circ}\text{C}$ or Persistently $> 37.2^{\circ}\text{C}$ for 1 hour	$\geq 100^{\circ}\text{F}$ or $\geq 99^{\circ}\text{F}$
Ear (Tympanic Membrane)	$\geq 37.2^{\circ}\text{C}$	$\geq 99^{\circ}\text{F}$
Axilla (Under the Arm)	$\geq 36.7^{\circ}\text{C}$	$\geq 98.1^{\circ}\text{F}$
Rise in any temperature above baseline	$\geq 1.1^{\circ}\text{C}$	$\geq 2^{\circ}\text{F}$

References:

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5. Shevchuk Y. Chapter 9: Fever. Patient Self Care 2002; Edition 1: 79-89.
6. Braun ThermoScan® Ear Thermometer Owner Manual. www.braun.com Accessed April 24, 2013.