# Pediatric Thermometry









Other available methods include the digital pacifier and the temporal artery scanner.

### **Taking a Child's Temperature**

Several methods for taking a child's temperature quickly, accurately, and safely are available. Devices used to measure body temperature in children include the digital thermometer (for rectal, oral, or underarm readings), the digital ear thermometer (tympanic membrane thermometer), the digital pacifier thermometer, and the forehead (temporal artery) thermometer.

Mercury thermometers are no longer considered safe because the glass can break and release the liquid mercury, which is highly toxic. Digital thermometers, which are safe and measure body temperature in seconds, should be used instead of mercury thermometers.

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continued



## PATIENT TEACHING AID

# **Never Leave a Child Alone While Taking Temperature**

Taking a child's temperature with a digital device is easy and quick, but the patient should never be left alone while the thermometer is in place. When a child has a fever, healthcare professionals recommend recording the time and temperature readings, along with any medication given to lower the fever. The following are descriptions of the different methods used to measure body temperature in children.



There are a number of safe and effective alternatives to mercury thermometers, which should no longer be used.

### Rectal, Oral, and Axillary Methods

Digital "instant-read" thermometers may be used for oral, rectal, or axillary (underarm) temperature measurement. A digital thermometer used rectally (in the child's bottom) should be kept separate from digital thermometers used for oral measurement, and it should be clearly labeled to ensure that it is not accidentally placed in the child's mouth. Before and after each use, the thermometer should be cleaned with rubbing alcohol or washed with soap and lukewarm water

The most accurate temperature measurement is taken via the rectal route, which is especially recommended for infants aged 3 months and younger; this method also provides the best readings for children aged up to 2 years. The tip of the thermometer should be coated with a small amount of petroleum jelly before use. Most doctors recommend laying the child flat on his or her back, raising his or her legs, and gently inserting the thermometer one-half to 1 inch into the rectum, until it stops. The thermometer must be held in place until it beeps, at which time it should be removed to check the reading. Rectal temperatures are higher than other readings, so a rectal temperature exceeding 100.4°F is usually considered a fever.

A digital thermometer may be used to measure temperature orally if the child is able to hold the tip of the thermometer under the tongue while keeping the lips closed. Young children older than 3 months can suck on a digital pacifier thermometer to record oral temperature. For an accurate oral measurement, it is best to wait 20 to 30 minutes after food or drink before taking a reading. An oral temperature of 100°F or higher is usually considered a fever.

A digital thermometer may also be used to measure a child's axillary temperature, with the tip of the thermometer surrounded by the skin of the armpit. This method is generally considered to be the least accurate, but it is useful in some situations. The axillary temperature is lower than the oral temperature, so a reading of 99°F is considered a fever.

### Ear Method

A tympanic membrane thermometer is gently inserted into the ear canal to measure the temperature. For correct use of this digital device, it is important to precisely follow the accompanying instructions. With a digital ear thermometer, a reading of 100.4°F or higher is considered a fever.

### **Forehead Method**

A temporal artery thermometer contains an infrared scanner that measures the temperature of the blood vessels in the forehead. The noncontact scanner is swept across the child's forehead, and the temperature is displayed on the digital screen. With this thermometer, a reading of  $100.4^{\circ}F$  or higher is considered a fever. Forehead strips, which the caregiver holds in place until the color changes to denote the reading, are another option.

When calling a doctor about a child with a fever, be sure to mention not only the child's temperature, but also the method used to measure it (oral, rectal, axillary, ear, forehead).

