

# Measuring a Child's Temperature and Breathing

This fact sheet provides information for parents and caregivers about how to take a temperature and how to measure breathing in children.

## Ways to Take a Temperature

There are 3 ways to take a child's temperature:

- by the mouth (oral)
- under the armpit (axillary)
- in the ear (tympanic)

The best method to choose for an exact reading depends on your child's age:

Age	Best	2 <sup>nd</sup> Best	3 <sup>rd</sup> Best
Birth-2	Armpit		
2-5 years	Ear	Armpit	
5-adult	Mouth	Ear	Armpit

## What is a Normal Temperature?

Mouth: 35.5°C to 37.5°C (95.9°F to 99.5°F)

Armpit: 34.7°C to 37.3°C (94.5°F to 99.1°F)

Ear: 35.8°C to 38°C (96.4°F to 100.4°F)

## Types of Thermometers

There are two types of thermometers for taking temperatures by mouth and armpit:

- a **glass thermometer** has a long slender bulb at one end, containing mercury. As the mercury expands, in response to the heat from the child's body, it moves up the column. Use of a glass thermometer is not recommended for children under 5 since they may bite down, breaking the glass and injuring themselves. If you are purchasing a glass thermometer, look for one with a mercury column that is easy to see, and degree markings that are easy to read.
- a **digital thermometer** is made of sturdy plastic, is easy to read and measures temperature faster than glass.

Ear thermometers are available but are expensive. A fever strip is not recommended because it does not give an accurate temperature reading.

Ask the pharmacist any questions you may have when you purchase your thermometer.

## How to Take a Child's Temperature

### Mouth Method (Oral)

If you are using a glass thermometer:

- Not recommended for children under 5 years of age.
- Be sure it is an oral thermometer.
- Clean the thermometer with cool, soapy water and rinse (hot water causes the mercury to expand and may burst the thermometer).
- Hold the thermometer at the end away from the mercury and shake it with firm downward flicks of the wrist so that the mercury goes below 36°C (96.8°F).
- Do not give the child cold or hot liquids for half an hour before taking his/her temperature.
- Carefully place the tip of the thermometer under the child's tongue. Tell him/her to close the mouth but not to bite down.
- With the child's mouth closed, leave the thermometer in place for 3 to 4 minutes. Stay with child and make sure he/she remains still.
- Remove thermometer; hold it near the light and slowly turn it until the line of mercury is seen.
- Read the thermometer where the line of mercury ends.
- Clean the thermometer with cool soapy water and rinse. Use a cotton swab soaked in alcohol to rub down the thermometer.
- Store the thermometer in a container to prevent breakage.

If you are using a digital thermometer:

- Press the button to turn the thermometer "on".
- Put the thermometer tip under your child's tongue and tell him/her to close the mouth.
- Wait for the thermometer to beep.

- Read the temperature on the display. Press the button to turn the thermometer off.
- To clean a digital thermometer, wash only the tip with soap and warm (not hot) water and wipe off with alcohol after use. Dry well.

### Armpit Method (Axillary)

If you are using a glass thermometer:

- Clean the thermometer and shake down the mercury as in “mouth method”.
- Place the silver tip of the thermometer in the center of the armpit.
- Make sure your child’s arm is tucked snugly against his/her body.
- Leave the thermometer in place for at least 4 minutes.
- Remove, read, clean and store the thermometer as in “mouth method”.

If you are using a digital thermometer:

- Press the button to turn the thermometer “on”.
- Put the thermometer under your child’s armpit. The silver tip must touch the skin.
- Hold the top of the thermometer with one hand and hold down your child’s arm with the other hand.
- Wait for the thermometer to beep.
- Read the temperature on the display.
- Press the button to turn the thermometer off.
- To clean a digital thermometer, wash only the tip with soap and warm (not hot) water and wipe off with alcohol after use. Dry well.

### Ear Method (Tympanic)

If you are using an ear thermometer:

- Not recommended for children under one year of age.
- Use a clean probe tip each time, and follow the manufacturer’s instructions carefully.
- Gently tug on the ear, pulling it up and back. This will help straighten

the ear canal, and make a clear path inside the ear to the eardrum.

- Gently insert the thermometer until the ear canal is fully sealed off.
- Squeeze and hold down the button for one second.
- Remove the thermometer and read the temperature.

### **How to Measure Breathing**

- For older children watch the chest rise and fall. Use a watch or clock and count the number of times the chest rises (or expands) in one minute (60 seconds).
- Children and infants use their stomachs to breathe. You should uncover the child so you can see their stomach. Count the number of times the stomach or chest rises in 60 seconds using a watch or clock.
- Compare the number you counted to the chart below. If the child’s breathing rate is equal to or higher than the number in the chart, it is a sign your child is having trouble breathing, and you should seek medical attention.
- If the child has other symptoms or behaviours you are concerned about, contact your doctor or Telehealth for advice.

Age	Number of breaths per minute
Less than 2 months	More than 60
2-12 months	More than 50
12 months-5 years	More than 40
Older than 5 years	More than 30

### **For more information:**

Call Telehealth

- 1-866-797-0000;
- TTY: 1-866-797-0007

Source: Ontario Health Plan for an Influenza Pandemic - August 2008  
Chapter #18A: Paediatric Services Tools 18A-3