

Temporal Artery Temperature Measurement

Measure only the exposed side

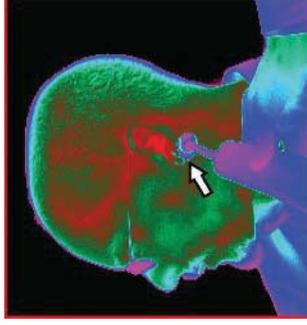
Brush hair aside if covering TA area

1. With probe flush on center of forehead, depress button, keep depressed.
2. Slowly slide probe midline across forehead to the hair line, not down the side of the face.



Brush hair aside if covering ear

3. Keeping button depressed, lift probe from forehead and touch on the neck just behind the ear lobe.
4. Release button, read, and record temperature.



- Measure only the exposed side. Anything covering the area to be measured would insulate and prevent the heat from dissipating, resulting in falsely high readings.
- Slide the thermometer straight across the forehead (midline), and not down the side of the face. Midline over the TA area, the TA is about 1mm below skin surface, whereas at the side of the face the TA is much deeper, and although anatomically correct, measuring there would result in falsely low readings.
- A dirty probe lens can cause a low reading. If not shiny, clean lens with an alcohol prep or swab.

Quick Tips

FAQs

Why both TA and behind the ear lobe (BE)?

Issues:

- Sweat cools the forehead.
- Head trauma could prevent access.

Facts:

- Correct Temperature = Peak Temperature
 - TA + BE = Peak Temperature
- Here's why it works:**
- Vasodilation is certain BE with sweat and trauma.
 - BE then becomes peak temperature.
 - Peak temperature overrides site errors.

What if both TA and BE are unavailable?

Consider one of these alternate sites:

- Femoral artery: slide the probe across groin.
- Lateral thoracic artery: scan side-to-side in the area, about midway between the axilla and nipple.
- Axilla: insert probe in apex of axilla for about 2-3 seconds.

Why not use BE as a sole site?

Without sweat or head trauma, this area is just too variable to be reliable as a sole site.

The Measurement

Arterial

If your thermometer is marked Arterial on the back label, it is actually measuring arterial (core) temperature. Arterial temperature is close to rectal temperature, approximately 0.8°F (0.4°C) higher than oral temperatures.

ArterialOral

If your thermometer is marked ArterialOral, it is programmed to compute the normal average cooling effect at the mouth, and automatically reduces the higher arterial temperature by that amount.

This calibration allows the hospital to maintain existing protocols for fever workups based on oral temperature, and results in a reading consistent with the 98.6°F (37°C) mean normal oral temperature, in the range of 96.6 - 99.5°F (35.9 - 37.5°C) you now see.

For further information:

See our website at www.exergen.com or call 800-422-3006 or 617-923-9900.

The Instrument

- Probe lens should be shiny clean. If not, wipe with an alcohol prep.
- Thermometer can be cleaned with any hospital approved disinfectant, alcohol, or even bleach solutions.
- Can be used in either °C or °F
- "bAtt" indicates a low battery.
- Battery: 9-volt alkaline or 9-volt lithium

Battery

To replace:

- Loosen the single screw at the bottom of the instrument as illustrated.
- Remove the cover.
- Snap out the old battery.
- Replace with a 9-volt alkaline or lithium battery.
- Replace the cover, push down to snap shut, and tighten the screw.



Why the Temporal Artery?

The temporal artery (TA) area has a long history of temperature assessment dating back thousands of years with recorded references to palpation of the head for fever assessment. Branching from the external carotid, the superficial TA courses within about a millimeter of the skin's surface over the lateral forehead, providing good heat conduction to the skin surface, is readily accessible, and provides no risk of injury from being touched. Since it is not an anastomosing vessel, perfusion remains high and stable, ensuring the reliability of conditions for the patented Arterial Heat Balance method to compute accurate temperatures.

High resolution infrared images confirm the reliability of the heat signature of the TA area for all ages. The cooling effect of diaphoresis is overcome by the measurement behind the ear lobe. Note the infrared image of the diaphoretic patient on the back of this pamphlet showing a cool (green/blue) TA area, but a very warm (red) neck.

Normal Body Temperature (BT)

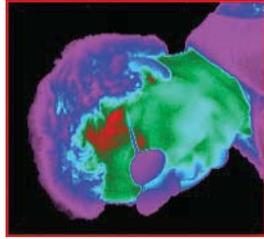
Normal BT is not a single temperature, but a range of temperatures influenced by age, time of day, and measurement site.

General Rule of Thumb

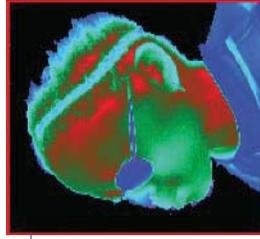
Rectal (and arterial) temperatures are 2°F (1°C) higher than axillary and -1°F (0.5°C) higher than oral temperature.

Expect the Differences

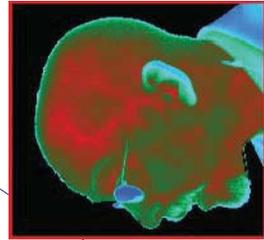
Arterial temperature measurement (PA Catheter, TA Thermometry) leads all other methods in identifying fever or defervescence, and is unaffected by activities of daily living. Accordingly, it will sometimes be different from your present methods — but accurate.



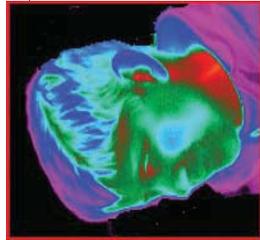
Normal



Vasodilation



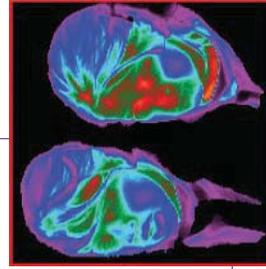
Vasodilation



Sweat



Still Strong Perfusion



Normal

Fever

Twins



Changing The Way The World Takes Temperature



Temporal Artery Thermometry

...a kinder, gentler way