



GREENLIGHT CLINICAL GUIDELINES

Temperature

September 2018

Temperature Monitoring Guidelines

Introduction

'Temperature' is a clinical observation that measures the temperature of a person. This is measured using a Thermometer.

The difference with temperature as an observation is that it does not tend to vary widely from person to person. This allows for an easy base point and makes it easier to tell if a reading is abnormal. This document will explain how to use a thermometer to measure a temperature, it will give basic information on how the machine works and how to interpret the given results. For the following document temperatures will be in Degrees Celsius (°c)

What does a thermometer measure?

A thermometer measures a person's temperature. Temperature is regulated centrally by the Hypothalamus in the brain. If the human body starts to get cold the brain sends a message to the blood vessels in the skin causing them to constrict, diverting the blood into deeper tissues to prevent more loss of heat, at the same time as instructing the larger muscles to cause shivering to make more heat. If a person starts to get hot the brain sends a message out to the skin blood vessels and causes dilatation of the blood vessels to allow heat loss. A message is also sent to the sweat glands that release sweat which then evaporates and cools the body down.

What is a normal Temperature range?

A healthy temperature in an adult is always within the range of 36.5°C -37.5°C no matter of age, fitness levels.

Normothermia: 36.5°C-37.5°C

Hypothermia: ≤ 35.0 °c

Hyperthermia: ≥ 38 °c

Outside of the healthy range a patient is at risk of developing further complications.

If you obtain a high or low reading, consider a Drs review.

If a patient has an abnormally high or low temperature, please do not hesitate to call an ambulance.

Please note if you attempt to raise or lower a temperature to fast a person could succumb to clinical shock.

Common causes for an abnormal Temperature

Hypothermia:

- Environmental
- Nervous system/Brain damage
- Pharmaceutical

Hyperthermia:

- Infection
- Heat exhaustion
- Heat Stroke
- Nervous system/Brain damage

How a thermometer works

An electric probe thermometer works by sending a low level of voltage through the probe and measuring the current. The warmer the metal, the more resistance. The electronics in the thermometer in turn translates resistance into a temperature.

Probe thermometers can become inaccurate in cold environments. If stored in a cold place it may give inaccurately low temperatures.

How to measure a temperature

Using the Welcly Allen Sure Temp Thermometer.

Orally:

Step 1: Wash and dry your hands thoroughly.

Step 2: Obtain consent and explain procedure.

Step 3: To turn on the thermometer place the probe into the main bulk of the thermometer and withdraw. Once on, place the plastic probe cover over the probe.

Step 4: Place the probe under the tongue and ask the person to close their mouth.

Step 5: The thermometer will take a moment and will beep and record the numerical value of the temperature. Note the temperature.

Temperature monitoring guidelines

How to measure a temperature Continued

Using the Welcly Allen Sure Temp Thermometer.

Orally:

- Step 6: Remove the probe, remove the probe cover from the thermometer and place into the clinical waste bin.
- Step 7: Wash and dry hands thoroughly then clean the thermometer.
- Step 8: Document the measurements.

Using the Welcly Allen Sure Temp Thermometer.

Axillary:

- Step 1: Wash and dry your hands thoroughly.
- Step 2: Obtain consent and explain procedure.
- Step 3: To turn on the thermometer place the probe into the main bulk of the thermometer and withdraw. Once on, place the plastic probe cover over the probe.
- Step 4: Ask the patient to raise their arm. Place the probe as high into the armpit as comfortable and ask the patient to hold their arm tightly to their side holding the probe in place.
- Step 5: The thermometer will take a moment and will beep and record the numerical value of the temperature. Note the number.
- Step 6: Remove the probe from the armpit then remove the probe cover from the thermometer and place into the clinical waste bin.
- Step 7: Wash and dry hands thoroughly then clean the thermometer.
- Step 8: Document the measurements.

References:

- Dougherty. L, Lister. S & West-Oram (2015) *The Royal Marsden Manual of Clinical Nursing Procedures, 9th edn*. Wiley, London.
- Mariab. N (2006) *Essentials of Human Anatomy & Physiology, 8th edn*, Pearson, San Francisco.
- National Health Service (2012) *Hypothermia*. Available at: <https://www.nhs.uk/conditions/hypothermia/> [accessed 22 September 2018]
- National institute for health and care excellence (2016) *Hypothermia: prevention and management in adults having surgery*. Available at: <https://www.nice.org.uk/guidance/cg65/chapter/recommendations> [Accessed 22 September 2018]
- Fields. M & Meekings.T (2013) *Temperature management in critically ill patients*. Available at: <https://academic.oup.com/bjaed/article/13/3/75/279055> [Accessed 22 September 2018]

