

HCUCC Disaster Ministries Weekly Update

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With Covid-19 cases on the rise once again in the United States, everyone is doing their part to watch for symptoms and flatten the curve. One of the major signs to look for is a fever, according to the Centers for Disease Control and Prevention (CDC). Checking your own temperature at home can help you gauge your symptoms and decide whether to call a doctor or try to get tested. If you believe you have been exposed to Covid-19, the CDC recommends checking your own temperature twice a day, morning and night, for 14 days.

A fever is your body's normal response to fighting infection and means that your immune system is working properly. If your temperature is consistently above 99.5 degrees Fahrenheit, monitor for other symptoms, including body aches and pains, severe muscle aches and a dry cough.

Thermometers have come a long way from mercury-encased-in-glass. Newer thermometers provide instant readings and often come with add-ons like cell phone apps and Bluetooth capability.

Types of thermometers:

Digital thermometers-

Regular digital thermometers use electronic heat sensors to record body temperature. These thermometers can be used in the rectum, mouth or armpit. Armpit temperatures are usually the least accurate. Rectal temperatures provide the best readings for infants, especially those 3 months or younger, as well as children up to age 3. For older children and adults, oral readings are usually accurate — as long as the mouth is closed while the thermometer is in place.

If you plan to use a digital thermometer to take both oral and rectal temperatures, you'll need to get two digital thermometers and label one for oral use and one for rectal use. Don't use the same thermometer in both places.

The pros:

- Most digital thermometers can record temperatures from the mouth, armpit or rectum — often in a minute or less.
- A digital thermometer is appropriate for newborns, infants, children and adults.

The cons:

- Parents may worry about causing discomfort when taking a child's temperature rectally.
- You need to wait 15 minutes after eating or drinking to take an oral temperature. Otherwise, the temperature of your food or drink might affect the thermometer reading.
- It can be difficult for children — or anyone who breathes through the mouth — to keep their mouths closed long enough to get an accurate oral reading.

Digital ear thermometers-

Digital ear thermometers, also called tympanic thermometers, use an infrared ray to measure the temperature inside the ear canal.

The pros:

- When positioned properly, digital ear thermometers are quick and generally comfortable for children and adults.
- Digital ear thermometers are appropriate for infants older than age 6 months, older children and adults.

The cons:

- Digital ear thermometers aren't recommended for newborns.
- Earwax or a small, curved ear canal can interfere with the accuracy of a temperature taken with a digital ear thermometer.

Temporal artery thermometers-

Temporal artery thermometers — often sold as forehead thermometers — use an infrared scanner to measure the temperature of the temporal artery in the forehead.

The pros:

- Temporal artery thermometers can record a person's temperature quickly and are easily tolerated.
- Temporal artery thermometers are appropriate for infants older than age 3 months and for older children. New research suggests that a temporal artery thermometer also might provide accurate readings for a newborn.
- Additional research suggests that temporal artery thermometers are the most accurate alternative to rectal digital thermometers for taking a child's temperature.

The con:

- A temporal artery thermometer may be more expensive than other types of thermometers.

Infrared thermometers-

The infrared non-touch thermometers contain a small lens that emits an infrared beam which bounces off the object and back to a detector which absorbs any radiation. This radiation is turned into heat and then into electricity. The thermometer can then convert this electricity into an accurate temperature reading. These thermometers check the human temperature by sensing the infrared energy radiated by the body. However, this is not a 100% accurate way of detecting COVID-19 cases. While the advantage of using an infrared thermometer is its 'no contact' process, the temperature can get affected by various factors such as wind and water. It can take from 2 to 10 days for a person to show the symptoms of coronavirus. If a person is affected by the virus and has not started to show symptoms yet, the infrared thermometer would not be able to detect it. Having a specific temperature is just one of the indications that you have a fever. Other signs of a fever are chills, sweats, flushed skin and body aches.

A fever is when an adult's body temperature reaches 100.4 °F (38 °C) or higher. The average body temperature of an adult without a fever is 98.6 °F (37 °C), some studies have shown that "normal" body temperature can be within a wide range, from 97°F (36.1°C) to 99°F (37.2°C). Every person can have different body temperatures, and it can also change during the day based on when someone's eaten or exercised. The Harvard Medical School adds that "body temperature is often higher in the afternoon than it is when you wake up in the morning."

Compared with contact temperature measurement, the accuracy of non-contact temperature measurement is lower. The non-contact thermometer with higher accuracy is about 0.2 degrees, and the worse temperature error is 1 degree or more. The temperature measurement time is about 5 seconds and the speed is very fast, so it is widely used in daily temperature measurement and industrial temperature measurement.

The Pros:

- Non-contact approach may reduce the risk of spreading disease between people being evaluated
- Easy to use
- Easy to clean and disinfect
- Measures temperature and displays a reading rapidly
- Provides ability to retake a temperature quickly

The Cons:

- How and where it is used may affect the measurement (for example, head covers, environment, positioning on forehead).
- The close distance required to properly take a person's temperature represents a risk of spreading disease between the person using the device and the person being evaluated.

The common definition of "medical grade" doesn't actually have much to do with the quality of the item. Under the current definition, "medical grade" items are items that are available from businesses that operate under some type of physician's license. As such, any equipment sold by a business with a medical director could theoretically be classified as medical grade has a very good chance that it lives up to higher standards. Though this really is more of a marketing term than anything else, it's also often an indicator of quality.