

With spring upon us, thoughts turn to grilling and roasting. Slow cooked foods go away and quicker fare is in store. This caused me to think about how to tell if something is done.

No doubt the best way to tell – in fact the only real way – is by temperature. If you wash your hands and they are don't get clean, they are still not clean. If you cook something for an hour and it's not at whatever temperature it is supposed to be, it's still not done.

You can't really tell by time. Just because something should be done in a certain amount of time, doesn't mean it is.

You can't by the temperature of cooking. Just because the coals were hot or the oven was at 350, doesn't mean that the food cooked completely.

You can't tell by texture. Poking the surface isn't fool proof. A toothpick stuck in a cake let's you know that it's not done yet or that's it's overcooked already.

You can't tell by color. Just because the surface is brown, doesn't mean the inside is cooked.

Whether food is transparent, translucent or opaque is not a good measure either.

Cooking is a function of time and temperature. In simple terms that's it. Cook it long enough and high enough and it will be done and safe.

But there are other factors to consider. The temperature of the food when you start is one. If it's been sitting out, it will be done quicker. But that's not a safe thing to try.

If the air is cooler, food cooked exposed to the air will take longer to cook. This is especially true of cooking outside. A grill – covered or not – takes longer to cook something in cooler weather.

Our perception of doneness is usually slanted toward color. No red or pink in meat means done for instance.

Let's not forget that our perception of color is significantly effected by light. In a commercial kitchen where fluorescent lights are used, red is harder to see. The blue of the lights makes it look brown. Outside in the late afternoon everything looks red.

According to the USDA, "one out of four hamburgers that turn brown are not done according to a thermometer." That fact alone ought to makes us have two kitchen thermometers available to us at all times when we are cooking.

Here's another fact that will get your attention: The Centers for Disease Control estimate "that in the United States, food poisoning causes about 76 million illnesses, 325,000 hospitalizations, and up to 5,000 deaths each year. One of the most common bacterial forms of infection, the salmonellae organisms, account for \$1 billion in medical costs and lost work time."

This tells us that the next time you sit at a table of four, chances are one of you will have food poisoning that year.

The great thing is that proper handling and cooking of your food will ratchet down your chances of being a victim dramatically.

It's very simple with ground beef. Cook it well done – no exceptions – for safety. That temperature is 160. That's the temperature that zaps e coli.

Done right, 160 degrees will not give you a dry tasteless burger. Season the exterior, turn it once and don't squeeze on it while it cooks for a great burger. And don't cook it to 180. When it's done, it's done.

160 is a magic number. If you aim there, safety issues will be minimal. Flavor and texture are another story. Steaks will be medium well to well done. If you want your steak rare, 135 to 140 is your goal.

With poultry, safety says aim 10 degrees higher for whole pieces or birds. If the meat is ground, 160 is fine.

Fish is done at 145 or less. If you are one of the many people who like their fish overcooked, aim higher.

As for casseroles and stuffing, 160 to 165 will do fine.

It's not against the rules to use a thermometer with baked goods either. That toothpick test is not that good. Neither is thumping the bottom to determine doneness.

The target temperature with baked goods is in the 180 to 210 range, according to what it is and the moisture content. So French bread is hotter than your banana loaf.

So where is the best place to test for temperature? If it's meat, fish or poultry, the thickest part is where you want to go. If there's a bone, avoid it. It will be hotter than the flesh. That's why cooking meat on the bone is quicker.

If the piece is thinner than an inch, go in sideways or parallel to the top. Go all the way to the center. That's how you check a burger.

As for bread, go in from the bottom of the loaf and at an angle. Other baked goods use the top and angle toward the center.

Don't forget about resting – not you – the food. When you take food away from the heat, it is still cooking. The temperature will continue to rise about another 5 degrees. 5 degrees too hot can turn moist food into dry and tasteless fodder.

One more thing – make sure your thermometer is accurate. The easiest way to check it is in a glass of water with lots of ice. Swirl the ice around until it's "freezing cold." If your thermometer reads around 32, you are in business. If not, you'll probably need a new one. Most of the instant read thermometers cannot be calibrated.

Besides temperature, the biggest thing you can do to serve safe food is clean preparation and storage. Wash your hands. Wash your knives. Wash your cutting boards. A mild bleach solution is best.

Use your dishwasher to disinfect not just clean stuff. Your microwave will nuke a sponge safe in a minute.

And wash your produce. Wash your chicken and anything else that doesn't have a pure clear smell. A quick rinse and a good dry won't hurt at all.

Food that's properly prepared for cooking and carefully cooked will be safe and tasty. Using a thermometer will make you a better cook and a safer one, too.