

## All About Slow Cookers and Temperature Control



The low setting on a slow cooker means you are cooking around 190-210 degrees Fahrenheit (or 87-99 degrees Celsius). The High setting means your cooker heats to around 300 degrees Fahrenheit (or 149 degrees Celsius).

The actual food temperature at any moment in time may vary based on, brand and model, as well as how much food is inside, how much of that food is liquid and how long the cooker has been tuned on. Unlike a stove top or a pre-heated oven, slow cookers heat up (dare I say it?) S L O W L Y. So, while you set the cooker to high, it may take a couple of hours to reach that temperature. According to several manufacturers, it may take 7-8 hours to reach 300 degrees on Low, or 3-4 hours on High.

Now, to throw a little science into the equation. Water boils at 212 degrees Fahrenheit and it never goes higher (unless you are using a pressure cooker). When you are boiling water on the stove, a rapid boil is the same 212 degrees as a slow boil. When water reaches 212 degrees, the water's phase changes to a gas and a rapid boil simply means the phase change is happening faster. So, if your dish contains a lot of water, then it basically cooks at 212 degrees. Non water items that do not phase change (i.e., meat and vegetables) can reach higher temperatures.



So, with only two settings to choose from, low and high (warm does not count, more on that later), that is why time is the factor most slow cooker recipes focus on. Now, it doesn't matter if you use the Low or High setting on a slow cooker, the liquid within the crock pot will eventually reach a maximum temperature at or just below the boiling point (212 degrees Fahrenheit). The main difference is how long it takes to reach this maximum temperature.



The "Warm" or "Keep Warm" setting should only be used **AFTER** the food is completely cooked. Warm will keep the food around 140 – 160 degrees Fahrenheit (60-71 degrees Celsius). You should not use the "Warm" setting to cook food, as higher temperatures are needed to kill the natural bacteria and make your food safe for eating. So, cook your food completely, first, and if it is not quite dinner time, switch over to "Warm" for an hour or two until it is dinner time.

### Slow Cooker Low vs. High: Cook Time Conversion

The time required to slow cook a meal on the Low setting, is about 2X the amount of time it takes on the High setting. This is not exact mathematics. And choosing low or high often depends on the time of day you prepare the meal and start the crock pot. For instance, if you are planning an outing and want to start the meal in the morning before you leave, you may choose to cook on low because you plan to be back in 6-8 hours. On the other hand, if you slept late and started preparing a meal in the afternoon, you may set your cooker to high, so dinner is ready in 3 hours. That is just one of the wonderful things about a slow cooker. Most recipes you simply put the ingredients in the pot, then go live your life and come back to a hot, delicious dinner.

It's also important to note that the cooking times are based on you resisting the temptation to lift the lid to check on the meal. Every time you lift the lid of a slow cooker you can anticipate adding another 20 minutes to the cooking time. You must have FAITH that everything will be fine and avoid lifting the lid.

The good news is that as long as you have enough liquid, slow cookers tend to be pretty forgiving. You can let items cook longer and it won't burn. Just make sure meats are cooked thoroughly to avoid problems.

## DUTCH OVEN IN THE KITCHEN OVEN

Since you are reading a cookbook that contains instructions for slow cookers and Dutch Ovens, you may be asking yourself, “self, can I use my kitchen oven and a Dutch Oven (cast iron pot) instead of a slow cooker?” The answer is a resounding “Yes.” Your kitchen oven plus a Dutch Oven are perfect substitutes for a slow cooker. The thick iron pot helps the food heat slowly and cook evenly. For recipes that use a slow cooker temperature of High, set your oven to 300 degrees (basically the same temperature as High on a slow cooker), then use the same cooking times. I’m not a fan of leaving my house while the oven is on, so I tend to follow the instructions on recipes that cook at the high temperature, rather than low. And unless it is a cold winter’s day, do you really want your oven to heat up your house for 8 hours?



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