Microwave Oven

The most controversial of all the methods the microwave has its fan club and those whom strictly avoid it. As with all things examining both sides and making your own conclusion is prudent. Knowing how microwaves work will help you make an educated decision for yourself.

According the Wikipedia, Percy Spencer invented the first microwave oven after World War II from radar technology developed during the war. It wasn't until 1967 they were small and efficient enough for the general household kitchen. The microwave heats food by exposing it to electromagnetic radiation in the microwave spectrum. This induces polar molecules in the food to rotate and produce thermal energy in a process known as dielectric heating. Unlike conventional ovens, microwave ovens usually do not directly brown or caramelize food, since they rarely attain the necessary temperatures to produce Maillard reactions (discussed previously).

Microwave ovens are popular for reheating previously cooked foods. The concern about eating leftovers is consuming the dangerous bacterial contaminations that have had time to grow on the food. Microwaves, if used properly, can quickly reach the temperature levels necessary to prevent food borne illness.

However, anyone who has microwaved bread knows there is more going on than just reheating. That rubbery substance previously known as a dinner roll occurs because the microwave primarily heats the water molecules, causing the bread to steam and get chewy.

There are many studies about microwaves that I encourage you to research for more information on the benefits and concerns of cooking with a microwave. Some say it is perhaps a choice between convenience and flavor.