The New Cool: Induction Cooking
Facilitator’s Guide

Program Objectives
Participants will:
• Become aware of a more efficient cooking technology
• Gain knowledge about induction cooking.
• Increase awareness of differences in cookware materials.

Materials for Facilitators
1. Facilitator’s guide for The New Cool: Induction Cooking
3. Participant evaluation form
4. Examples of cookware (a cast iron pan, an aluminum pan, a stainless steel pan, and others if you want to show more examples)
5. Small magnets
6. Optional: a portable induction cooktop with which to demonstrate

Materials for Participants
1. The New Cool: Induction Cooking
2. Optional: A magnet for shopping for cookware

Facilitators
This program focuses on induction cooking, cookware for use with induction cooking, and the energy efficiency of induction cooking. Review the information in the participant handout and be familiar with it. If you have any questions or need clarification, check with the county Extension agent for help.

Begin the program by presenting in your own words an overview of the program. Explain how heat is generated for cooking with an induction cooktop. Discuss how a magnetic field is generated under the ceramic glass cooktop. Explain that the magnetic field reverses direction. This alternating magnetic direction causes the molecules in the pan to bump into each other and generate heat within the pan.

Discuss the heat transfer qualities of different cookware. In traditional gas and electric cooking, heat is transferred from the heat source to the cookware and then to the food. To obtain even heating with traditional heat sources, consumers like pans that spread the heat quickly and evenly over the bottom of the pan. Ask participants which material is the best conductor of heat. (Answer: silver) Explain that silver is expensive and soft, so we do not have silver cookware. Ask participants if they know the next best heat conduction material. (Answer: copper) Explain that we do not cook in cooper because the oxide (tarnish) on
Copper is toxic to humans. Copper pans are expensive and difficult to maintain. However, copper bottom pans were very popular at one time. Discuss how the third best heat conductor is aluminum. Many consumers cook with aluminum pans. One drawback to aluminum, with the exception of anodized aluminum, is that it also tarnishes. Cookware today is usually stainless steel, because of ease of cleaning, with an aluminum core, or an aluminum bottom. Cast iron does not readily conduct heat so it has not been the best surface cooking utensil. Once cast iron is hot, it holds the heat well.

Grandma’s cast iron skillet is back in style with induction cooking. Because the heat is generated in the cookware, the heat is evenly distributed.

Explain how with induction cooking only cookware with materials that react to a magnet can be used. Use a magnet to demonstrate how to know the cookware will work with an induction cooktop. Hold a magnet against the bottom of various types of cookware. It will cling to a cast iron skillet or pan, and pans that are iron with an enamel coating. Some stainless steel pans have an iron core or a high steel content and it will also cling to them. The magnet will not cling to stainless steel, aluminum, or ceramic glass pans. **Optional: Give each participant a magnet for future shopping.** (Small magnets can be purchased in packages of 50 at a craft store. They can be decorated by sticking a small cut-out on the top of the magnet.)

Present the information on the advantages of using an induction cooktop. If you have a portable induction cooktop available, demonstrate how fast it works by heating a cup of water in a sauce pan or skillet. Let the participants feel how cool the surface next to the pan is while the water is boiling. Use a non-magnetic pan or skillet to show how it does not work with an induction cooktop.

Ask participants if they currently cook with gas. Ask them why they like about cooking with gas. Usually participants like gas because it has almost instant heat control. If the flame is turned to a lower setting, the heat to the pan will instantly slow down. This makes it easy to go from boiling to simmer. Explain that the same type of heat control is an advantage of induction cooking. If you have a demonstration induction unit available, show participants how this happens.

Discuss the energy efficiency of gas cooktops, regular electric cooktops, and induction cooktops. The energy efficiency indicates how much of the energy consumed is transferred to the heating of the food. Gas cooktops are 45 to 55 percent efficient. Regular electric cooktops are 55 to 65 percent efficient. Induction cooktops are 90 to 95 percent efficient. Explain that by being more efficient, induction cooking consumes less energy overall and is environmentally friendly. Sometimes induction cooking is referred to as “green” cooking.

Explain to participants that there are a few disadvantages to induction cooking. The largest disadvantage is the high initial purchase price. Single portable induction units are available for $100 to $500. Separate built-in cooktops vary in price, but can cost from $1,500 to over $3,000. As more consumers purchase induction cooking appliances, the price should come down.

Explain that if the consumer previously had a gas cooking appliance, there may be some need for electrical work with the installation of an induction cooking appliance.
The last thing to explain is the care of a ceramic glass cooktop. If you have it available, show the special creamy cleaners for ceramic glass cooktops. Also explain the section in the participant handout about being careful about scratches or leaving sugary spills on the glass surface as it can cause permanent harm to the glass top.

If the participants ask any questions for which you do not know the answer, write them down and ask the county Extension agent for help. Tell the participant that you will find the answer and give it to her/him later.