Moist Cooking Methods (Simmer, Poach, Boil, Steam)

Objectives
Participant will:
1. State the similarities and differences between poach, simmer, boil, and steam, (moist heat cooking methods) and when to use them.
2. Identify and demonstrate poaching, simmering, boiling, and steaming.
3. Taste foods that have been prepared using one or more moist cooking methods.

Required Materials:

- Stove or hot plate.
- Saucepans.
- Pot for corn chowder (see recipe on pg 8).
- Water.
- Slotted spoon.
- Steaming rack.
- Egg for poaching.
- Potatoes or carrots for simmering.
- Pasta for boiling.
- Broccoli for steaming.
- Optional – Fish for steaming.
- Ingredients for corn chowder.
- Bowls, plastic spoons, napkins.
- Handouts (see pg. 7-8).
- Required paperwork for program.

Preparation Required:

- Review lesson plan.
- Gather ingredients and materials needed for the activities and demonstrations. Pre-cut vegetables for demonstration before class.
- Make copies of handouts you wish to distribute – enough for all class participants.
LESSON PLAN

Introduction
Time: 5 minutes

• Welcome everyone to the class and thank them for taking time to participate.
• Briefly introduce yourself and the program.
• Ask the class: Has anyone ever said this about you? “She’s such a bad cook, she can’t even boil water!”
• This lesson is designed to teach you different methods of moist cooking using poaching, simmering, steaming, and yes, boiling.

Objective 1: State the similarities and differences between poach, simmer, boil, and steam (moist heat cooking methods) and when to use them.
Time: 10 minutes

• Poaching, simmering and boiling are different stages of the same cooking process.
• Each method cooks food by immersing it in a liquid, usually water or stock.
• Ask the class: Which is hotter? Liquid that can poach food or liquid that can simmer food?
• Poaching is done by heating the water to a low temperature (160˚ - 180˚ F) where the liquid in the pan is hot but not bubbling at all, although some small bubbles may form at the bottom of the pot. Poaching is usually used for very delicate food items such as eggs or fish.
• Simmering is done at hotter temperatures than poaching (185˚ - 205˚ F). Bubbles will form and gently rise to the surface of the pan, but the water is not at a full rolling boil.
  o Food that is simmered cooks evenly because it stays at a constant temperature due to being surrounded by water.
  o Simmering is the standard method for preparing soups, stocks and starchy items such as potatoes.
• Boiling is the hottest of the three techniques (212˚F).
  o This is the method least likely to be used in cooking because it can destroy some delicate foods with its active action and the high temperature would toughen some foods like meat, fish, and eggs.
• Steaming
  o Once water is heated past boiling point (212˚F) it turns into steam.
  o Steam carries much more heat than boiling water yet steaming is a very gentle way to cook foods. It is an ideal method for cooking seafood, vegetables, and other delicate food items. Food that is steamed cooks quickly with very little loss of nutrients.

Objective 2: Identify and demonstrate poaching, simmering, boiling, and steaming.
Time: 20 – 30 minutes

Poaching Basics:
• Poaching is a fast way to cook tender protein foods like eggs or fish. The food doesn’t get stirred or disturbed too much so it doesn’t fall apart or break up. The poaching liquid adds taste to the food and then can be used as the base for a sauce. Poaching is a good way to cook without adding fat to the dish.
• Poaching is done by heating the cooking liquid to a simmer before slipping the food in very gently. The temperature is then adjusted so that bubbles form on the bottom of the pan but don’t break the surface. This allows the protein in the food to coagulate without toughening it. A full rolling boiling would break apart the structure of the food.
• When poaching eggs, use only eggs of high quality; low-quality eggs will spread badly when slipped into the simmering water. A high-quality egg, with its abundance of thick white, will...
have little tendency to spread away from the yolk. A poached egg should have a firm, tender white well around the thickened, unbroken yolk. The white should not have streamers, and the yolk should be cooked to where it begins to solidify.

**Poaching Activity:** *If group is small, allow participants to participate in activity as you explain the process. If group is large, just demonstrate while explaining process.*

- **Steps for poaching eggs**
  1. In saucepan, bring 2 to 3 inches of water to boil. Reduce heat to keep water gently simmering.
  2. Break cold egg into small dish, such as a custard cup. Holding dish close to water, gently slip egg into hot water. Repeat this step with each egg to be poached.
  3. Cook egg until white is completely set and yolk begins to thicken but is not hard, about 5 minutes.
  4. Lift egg out of water with slotted spoon. Drain in spoon or on paper towel. Serve hot.

**Simmering Basics:**

- Most foods cooked in a liquid are simmered rather than boiled because a full rolling boil is too hard on them. When a recipe calls for boiling foods, many times it is actually referring to a low boil or simmer rather than a full boil.
- **Ask the class:** What would happen to a simmering liquid that you added a cold food to? Usually when food that comes from the fridge or even food at room temperature is added to a hot liquid, the liquid is cooled by the food. For this reason it is best to bring the cooking liquid to a full boil first, add the food, then adjust the temperature to a simmer.
- Simmering is the most common method of cooking vegetables but requires careful management to prevent nutrient and color loss and to keep the vegetable from turning to mush.

**Simmering Activity:** *If group is small, allow participants to participate in activity as you explain the process. If group is large, just demonstrate while explaining process.*

- **Steps in simmering vegetables**
  1. For every cup of vegetables, use ¼ to ½ cup water (just enough water to cover vegetables).
  2. Bring water to full boil, then add vegetables.
  3. Let water come to a boil again; reduce heat and keep at a gentle simmer.
  4. When vegetables are tender, drain and reserve the liquid for soup stock or recipes calling for water. This helps to conserve vitamins cooked out into the liquid.

- **Begin cooking corn chowder. Have all vegetables pre-cut and demonstrate putting them in the boiling water, bringing them to a boil, then reducing the heat to simmer.**

**Vegetable cooking tips:**

- **Green Vegetables** give off acids, which cause loss of color. When simmering, leave the lid off for the first few minutes to allow these acids to escape.
- **Red Vegetables** will retain their color if a small amount of vinegar or lemon juice is added when simmering them. Simmer these vegetables for short time in a covered pan.
- **Yellow Vegetables** usually do not lose their color unless they are overcooked. Simmer them for a short time in a covered pan.
- **White Vegetables** turn yellow or gray from overcooking. Cook them for a short time in a covered pan.
• **Cooking with milk:**  
  o When you cook with milk you must be careful not to let it come to a full boil. Otherwise it will curdle and bring an undesirable taste and texture to your dish. To accomplish this, cook the other ingredients in the recipe first and then add the milk. All you want the milk to do is heat through at a temperature desirable for poaching.

**Boiling Basics:**  
• **Ask the class:** Can you think of a time when it is best to cook foods at a full rolling boil?  
• A full rolling boil is good for cooking pasta.  
• To cook pasta, bring a large pot of salted water to a full, rapid boil and drop in the pasta. Bring the pot back to a full boil and occasionally stir the pasta to keep it from sticking. When the pasta is al dente (firm but not hard), drain the pasta into a colander and rinse with cold water to stop the cooking process.

**Steaming Basics:**  
• Steaming is fast and gentle. Steaming helps retain the shape and color of foods, especially vegetables, as well as conserves the nutrients. The flavor of steamed vegetables is more distinct.  
• **Steaming Vegetables Activity:** *If group is small, allow participants to participate in activity as you explain the process. If group is large, just demonstrate while explaining process.*  
  o Steps in steaming vegetables:  
    1. Bring water to a boil in the bottom part of a double boiler or in a steamer.  
    2. Place vegetables in the steamer or perforated pan that fits on top of double boiler.  
    3. Cover and steam until tender. If the vegetables are green, leave the lid askew to help retain their color.  
• When done, place in serving bowl.

• **Optional Steaming Fish Activity:** *If you choose not to demonstrate steaming fish, you may still want to discuss the method.*  
• Steaming fish is a cooking method where steam from boiling water cooks the fish. No oil or sauce is cooked with the fish, yet steam retains the natural juices and flavors of fish. Properly cooked fish is opaque, with milky, white juices. The flesh flakes easily with a fork. Cook fish just until done using dry or moist heat (145º F). Undercooked fish has an unpleasant taste; overcooked fish is tough and rubbery.  
• Steaming is the easiest method of cooking fish quickly without the addition of any fats. All that is needed is a little boiling water in the bottom of a saucepan, a colander or bamboo steamer sitting over the water, and a tight fitting lid or enough aluminum foil to seal in the steam.  
• Steps in steaming fish  
  • Use a firm fleshed fish, such as sole, cod, halibut.  
  • Quarter-fill a saucepan with water and bring it to a boil.  
  • Place the fish fillets in a steamer or other perforated container, over the saucepan.  
    o Cover with lid or foil, and steam for about 3 minutes for fillets, 4 to 5 minutes for cutlets and 5 minutes for a whole small fish.  
  • The fish should cook thoroughly without turning. When the fish is cooked, the flesh should be firm to the touch.  
  • Carefully remove from the steamer. Internal temperature for steamed fish should be 145ºF.  
• **Ask the class:** Does anyone know what “braising” means?
• Braising is a cooking method that usually involves two steps. First you brown the food to develop color and flavor in a small amount of oil and then you finish cooking it by simmering it in a small amount of liquid in a covered pan. This technique works really well for cheaper, tough cuts of meat (think Swiss steak or beef stew).

**Objective 3: Taste foods that have been prepared using one or more moist cooking methods.**

**Time: 5-10 minutes**

- *Finish preparing the corn chowder. Allow it to finish heating through as you finish the lesson. Be sure that it does not get too hot and curdle.*
- *Summary:* As you can see, poaching, simmering, and boiling are basically the same method. Only the temperature of the water or cooking liquid changes.
- The food is cooked by immersing it in a hot liquid and cooking it until tender or done. The more tender the food to begin with, the lower the temperature of the cooking liquid.
- Steaming is a moist cooking method but in this case, the food is not immersed in the cooking liquid.
- *Ask the class:* Are there any questions?
- Serve a sample of corn chowder to the participants.
References


This material was funded by USDA’s Supplemental Nutrition Assistance Program – SNAP. The Supplemental Nutrition Assistance Program (SNAP) provides nutrition assistance to people with low income. It can help you buy nutritious foods for a better diet. To find out more, contact 1-800-221-5689 or visit online at http://www.fns.usda.gov/snap/. In accordance with Federal Law and U.S. Department of Agriculture policy, this institution is prohibited from discriminating on the basis of race, color, national origin, sex, age, religion, political beliefs or disability. To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800)795-3572.
Moist Cooking

What method do I use?

**Poach**
160°-180°F

Bubbles form on the bottom of the pan but don’t break the surface. Great for cooking delicate food items such as eggs or fish.

**Simmer**
185°-205°F

Bubbles form and gently rise to the surface of the pan. Great for cooking soups, stocks, and starchy items such as potatoes and pasta.

**Boil**
212°F

Bubbles rapidly break the water surface. Good to use for pasta. Avoid boiling meat, fish, eggs or any delicate food.

**Steam**
over 212°F

Food is cooked with steam that rises from boiling water. Great for cooking delicate foods such as seafood or vegetables.
Nothing says comfort like a simmering pot of soup!

**Corn Chowder**

1 quart water  
4 cups peeled, cubed potatoes  
1 small onion, chopped  
1 cup peeled, cut carrots  
1 cup chopped celery  
1 can evaporated skim milk  
1 cup frozen corn, thawed  
1 can creamed corn

Bring water to boil in large pot. Add potatoes, onion, carrots and celery. Bring to boil and reduce heat to a slow simmer until vegetables are soft (15 -20 minutes). Mash half of mixture with potato masher. Add evaporated milk, frozen corn and creamed corn. Simmer on low until heated through and serve.  
Yield: 8-12 servings

*Note: Take care not to let soup boil after adding milk to keep it from curdling.*

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**Steaming veggies is easy-peasy lemon-squeazy!**

**Steamed Fresh Peas**

4 cups fresh shelled peas*  
1 teaspoon olive oil  
Zest of one lemon  
¼ cup toasted, chopped almonds (optional)

Rinse shelled peas. Bring an inch of water to a boil in a saucepan with a steamer**. Add the peas to the steamer and cover; reduce heat to medium and let cook for 2-4 minutes or until peas are bright green. Be careful not to overcook them. Remove from heat, place in serving dish. Whisk lemon zest into olive oil and drizzle over peas. Toss with toasted almonds if desired.  
Yield: 4-6 servings

*A bag of frozen peas may be substituted for fresh; also try asparagus, broccoli, green beans, etc.  
**Note: If you don't have a steamer, you can place the peas directly into the boiling water.*

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