

## The Clean Kitchen Test

In the home, food safety concerns revolve around three main functions: food storage, food handling and cooking. To see how well you're doing in each, take this quiz, and then read on to learn how you can make the meals and snacks from your kitchen the safest possible. Choose the answer that best describes the practice in your household, whether or not you are the primary food handler.

1. The temperature of my refrigerator is:
  - a. 50 °F (10 °C).
  - b. 40 °F (5 °C).
  - c. I don't know; I've never measured it.
2. The last time we had leftover cooked stew or a food with meat, chicken or fish, the food was:
  - a. Cooled to room temperature, then put in the refrigerator.
  - b. Put in the refrigerator immediately after the food was served.
  - c. Left at room temperature overnight or longer.
3. The kitchen sink drain, disposal and connecting pipe at home were last sanitized:
  - a. Last night.
  - b. Several weeks ago.
  - c. Can't remember.
4. If a cutting board is used in my home to cut raw meat, poultry or fish and it is going to be used to chop another food, the board is:
  - a. Reused as is.
  - b. Wiped with a damp cloth.
  - c. Washed with soap and hot water.
  - d. Washed with soap and hot water, sanitized with a mild chlorine bleach solution.
5. The last time we had hamburgers, I ate mine:
  - a. Rare (140 °F).
  - b. Medium (160 °F).
  - c. Well-done (170 °F).
6. The last time there was cookie dough in my home, the dough was:
  - a. Made with raw eggs, and I sampled some.
  - b. Made with raw eggs and refrigerated, then I sampled some of it.
  - c. Store-bought, and I sampled some.
  - d. Not sampled until baked.
7. I clean my kitchen counters and other surfaces that come in contact with food with:
  - a. Water.
  - b. Hot water and soap.
  - c. Hot water and soap, then bleach solution.
  - d. Hot water and soap, then commercial sanitizing agent.
8. When dishes are washed in my home, they are:
  - a. Washed and dried in an automatic dishwasher.
  - b. Left to soak in the sink for several hours and then washed with soap in the same water.
  - c. Washed right away with hot water and soap in the sink and then air-dried.
  - d. Washed right away with hot water and soap in the sink and immediately towel-dried.
9. The last time I handled raw meat, poultry or fish, I cleaned my hands afterwards by:
  - a. Wiping them on a towel.
  - b. Rinsing them under hot, cold or warm tap water.
  - c. Washing them with soap and warm water.
10. Meat, poultry and fish products are defrosted in my home by:
  - a. Setting them on the counter.
  - b. Placing them in the refrigerator.
  - c. Microwaving.

11. When I buy fresh seafood, I:
- Buy only fish that's refrigerated or well iced.
  - Take it home immediately and put it in the refrigerator.
  - Sometimes buy it straight out of a local fisher's creel.
12. I realize people should be especially careful about not eating raw seafood, if they have:
- Diabetes.
  - HIV infection.
  - Cancer.
  - Liver disease.

## ANSWERS

**1. Refrigerators should stay at 40 °F (5 °C) or less, so if you chose answer B, give yourself two points.** If you didn't, you're not alone.

Many people overlook the importance of maintaining an appropriate refrigerator temperature. In many households, the refrigerator temperature is above 50 °F (10 °C). Keep a thermometer in both the refrigerator and freezer at all times and, if needed, adjust the temperature control dial.

A refrigerator temperature of 40 °F (5 °C) or less is important because it slows the growth of most bacteria. The temperature won't kill the bacteria, but it will keep them from multiplying, and the fewer there are, the less likely you are to get sick from them. Keep the freezer at 0 °F (-18 °F) or less to stop bacterial growth (although it won't kill all bacteria already present).

**2. Answer B is the best practice; give yourself two points if you picked it.** Hot foods should be refrigerated as soon as possible within two hours after cooking. Divide large amounts into small, shallow containers for quick cooling in the refrigerator. Don't overload the refrigerator or freezer. Cool air must circulate to keep foods safe. But don't keep the food if it's been standing out for more than two hours. Don't taste test it, either. Even a small amount of contaminated food can cause illness.

Date leftovers so they can be used within a safe time. Generally, they remain safe when refrigerated for three to five days. If in doubt, throw it out.

**3. If answer A best describes your household's practice, give yourself two points. Give yourself one point if you chose B.** The kitchen sink drain, disposal and connecting pipe are often overlooked, but they should be sanitized periodically. This can be done by pouring down the sink a solution of 1 teaspoon (5 milliliters) of chlorine bleach in 1 quart (about 1 liter) of water or a solution of commercial kitchen cleaning agent made according to product directions. Food particles get trapped in the drain and disposal and, along with the moistness, create an ideal environment for bacterial growth.

**4. If answer D best describes your household's practice, give yourself two points.** Washing with soap and hot water and then sanitizing with a mild bleach solution is the safest practice.

If you picked A, you're violating an important food safety rule: Never allow raw meat, poultry or fish to come in contact with other foods. Answer B isn't good, either Improper washing, such as with a damp cloth, will not remove bacteria. And answer C, washing only with soap and hot water, may not do the job either.

To prevent cross-contamination from a cutting board, the FDA advises consumers to follow these practices:

- Use smooth cutting boards made of hard maple or a non-porous material such as plastic that can be easily cleaned. They should be free of cracks and crevices.
- Wash cutting boards with hot water, soap and a scrub brush to remove food particles. Sanitize the boards by putting them through the automatic dishwasher or rinsing them in a solution of 1 teaspoon of chlorine bleach in 1 quart of water.
- Always wash and sanitize cutting boards after using them for raw foods and before using them for ready-to-eat foods. Consider using one cutting board only for foods that will be cooked, such as raw fish, meat or poultry, and another only for ready-to-eat foods, such as bread, fresh fruit, and cooked meats. Disposable cutting boards are a newer option.

**5. Give yourself two points if you picked answer B or C.** Ground beef must be cooked to an internal temperature of 160 °F. Using a food thermometer is crucial because some ground meat may prematurely brown before a safe internal temperature has been reached. On the other hand, some ground meat patties cooked to 160 °F or above may remain pink inside; thus the color of meat alone is not a reliable indicator of ground beef safety. If eating out, order your ground beef to be cooked well-done.

Temperatures for other foods to reach to be safe include:

- Beef, lamb and veal roasts, steaks and chops, 145 °F (for medium rare) 160 °F (for medium).
- Fresh pork roasts, steaks and chops, 160 °F.
- Ground beef, veal and lamb 160 °F.
- Poultry 165 °F.
- Fish, 145 °F.

**6. Answer D — eating the baked product — will earn you two points.** Cooking the egg or egg-containing food product to at least 160 °F kills the bacteria. If you answered A or B, you may be putting yourself at risk for infection with *Salmonella enteritis*, a bacterium found in shell eggs. Other foods containing raw eggs, such as homemade ice cream, cake batter, mayonnaise, and eggnog, carry a Salmonella risk too. Their commercial counterparts are usually made with pasteurized egg; that is, eggs which have been heated sufficiently to kill bacteria, and also may contain an acidifying agent that kills the bacteria. But the best practice, even when using products containing pasteurized eggs, is to eat the foods only as they are intended to be eaten, so answer C, sampling the unbaked store-bought cookie dough, will not earn you any points.

Some other tips to ensure egg safety:

- Buy only refrigerated eggs, and keep them refrigerated until you are ready to cook and serve them.
- Cook eggs thoroughly until both the yolk and white are firm, not runny, and scramble until there is no visible liquid egg.
- Cook pasta dishes and stuffings that contain eggs thoroughly (to 160 °F).

- Make homemade ice cream and eggnog safely from a cooked base. Heat the egg-milk mixture gently, stirring constantly, until it reaches 160 °F before adding other ingredients.

**7. Answers C or D will earn you two points each; answer B, one point.** Bleach and commercial kitchen cleaning agents are the best sanitizers — provided they're diluted according to product directions. They're the most effective at getting rid of bacteria. Hot water and soap does a good job, too, but may not kill all strains of bacteria. Water alone may get rid of visible dirt, but not bacteria.

Bacteria can live in kitchen towels, sponges and cloths. Wash kitchen towels and cloths before reusing them, or use paper towels and throw them away. Replace sponges every few weeks.

**8. Answers A and C are worth two points each. There are potential problems with B and D.** When you let dishes sit in water for a long time, the food left on the dishes contributes nutrients for bacteria, so the bacteria will multiply. When washing dishes by hand it's best to wash them all within two hours. Also, it's best to air-dry them so you don't handle them while they're wet.

**9. The only correct practice is answer C.** Give yourself two points if you picked it. Wash hands with warm water and soap for at least 20 seconds before and after handling food, especially raw meat, poultry and fish. If you have an infection or cut on your hands, wear rubber or plastic gloves. Wash gloved hands just as often as bare hands because the gloves can pick up bacteria.

**10. Give yourself two points if you picked B or C.** Food safety experts recommend thawing foods in the refrigerator or the microwave oven, or putting the package in a watertight plastic bag submerged in cold water and changing the water every 30 minutes. Changing the water ensures that the food is kept cold, an important factor for slowing bacterial growth on the outer thawed portions while the inner areas are still thawing. Gradual defrosting in the refrigerator is best because it helps maintain quality.

When microwaving, follow package directions. Leave about 2 inches between the food and the inside surface of the microwave to allow heat to circulate. Smaller items will defrost more evenly than larger pieces of food. Foods defrosted in the microwave oven should be cooked immediately.

Do not thaw meat, poultry and fish products on the counter or in the sink without cold water; bacteria can multiply rapidly at room temperature. Foods should also be marinated in the refrigerator, not on the counter. Discard the marinade after use because it contains raw juices, which may harbor bacteria.

**11. Answers A and B are correct. Give yourself two points for either.** When buying fresh seafood, buy only from reputable dealers who keep their products refrigerated or properly iced. Be wary, for example, of vendors selling fish out of their creel (canvas bag) or out of the back of their truck. Once you buy the seafood, immediately put it on ice, in the refrigerator, or in the freezer.

Other tips for choosing safe seafood:

- Don't buy cooked seafood, such as shrimp, crabs or smoked fish, if displayed in the same case as raw fish. Cross-contamination can occur.
- Don't buy frozen seafood if the packages are open, torn or crushed on the edges. Check for signs of frost or ice crystals, indications that the fish has either been stored for a long time or has thawed and refrozen.
- Store fresh seafood, meat and poultry in the coldest part of the refrigerator if it will be used within two days of purchase. Otherwise, wrap the food tightly in moisture-proof freezer paper and store in the freezer.
- Recreational fishers who plan to eat their catch should follow state and local government advisories.
- Discard shellfish, such as lobsters, crabs, oysters, clams and mussels, if they die during storage or if their shells crack or break. Live shellfish close up when the shell is tapped.

**12. If you are under treatment for any of these diseases, you should avoid raw seafood. Give yourself two points for knowing one or more of the risky conditions.** People with certain diseases and conditions need to be especially careful because their diseases or the medicines they take may put them at risk for serious illness or death from contaminated seafood. These conditions include:

- Liver disease, either from excessive alcohol use, viral hepatitis, or other causes
- Hemochromatosis, an iron disorder
- Diabetes
- Stomach problems, including previous stomach surgery and low stomach acid (for example, from antacid use)
- Cancer
- Immune disorders, including HIV infection
- Long-term steroid use, as for asthma and arthritis

People with these diseases or conditions should only eat seafood that has been thoroughly cooked.

## **RATING YOUR HOME'S FOOD PRACTICES**

**24 points:** Feel confident about the safety of foods served in your home.

**12 to 23 points:** Reexamine food safety practices in your home. Some key rules are being violated.

**11 points or below:** Take steps immediately to correct food handling, storage and cooking techniques used in your home. Current practices are putting you and other members of your household in danger of foodborne illness.

For more information on safe food handling practices, contact your local Clemson University Extension office, or the Home and Garden Information Center toll-free at 1-888-656-9988.

SOURCE: U.S. FDA (2002, July). *Can Your Kitchen Pass the Food Safety Test?* [WWW document]. URL <http://vm.cfsan.fda.gov/~dms/fdkitchn.html>

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This information has been reviewed and adapted for use in South Carolina by E.H. Hoyle, Extension Food Safety Specialist, Clemson University.

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