



Assessment of Doneness in Cooked Ground Beef

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Because raw meat and poultry products may contain harmful bacteria, safe handling and proper cooking of meat and poultry is recommended. The goal of proper food safety practices is to prevent situations which promote bacterial growth, cross contamination, and food-borne illness. *E. coli* O157:H7 is a strain of bacteria that has caused numerous outbreaks of food borne disease. The majority of *E. coli* outbreaks since 1982 have been linked to undercooked ground beef. While this pathogen can survive both refrigeration and freezer storage, thorough cooking will kill it.

Recently, the Food Safety and Inspection Service (FSIS) of the USDA recommended consumers use a meat thermometer when cooking ground beef to assess doneness. When a thermometer is inserted into cooked ground beef, it should read 160°F in order to be done and safe to eat. FSIS determined that the use of color (i.e., absence of red or pink in meat) to assess doneness is not reliable.

There are two problems with using the color of ground beef to test for doneness and guarantee the destruction of pathogens:

1. Some ground beef may appear to have lost all pink color before it is fully cooked. If raw ground beef is somewhat brown already, it may look fully cooked before it reaches a safe temperature.
2. Some lean ground beef may remain pink at temperatures well above the 160°F final cooking temperature recommended for consumers.

Consumer Advice

- ◆ Use an instant-read thermometer: insert so sensitive end is in the center of patty. Check the thermometer instructions for correct use and calibration. Cook to a minimum temperature of 160°F in the center of the thickest part of the meat.

- ◆ For ground beef patties, a digital instant-read food thermometer may be used toward the end of the cooking time and inserted at least ½ inch into the thickest part of the patty. If the ground beef patty is not thick enough to check from the top, the thermometer should be inserted sideways. If uncertain about the temperature reading, take a reading in a second location. Ground beef should be cooked to an internal temperature of 160°F on an instant-read food thermometer.
- ◆ Consumers should not eat ground beef patties that are pink or red in the middle unless a food thermometer is used to verify the temperature.
- ◆ Fresh or thawed ground meat should be used quickly, within one day. You should either tightly wrap or freeze, or store ground beef for no more than one day in a 40°F refrigerator.
- ◆ When eating out, ask your server if ground beef patties have been cooked to at least 155°F for 15 seconds (as recommended by the U.S. Food and Drug Administration Food Code), which is a safe option for restaurants or food service operations.

For other questions about Food Safety or food borne illness, contact your county Cooperative Extension office.

References

- Food Safety and Inspection Service (FSIS), USDA. Color of Cooked Ground Beef and Juices as it Relates to Doneness. April 2003. http://www.fsis.usda.gov/Fact_Sheets/Color_of_Cooked_Ground_Beef/index.asp
- Meer, Ralph & S. Misner, Assessment of Doneness in Cooked Ground Beef, University of Arizona Cooperative Extension. December 1997.
- Safe Food Handling, The Color of Meat and Poultry, http://www.usda.gov/fact_sheets/Color_of_Meat_&_Poultry/index.asp, August 7, 2007.