

Mechanically Tenderized Beef and Food Safety

What is mechanically tenderized meat?

Cuts of beef, such as steaks and roasts, may be mechanically tenderized using machines or tools specifically designed for this process. Mechanical tenderizers use blades or needles to pierce meat and break connective tissue and muscle fibers. This improves the tenderness of meat as well as the flavor once cooked. Mechanical tenderization may be used by suppliers, retailers and restaurants, and even consumers at home. It is very difficult to tell if a piece of meat has been mechanically tenderized unless it is labeled as such.

With solid cuts of beef, any harmful bacteria will only exist on the outside surface of the meat and be destroyed during the cooking process. Mechanically tenderizing beef can spread surface contamination to the inside of the meat, meaning the meat must be cooked to a higher temperature so that harmful organisms such as *E.coli* 0157:H7 are destroyed.

Potential for foodborne illness

Pregnant women, young children, the elderly and people with weakened immune systems are at higher risk of suffering more serious effects and complications from foodborne illness. These people, along with their caregivers, should make sure that mechanically tenderized beef products are thoroughly cooked and safely handled.

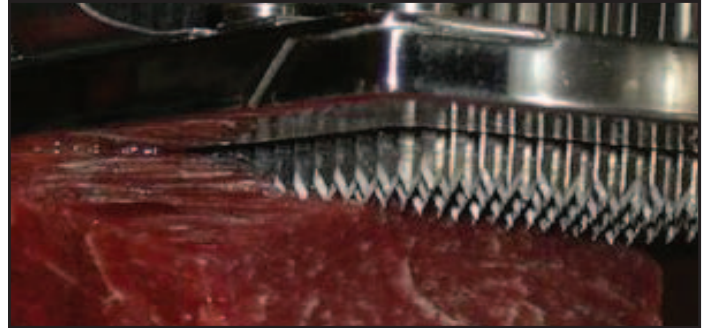
The most common symptoms of foodborne illness include stomach cramps, nausea, vomiting, diarrhea, headache and fever. Symptoms may begin several hours to days after eating contaminated food.

Food safety tips

Below are food safety tips to minimize risk of foodborne illness from mechanically tenderized beef.

1. Cooking

- Health Canada and the Public Health Agency of Canada recommend cooking mechanically tenderized cuts of beef to a minimum internal temperature of 71°C (160°F). If you are not sure whether a piece of meat has been mechanically tenderized, it is recommended to cook it to 71°C (160°F). Reaching this internal temperature will result in "medium" doneness.



- Use a thermometer to verify that the minimum internal cooking temperature is reached.
- #### 2. General food safety tips
- Wash your hands before and after handling food for 20 seconds with soap and warm water.
 - Make sure that knives and other utensils, dishes, cutting boards and countertops are clean before and after using. These can be cleaned with soap and hot water. Avoid using sponges and other materials that are difficult to keep clean and dry. These harbor bacteria and their use will contaminate your surfaces.
 - Keep raw meats (and fish) separate from all other foods when storing in a refrigerator or freezer. Raw meats (and fish) should be stored below all other foods to prevent cross-contamination from juices dripping onto foods.
 - Maintain the temperature of your refrigerator at 4°C (40°F) or below. It is a good idea to keep a thermometer in the main part of the refrigerator to check routinely.
 - Refrigerate or freeze leftovers promptly.

More information

Health Canada release: October 20, 2012 - Information for Canadians on cooking mechanically tenderized beef: http://www.hc-sc.gc.ca/ahc-asc/media/advisories-avis/_2012/2012_158-eng.php

Specific foodborne diseases: http://www2.gnb.ca/content/gnb/en/departments/ocmoh/cdc/content/food_andwaterborne.html

General food safety information: http://www2.gnb.ca/content/gnb/en/departments/ocmoh/healthy_environments.html