

HAMBURGER FOOD SAFETY

Hamburgers are a popular form of ready-to-eat foods; however, they can serve as a vehicle for pathogenic bacteria and if not cooked, handled or stored properly, can potentially lead to food poisoning once consumed.

Is it dangerous to eat a raw or undercooked burger patty?

Raw and undercooked hamburger patties may contain harmful bacteria that can produce foodborne illness such as pathogenic strains of *Escherichia coli* (*E.coli*), mostly due to improper handling and preparation of the meat. This specific pathogenic bacteria can potentially result in a serious condition that affects the blood and blood vessels.

Eating raw or undercooked patties is an emerging trend in Australia and therefore, no outbreaks of foodborne illness due to their consumption have yet been recorded.

However, in the USA it has been a common practice for some time and has resulted in a number of outbreaks of *E. coli* and a total of five deaths since the first outbreak was recorded in the USA in 1993 (Table 1).

Table 1. Outbreaks in the USA linked to hamburgers and ground meat

Year	Sick	Hospitalised	Deaths
2015	37	13	0
2014	3	3	1
2009	23	6	0
2008	79	32	0
2007	40	21	0
2007	47	0	0
2002	28	7	0
2000	46	24	0
1993	501	151	4

Source^{1,2}: Marler, 2015

Why is it ok to eat a rare steak and not a rare patty?

Different meats require different cooking temperatures to destroy harmful bacteria.

For example, a steak need only be seared on the outside and can be rare inside, while minced meat must be carefully cooked to destroy bacteria.

That's because when cooking a steak, all areas that have been exposed to the elements are heated to the point where bacteria will be killed. With minced meat, the very act of mincing meat means the outsides end up on the inside and the bacteria would be spread throughout the entire patty.

In short, minced meat has far greater surface area than steak and therefore presents a greater risk of bacterial contamination.

Food safety tips

- Proper cooking of hamburger patties minimises the risk of food poisoning
- Keeping everything clean is critical to improving food safety
- Cool down cooked burger patties quickly if intended to store
- Keep raw and cooked food separate
- Do not allow leaking juices to drip on other foods
- Refrigerate or freeze minced meat as soon as possible after purchase



What are the health risks?

Undercooking meat, poultry and other foods can be very dangerous. Raw meat and poultry can contain harmful bacteria, including pathogenic *E. coli*, *Salmonella*, *Campylobacter jejuni*, *Listeria monocytogenes*, and *Staphylococcus aureus*. It is important to remember that the presence of harmful bacteria cannot be assessed through sight or smell.

Ensuring food safety of a hamburger

In order to reduce the potential for foodborne illness, minced meat should be cooked right through to the centre. No pink should be visible and juices should run clear. Some guidelines suggest cooking hamburgers until the thermometer reads at least 71°C internal temperature.

To ensure your meat is free from harmful bacteria, it is important that a clean and sanitised thermometer is used and placed in the thickest portion of the meat to check the temperature of the food.

Reducing the risk of contamination

- Keep raw minced meat cold (4°C or lower) and cook within no more than two days after purchasing.
- Remember, if raw hamburger patties are kept in the temperature danger zone which is between 5°C and 60°C, bacteria will multiply rapidly.
- Use separate chopping boards and utensils for produce and raw meat.
- Always wash hands before and after touching raw meat, washroom use and handling pets.
- Keep kitchen surfaces clean and sanitised, changing dishcloths daily and sanitise premises before and after preparing food.
- Never allow ready-to-eat foods like lettuce, tomatoes or cheese to come in contact with raw meat or its juices.
- Throw away left-over marinade or sauce. It is advised to prepare just enough for single usage.

More information

- Visit the website at www.foodauthority.nsw.gov.au
- See our *Cooking temperatures* page on the website at www.foodauthority.nsw.gov.au/foodsafetyandyou/food-at-home/cooking-temperatures
- Phone the helpline on 1300 552 406

¹CDC. 2015. Multistate outbreak of shiga toxin-producing *E. coli* O26 infections linked to Chipotle Mexican Grill in Washington and Oregon. (<http://www.cdc.gov/ecoli/2015/O26-11-15/index.html>)

²Marler B. 2015. A history of hamburger *E. coli* outbreaks. (<http://luckypeach.com/a-history-of-hamburger-e-coli-outbreaks/>)

About the NSW Food Authority: The NSW Food Authority is the government organisation that helps ensure NSW food is safe and correctly labelled. It works with consumers, industry and other government organisations to minimise food poisoning by providing information about and regulating the safe production, storage, transport, promotion and preparation of food.

Note: This information is a general summary and cannot cover all situations. Food businesses are required to comply with all of the provisions of the Food Standards Code and the *Food Act 2003* (NSW).



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February 2016
NSW/FA/FI258/1602