

Introduction: less than thoroughly cooked beef burgers guidance

An overview of different burger cooking methods, purpose of the guidance, its legal status and the intended audience.

This guidance has been produced by the Food Standards Agency (FSA), in consultation with key stakeholders including food businesses, trade organisations, food safety consultants and local authorities (LAs).

The FSA first produced a guidance document on less than thoroughly cooked (LTTC) beef burgers in 2016, as it had become apparent that consumer demand for lightly cooked burgers was increasing and that food businesses and enforcement authorities (EAs) needed information to help them understand the necessary controls and systems. An update to the guidance in 2018 was limited to advice about consumer messaging.

When meat is minced and burgers are formed, harmful bacteria which are normally on the outside of a joint of meat can be spread throughout the burgers. If burgers are not thoroughly cooked there is a risk that harmful bacteria may survive and cause food poisoning.

Minced meat may be formed into a burger or into a patty. For the purpose of this guidance a burger consists of minced meat with added ingredients, while a patty consists of minced meat with less than 1% salt added. In this guidance when the term burgers is used it also includes patties.

When burgers are thoroughly cooked, achieving a temperature of 70°C for two minutes, or equivalent all the way through, this will result in a 99.9999% (six-log) reduction in harmful bacteria which are a risk to human health and may be present in meat. This reduction in bacteria is generally considered to reduce the risk of food poisoning to an acceptable level.

The colour of a beef burger cannot be used as the sole indication of safe cooking. Some thoroughly cooked beef burgers appear to be LTTC as they are pink in the middle, for example when they have been cooked using the sous vide method which achieves a lower temperature but for a longer period of time.

The FSA acknowledges that some consumers wish to eat LTTC beef burgers, which are considered a greater risk of food poisoning than beef burgers normally consumed thoroughly cooked. This guidance aims to balance the risks to consumers with informed consumer choice.

Whilst there is no legal requirement to cook meat for a specific time or to a specific temperature, food businesses are legally obliged to produce safe food. Food businesses can serve LTTC beef burgers where they can demonstrate that they have suitable procedures in place and have controlled all hazards identified, including the microbiological risks, to an acceptable level.

This guidance provides advice on the source control method which can be used to produce LTTC beef burgers. This method can provide an equivalent level of safety to conventional thorough cooking, but strict controls and systems need to be in place. This guidance also includes overviews of two methods – sear and shave, and sous vide – which can be used to produce beef

burgers that may appear to be LTTC as they are pink in the middle. The overviews are in [Annexes 4](#) and [5](#).

For the purposes of this guidance, a LTTC beef burger is a beef burger which has been produced using the source control method.

Food businesses intending to serve LTTC beef burgers must inform their LA beforehand and must be able to demonstrate that suitable controls are in place. This will include a food safety management system (FSMS) which identifies the hazards and controls needed for producing and/or serving beef burgers that will be LTTC.

A consumer message is required at the point of sale to help consumers understand the potential risks of eating LTTC beef burgers so they can make an informed choice when ordering. The consumer message also aims to discourage consumers from eating LTTC beef burgers at home.

Food businesses with a primary authority relationship (England and Wales only) may request the support of the primary authority in meeting their obligations. This does not affect the responsibility that the food business has to comply with the law.

Intended audience

This guidance is intended for food businesses that serve LTTC beef burgers and beef burgers that appear to be LTTC, and the enforcement officers who approve, register and inspect such food businesses.

Guidance is also provided for the businesses which serve LTTC beef burgers that they make themselves on site, either from minced meat they have bought in, or by mincing beef themselves and making beef burgers from it.

This guidance may also be useful to food businesses that supply beef, minced beef and beef burgers to be LTTC, and the enforcement officers who carry out official controls at these food businesses.

Purpose of the guidance

This guidance is intended to help food businesses and enforcement officers to understand the controls and systems which can be used to produce and serve LTTC beef burgers. It also gives an overview of methods that can be used to cook beef burgers which appear to be LTTC. The guidance will help food businesses to achieve consumer safety and legal compliance.

Burgers made from meat other than beef are not within the scope of this guidance. FSA advice is that burgers made from other meats should be thoroughly cooked.

Legal status of the guidance

This guidance document has been updated and published since the UK exited from the EU and the end of the transition period. References to EU legislation have therefore been updated to reflect Retained EU Law (REUL). **In Northern Ireland EU law continues to apply in respect to the majority of food and feed hygiene and safety law**, as listed in the Northern Ireland Protocol (now referred to as the Windsor Framework), and retained EU law does not apply in these circumstances. [Please note that the UK Government published ['The Windsor Framework: A new way forward' - Command Paper 1245](#) (PDF) to set out new arrangements which will be applied in place of the original Protocol.]

Retained EU Law is identified in FSA guidance using the following formats: **Retained Regulation (EU) No. XXX/XXXX** or **Regulation (EU) No. XXX/XXXX (REUL)**.

This guidance has been produced to provide:

- guidance on the legal requirements relevant to the production and service of LTTC beef burgers and beef burgers which appear to be LTTC
- links to the legislation that applies can be found in legislation boxes at the end of each page and in [Annex 1](#)
- best practice guidance. You are not required by law to follow best practice guidance.

The guidance on legal requirements cannot cover every situation, food businesses and EAs may need to consider the relevant legislation itself to see how it applies in their circumstances. Food businesses with specific queries may seek advice from the relevant EA, which will usually be the environmental health/trading standards department of their LA.

Following this guidance will help food businesses comply with the law. Food businesses are not required by law to follow best practice guidance. Guidance on best practice is identified with a heading of 'Best practice':