

# Campylobacter: the science

**Campylobacter is the generic name for a number of species of bacteria that can cause food poisoning in people. They cause more cases of food poisoning in the UK than salmonella, E. coli and listeria combined.**

Campylobacter bacteria are commonly found on poultry meat. Between 50% and 80% of cases of campylobacter food poisoning in the UK and other EU countries can be attributed to poultry sources, mostly to raw poultry meat.<sup>1</sup>

An FSA survey in (2007–8)<sup>2</sup> indicated that 65% of chicken on sale in UK shops was contaminated with campylobacter. A new FSA survey will update this figure in 2015.

A quantitative risk assessment based on data from four countries concluded that there is a direct relationship between the prevalence of campylobacter in broiler flocks and public health risk, meaning that reducing the level of contamination on poultry meat should result in a reduction in human disease<sup>3</sup>.

The amount of campylobacter present on poultry is measured in terms of the number of bacteria on a given weight of skin, expressed technically as colony forming units per gram (cfu/g).

A recent Dutch study<sup>4</sup> concluded that limiting the level of campylobacter on poultry to below 1,000 cfu/g could be expected to deliver a significant reduction in the risk of humans contracting campylobacter poisoning.

Since 2009 the FSA has been working with industry to tackle campylobacter in poultry through a Joint Working Group (JWG). The JWG agreed a target to reduce the percentage of chickens with more than 1000 cfu/g at the end of the slaughter process, from 27% in 2008 to 19% by 2013, and to 10% by 2015.

Monitoring suggests there has been no evidence of a change in the proportion of most highly contaminated birds since 2008.

**50%–80%**  
**food poisoning**  
**is from raw meat**

**65%**  
**of chicken is**  
**still contaminated**



1. Scientific Opinion on Quantification of the risk posed by broiler meat to human campylobacteriosis in the EU (adopted 9 December 2009) <http://www.efsa.europa.eu/en/scdocs/scdoc/1437.htm>

2. <http://food.gov.uk/science/research/surveillance/fsisbranch2009/fsis0409>

3. EFSA Journal 2011; 9(4):2105

4. [http://www.rivm.nl/en/Documents\\_and\\_publications/Scientific/Reports/2013/juni/Microbiological\\_criteria\\_as\\_a\\_decision\\_tool\\_for\\_controlling\\_Campylobacter\\_in\\_the\\_broiler\\_meat\\_chain](http://www.rivm.nl/en/Documents_and_publications/Scientific/Reports/2013/juni/Microbiological_criteria_as_a_decision_tool_for_controlling_Campylobacter_in_the_broiler_meat_chain)

## The appliance of science

There is currently no 'silver bullet' solution to the problem of campylobacter in chicken.

Some surface antimicrobial treatments that can reduce the level of surface contamination (such as lactic acid, chlorine compounds or peroxyacetic acid) have been tried in the UK and in other countries and found to have some benefit, but none is yet approved for use on poultry within the EU.

A novel process of chilling the surface of birds with extremely cold gases appears to offer worthwhile reductions in campylobacter numbers. Trials of a prototype machine at near commercial scale are taking place.

The FSA expects farmers and producers to maximise the effectiveness of biosecurity, working through third party assurance schemes to drive a change in culture at all levels in these businesses.

To assist slaughterhouses and processors, we will work to address any regulatory barriers that might prevent the adoption of new technologies that are effective in reducing surface contamination, such as surface chilling, antimicrobial washes or other techniques.

We are also asking retailers to develop packaging solutions that reduce campylobacter during storage and in the kitchen, and to help educate their customers on cooking poultry safely.

Since 2010, the FSA has committed £5.1 million to support research underpinning work in this area.

**Spread the word, not the germs!**

**£5.1 million**  
**committed to**  
**campylobacter**  
**research by**  
**the FSA**

