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Campylobacter and Listeria infections still rising in the EU

Human cases of Listeriosis and Campylobacteriosis rose once again in 2014, continuing an upward trend that began in 2008. Salmonellosis cases increased slightly for the first time since 2008. These are the main findings of the latest annual report by the European Food Safety Authority (EFSA) and the European Centre for Disease Prevention and Control (ECDC) on zoonoses and foodborne outbreaks in the European Union.

Listeriosis infections reported in humans increased by 16% compared with 2013: there were 2,161 confirmed cases in 2014. Although this number is relatively low, the rise of reported Listeriosis cases is of concern as the surveillance of these infections is focused on severe forms of the disease, with higher death rates than for other food-borne diseases, particularly among the elderly and patients with a weak immune system. However, *Listeria monocytogenes*, the bacterium that causes Listeriosis in humans and animals, seldom exceeded the legal safety limits in ready-to-eat foods – the most common foodborne source of human infections.

Campylobacteriosis remains the most commonly reported foodborne disease in the EU and has been so since 2005. The number of confirmed cases in the EU in 2014 was 236,851, an increase of 22,067 cases (10%), compared with 2013. The majority of EU Member States reported an increase in the number of Campylobacteriosis cases in 2014, which could be partly explained by improvements in the

surveillance system and/or improved diagnostics for Campylobacteriosis in several Member States in recent years. In food, Campylobacter was mostly found in chicken meat.

In 2014, Salmonellosis cases increased slightly for the first time over the period 2008-2014, partly due to changes in the number of Member States reporting. However, there has been a statistically significant downward trend of Salmonellosis in the seven-year period of 2008–2014. This is mainly due to the successful Salmonella control programmes put in place for poultry by EU Member States and the European Commission. The number of reported Salmonella outbreaks within the EU has decreased by 44% since 2008.

The EFSA-ECDC is based on data collected by 32 European countries (28 Member States and four non-Member States).

Monitoring the behaviour of poultry flocks to determine the likelihood of Campylobacter infection

I have a small chicken run at the bottom of my garden (big enough for half a dozen hens) and would recommend anyone who has the space to do likewise, as you really cannot beat collecting and eating nice fresh free range eggs. I have always assumed that their movements around the run (although quite comical) were completely random, but a new technique which monitors the movement of chickens could be used to predict which flocks are at risk of becoming infected with Campylobacter.

Researchers from Oxford University have found that by using a camera system to analyse the 'optical flow' of chickens, at-risk flocks can be detected when the birds are only seven to 10 days old, much earlier than is usually possible with conventional on-farm sampling methods.

The Oxford team tested the hypothesis that flocks colonised with *Campylobacter* might be distinguishable by their behaviour. The team used a novel and non-invasive way of monitoring the chicken behaviour by analysing optical flow patterns from cameras inside broiler houses.

Campylobacter-positive flocks showed lower mean optical flow (less average movement) and higher kurtosis (less uniform movement) than flocks without the bacteria, as early as the first 10 days of life.

Professor Marion Dawkins, professor of animal behaviour at Oxford University stated: "Use of this optical flow information has the potential to make a major impact on the management of commercial chicken flocks, for the benefit of producers, consumers and the birds themselves. Farm managers able to access such information in real time would have early warning of which of their flocks were most at risk of health and welfare problems, enabling them to intervene before these became serious and helping them to produce higher quality, healthier food with better welfare."

EFSA recommends research into EAEC

The World Health Organisation have published a new document entitled five keys to safer food. The manual highlights the importance of personal hygiene, separation of raw and cooked food, cooking food thoroughly, keeping food at safe temperatures and using safe water and raw materials as the five keys to safer food.

<http://www.who.int/foodsafety/publications/5keysmanual/en/>

Outbreak of foodborne botulism in France

A cluster of three cases of food-borne botulism due to *Clostridium baratii* type F occurred in France in August 2015. All cases required respiratory assistance. Consumption of a Bolognese sauce at the same restaurant was the likely source of contamination. *Clostridium baratii* was isolated both from stool specimens from the three patients and ground meat used to prepare the sauce. This is the second episode reported in France caused by this rare pathogen which previously has been associated with infant botulism.

In Europe, patients who show the classical symptoms of botulism; having both gastrointestinal and neurological symptoms such as dysphagia, diplopia or blurred vision, and progressive paralysis, are given botulinum antitoxin which is capable of protecting only against type A, B, E toxins. This is not appropriate in the case of type F botulism, therefore the replacement with the heptavalent antitoxin may need to be considered if more cases of the type F toxin are recorded.

Listeria outbreak linked to salad

The Public Health Agency of Canada is collaborating with the CDC and FDA in America to investigate an outbreak of *Listeria monocytogenes* infections linked to Dole packaged salad products produced from a US processing facility in Springfield, Ohio.

In total 22 people have been affected with 2 fatalities reported although it has not been confirmed that Listeriosis was the cause of the deaths.

FSA investigate high E coli levels

The FSA has published four investigative reports commissioned following an event that occurred in July 2015 where exceptionally high levels of E.coli were recorded at shellfish beds along the South and South West coasts of England. No conclusive cause for the event has been identified. However, a number of possible causes have been ruled out and recommendations from the reports are being studied by the shellfish industry and other agencies.