

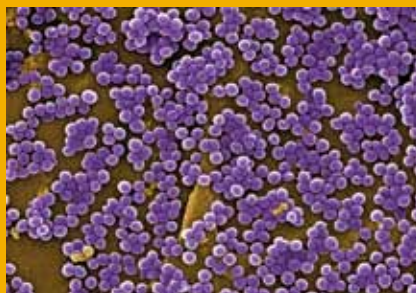
FOOD-BORNE ZONOSSES

What are zoonoses?

- Zoonoses are infections or diseases that can be transmitted directly or indirectly between animals and humans, for instance by consuming contaminated foodstuffs or through contact with infected animals.



- Research indicates that between one third and one half of all human infectious diseases have a zoonotic origin, that is, are transmitted from animals. About 75% of the new diseases that have affected humans over the past 10 years (such as the West Nile Virus) have originated from animals or products of animal origin.



- Food-borne zoonoses are a significant and widespread public health threat. More than 320,000 human cases are confirmed in the European Union each year, but the real number is likely to be much higher.



- Human Salmonella cases were reduced by almost one-half from 2004 to 2009 thanks to the coordinated action of all EU actors.

- The European Food Safety Authority's independent scientific advice on the food safety and animal health-related aspects of zoonotic diseases supported by data collected in Member States help European decision-makers in setting policies and making decisions to protect consumers from this public health threat.



Index

> What are zoonoses?	1
> What are food-borne zoonoses?	1
> What is EFSA's role in the battle against zoonoses in the EU?	2
> Fighting <i>Salmonella</i> - cooperation in the EU	3
> Human <i>Salmonella</i> cases in EU, 2005-2009	3
> EFSA cooperates with key actors on food-borne zoonoses	4
> Joint reporting on antimicrobial resistance	4

What are food-borne zoonoses?

- Food-borne zoonotic diseases are caused by consuming food or drinking water contaminated by pathogenic (disease-causing) micro-organisms such as bacteria and their toxins, viruses and parasites.
- The most common micro-organisms in the European Union (EU) causing food-borne diseases are *Campylobacter*, *Salmonella* and viruses such as hepatitis A and norovirus.
- The severity of these diseases in humans varies from mild symptoms to life-threatening conditions.
- Many of these micro-organisms are commonly found in the intestines of healthy food-producing animals. The risks of contamination are present from farm to fork and require prevention and control throughout the food chain.
- Safe handling of raw meat and other raw food ingredients, thorough cooking and good kitchen hygiene can prevent or reduce the risk posed by these micro-organisms. ■

"Europe's integrated approach to combating zoonoses has successfully reduced the burden of human salmonellosis. EFSA's scientific advice and data monitoring on zoonoses contribute to the protection of EU consumers from this public health threat. But we must strengthen our collective efforts to repeat this success with other zoonoses impacting on human health. Experience has shown us that we must not let our guard down when it comes to the possible presence of these micro-organisms in foods."



Catherine Geslain-Lanéelle,
Executive Director of EFSA

What is EFSA's role in **the battle** against **food-borne zoonoses** in the EU?

"EFSA is a key partner and important contributor to the EU-wide, harmonized monitoring of micro-organisms in animals and in food that pose a risk to human health. Combined with epidemiological data based on new tracking and tracing methods this information can be used to investigate the behaviour of zoonotic micro-organisms in order to assess the contribution to the burden of disease and to get clues for cost-effective risk reduction."

Dr. Rob van Oosterom,

Netherlands Food and Consumer Product Safety Authority, Office for Risk Assessment and Research, and member of EFSA's Task Force on Zoonoses Data Collection

Food-borne zoonotic diseases are a significant and widespread global public health threat. In the EU, more than 320,000 human cases are reported each year, but the real number is likely to be much higher.

EFSA's main role is to assess risks associated with the EU food chain, ensuring a high level of consumer protection and animal health. Its scientific work and advice on zoonoses support the European Commission, European Parliament and EU Member States in making effective risk management decisions and provide a sound foundation for policies and legislation to protect consumers in the European Union.

EFSA's work includes:

▶ **Annual monitoring:** The occurrence of food-borne zoonoses in the EU is monitored and analysed in annual EU Summary Reports prepared by EFSA and the European Centre for Disease Prevention and Control (ECDC). The monitoring is based on comparable data collected by EU Member States on the prevalence of *Salmonella*, *Campylobacter* or other micro-organisms in humans, animals and food. The annual reports provide the Commission and the Member States with up-to-date information on the current situation.

▶ **Analysis of risk factors:** EFSA and its Scientific Panels identify risk factors that contribute to the prevalence of zoonotic micro-organisms in animal populations and in food based on Member State data and other relevant information.

▶ **Risk assessments:** EFSA's Scientific Panels carry out assessments of the risks for public health from infected animals and give advice about how new mitigation and control options will impact on these bacteria.

▶ **Recommendations and advice on reduction measures:** EFSA's scientific advice helps EU decision-makers to understand the anticipated public health impacts of different control measures. The data collected by EU Member States serve as a basis for the EU to set targets for the reduction of these micro-organisms in food-producing animals and foodstuffs. The impact of the reduction programmes on the actual prevalence of zoonoses in animals and foods and related human health cases are then monitored and analysed in the annual EU Summary Reports. ■



"Risk assessments on food-borne zoonotic diseases form a crucial part of the work undertaken by EFSA's Panel on Biological Hazards. Our work includes advice on control measures such as national and EU-wide reduction targets to support risk managers in taking effective decisions in this important area for public health."

Dr. Birgit Nørrung,

Chair of the Panel on Biological Hazards, EFSA

Fighting *Salmonella* – cooperation in the EU

To protect consumers from food-borne zoonotic diseases, the EU has adopted an integrated approach to food safety from the farm to the fork. The approach consists of both risk assessment and risk management measures involving all key actors: EU Member States, European Commission, European Parliament, EFSA and ECDC. The approach is supported by timely and effective risk communication activities.

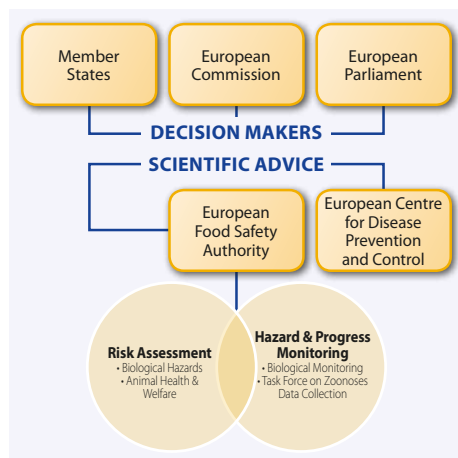


Diagram: EU actors dealing with zoonoses

A coordinated approach by the EU and Member States helped to reduce human *Salmonella* cases by almost one-half over a five-year period (2004-2009).

EU hygiene legislation sets out hygiene requirements for food producers and operators and provides rules for official controls

of fresh meat, milk and other foods. This is an important regulatory basis for minimising the prevalence of food-borne diseases throughout the food chain.

In 2003, the EU set up an extended control programme for zoonoses, considering *Salmonella* as a priority. Enhanced *Salmonella* control programmes in poultry were implemented in all EU Member States. Targets were set for the reduction of *Salmonella* in poultry flocks (e.g. laying hens, broilers, turkeys) and pigs. Restrictions were also imposed on the trade of products from infected flocks.

EFSA's role in protecting consumers from this public health threat consists of providing independent scientific support and advice on the human health and food safety-related aspects of *Salmonella* as well as monitoring the impact of reduction targets and other control options.

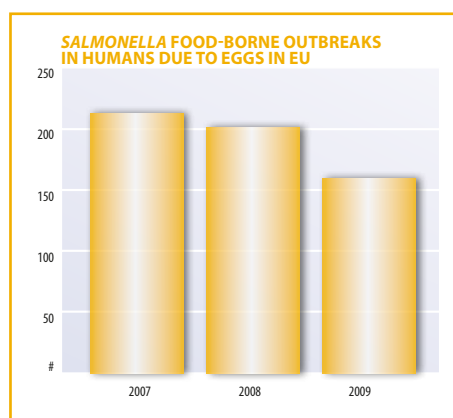
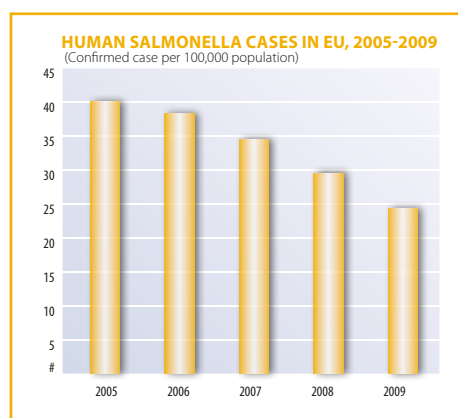
In the EU Summary Report on zoonoses and food-borne outbreaks, ECDC and EFSA provide yearly updates on the progress made in meeting the reduction targets for *Salmonella*. These reports analyse the data from the monitoring of *Salmonella* in animals, food and humans collected by Member States. Between 2005 and 2009, the reports indicated a clear downward trend for *Salmonella* with respect to human cases, human outbreaks and its prevalence in poultry flocks. ■

"The joint EFSA/ECDC summary report illustrates clearly that the situation on zoonoses in the European Union has improved further. We have made great strides in the battle against Salmonella. The consistent drop in the number of cases is testament to the strong, comprehensive measures put in place by Member States. It is definitely one of the success stories of the European Union's food safety regime."



John Dalli,
European Commissioner
for Health and Consumer Policy

Significant decrease in human cases



"Fighting zoonoses can only be successful if the most robust legal framework exists and if Member States implement these provisions properly by supplying sufficient staff and financial means to ensure the necessary controlling measures."



Dagmar Roth-Behrendt,
MEP, Vice-President
of the European Parliament

EFSA cooperates with **key actors** on food-borne zoonoses

"EFSA, in cooperation with its partners in Member States, will continue to support all efforts to reduce all zoonotic diseases across the EU. The fall in Salmonella cases in humans is a great achievement and indicates that the control measures put in place by the European Commission and EU Member States are working."

Hubert Deluyker,

Director of Science Strategy and Coordination

EFSA is assisted in its work in the area of food-borne zoonoses by the:

- **Task Force on Zoonoses Data**

Collection: a pan-European network of national representatives of EU Member States and other reporting countries, as well as the World Health Organisation (WHO) and World Organisation for Animal Health (OIE). Members of the Task Force assist EFSA by gathering and sharing information on zoonoses in their respective countries.

- **Panel on Biological Hazards and Panel on Animal Health and Welfare** composed of independent experts carrying out risk assessments and provid-

ing scientific advice to EU risk managers on zoonoses.

EFSA uses data collected by Member States to monitor and analyse the situation with regard to zoonoses, antimicrobial resistance, and food-borne outbreaks across Europe. The results are presented in annual EU Summary Reports on zoonoses, food-borne outbreaks and antimicrobial resistance, and in other reports on specific zoonoses issues. The annual EU Summary Reports are prepared in collaboration with ECDC. ■



"Many communicable diseases in humans have their origin directly or indirectly in animal populations. Our joint effort to combat these diseases – zoonoses – is an important part in protecting the health of EU citizens. ECDC and EFSA have had smooth and intensive collaboration ever since ECDC was established. This collaborative work culminates annually into a joint trend monitoring report of zoonoses, which provides the latest evidence for the Commission and other risk managers and enables targeted preventive measures at EU level."

Marc Sprenger,

Director of the European Centre for Disease Prevention and Control

Joint reporting on **antimicrobial resistance**

In 2011, EFSA and ECDC compiled their first joint report on antimicrobial resistance in zoonotic bacteria affecting humans, animals and food. The report makes an important contribution to work being carried out at European level and assists the European Commission as it develops its proposals for action to fight antimicrobial resistance.

Antimicrobial resistance refers to the ability of micro-organisms to withstand antimicrobial treatments. The overuse or misuse of antibiotics has been linked to the emergence and spread of micro-organisms which are resistant to them, rendering treatment ineffective and

posing a serious risk to public health. Resistant bacteria can spread through many routes. When antimicrobial resistance occurs in zoonotic bacteria present in animals and food it can also compromise the effective treatment of infectious diseases in humans and in animals.

EFSA's Scientific Panel on Biological Hazards utilises this data along with other information to provide scientific advice on antimicrobial resistance. The Panel carried out a risk assessment on the role of food as a vehicle for transmitting antimicrobial resistant bacteria to humans. ■

Committed to ensuring that Europe's food is safe