

## Background information on the **EU legislation on food safety** and the **Shiga toxin-producing *Escherichia coli***

### 1. EU legislation on food safety

- EU requirements (Directive 2003/99/EC) impose a full epidemiological investigation of the food-borne outbreak in order to identify the source and its spread.
- All food business operators have to comply with requirements for good hygiene practice in accordance with Regulation (EC) No 853/2004, preventing the contamination of food of animal and plant origin. In addition, most establishments must implement procedures based on the HACCP principles to monitor effectively the risks.
- Standards on the presence of *E. coli* have been laid down in Regulation (EC) No 2073/2005 e.g. for ready to eat fruit and vegetables, juices, meat, milk products, egg products, crustaceans and molluscan shellfish.
- Food containing shigatoxin-producing *E. coli* (STEC/EHEC) is considered unsafe for human consumption and must be withdrawn from the market in accordance with the General Food Law (R 178/2002).

## 2. Shiga toxin-producing *Escherichia coli*

### **What is Shiga toxin-producing *Escherichia coli*?**

Shiga toxin-producing *Escherichia coli* is a type of enterohemorrhagic *E. coli* (EHEC) bacteria that can cause illness ranging from mild intestinal disease to severe kidney complications. Other types of enterohemorrhagic *E. coli* include the relatively important serotype *E. coli* O157:H7, and more than 100 other non-O157 strains such as O111 and O26.

### **What are the symptoms?**

Typical symptoms include severe abdominal cramping, sudden onset of watery diarrhea, frequently bloody, and sometimes vomiting and a low-grade fever. Most often the illness is mild and self-limited generally lasting 1-3 days. However, serious complications such as hemorrhagic colitis, Hemolytic Uremic Syndrome (HUS), or postdiarrheal thrombotic thrombocytopenic purpura (TTP) can occur in up to 10% of cases.

### **How soon do the symptoms appear?**

The incubation period ranges from 1 to 8 days, though typically it is 3 to 5 days.

### **How do you get Shiga toxin-producing *Escherichia coli*?**

Cases and outbreaks of Shiga toxin-producing *Escherichia coli* have been associated with the consumption of undercooked beef (especially ground beef), raw milk, unpasteurized apple juice, contaminated water, red leaf lettuce, alfalfa sprouts, and venison jerky. The bacteria have also been isolated from poultry, pork and lamb. Person-to-person

spread, via fecal->oral transmission, may occur in high-risk settings like day care centers and nursing homes. Further studies are being done to better understand the modes of transmission.

### **Who gets infected with Shiga toxin-producing *Escherichia coli*?**

Although anyone can get infected, the highest infection rates are in children under age 5. Elderly patients also account for a large number of cases. Outbreaks have occurred in child-care facilities and nursing homes.

### **How is it treated?**

For mild illness, antibiotics have not been shown to shorten the duration of symptoms and may make the illness more severe in some people. Severe complications, such as Hemolytic Uremic Syndrome, require hospitalization.

### **How can you keep from getting it?**

- WASH fruit and vegetables thoroughly
- AVOID CROSS-CONTAMINATION (knives, plates, hands, ...)
- WASH YOUR HANDS after using the bathroom or changing diapers and before preparing or eating food.