

## 3.8 Listeriosis

### Summary

Number of cases in 2007: 21  
 Number of cases in 2006: 7  
 Crude incidence rate, 2007: 0.5/100,000

Twenty-one listeriosis cases (CIR 0.5 per 100,000 population) were reported in Ireland in 2007, three times the number of cases that were notified in 2006. This is against a backdrop of increased reporting of human listeriosis across the EU over the last eight years. Overall the reported incidence of listeriosis across the EU in 2006 was 0.3 per 100,000 (range 0.0-1.0 per 100,000).

Cases were distributed throughout Ireland, with higher number of cases than usual reported in Quarters 3 and 4 (table 1).

In particular, there was a significant increase in the reported number of pregnancy-associated and neonatal cases. Nine pregnancy-related/neonatal cases were notified in 2007 -an estimated rate of 14.0 notifications per 100,000 live births<sup>a</sup>- compared with five pregnancy-

related/neonatal cases for the entire period 2004-2006 (Table 2). Of particular note was the fact that five of the pregnancy-related cases in 2007 were non Irish-born women; three from Eastern Europe, one from Asia and one from Africa. In addition, one of the neonatal cases was born to an Eastern-European mother. This increase in the number of pregnancy-associated cases in Ireland contrasts with recent rises in human listeriosis incidence noted in Germany and in England & Wales, where elevated numbers of non-pregnancy associated adult cases were reported.

There were also 12 non-pregnancy associated adult cases notified in 2007, all except one of which were reported as elderly (>65 years) and/or suffering from an underlying illness which predisposed them to listeriosis; the remaining adult case was >55 years. Seven cases were male (58%) and five were female, age range 30-79 years (median=71 years).

There were no adult fatalities due to listeriosis in 2007, however, two women were reported as having suffered late miscarriages.

Table 1. Listeriosis notifications by quarter and year, Ireland 2004-2007

Quarter	2004	2005	2006	2007	Total
Q1	2	2	5	2	11
Q2	3	3	0	1	7
Q3	4	5	1	11	21
Q4	2	2	1	7	12
<b>Total</b>	<b>11</b>	<b>12</b>	<b>7</b>	<b>21</b>	<b>51</b>
<b>CIR (CI) per 100,000*</b>	<b>0.26(0.11-0.41)</b>	<b>0.28(0.12-0.44)</b>	<b>0.17(0.04-0.29)</b>	<b>0.50(0.28-0.71)</b>	<b>-</b>

\*CSO data from census 2006 as denominator in incidence rates

<sup>a</sup>Rate was calculated using the number of births reported by CSO for 2006 as an estimate of the number which occurred in 2007 as data not yet published for 2007.

Isolates for sixteen human cases notified in 2007 were serotyped at NSRL (Table 3). While the predominant serotype from patients was 4b, 1/2 was the predominant *Listeria monocytogenes* serotype isolated from food.

*Listeria* isolates can be further characterized by molecular typing methods to investigate possible links between cases. During the upsurge in cases in 2007, isolates were examined by the National Salmonella Reference Laboratory (NSRL) using pulsed field gel electrophoresis (PFGE), and by Waterford Regional Hospital (WRH) using ribotyping. Only two isolates were indistinguishable both by ribotyping and PFGE. From these results, it appears that the upsurge in cases was not caused by a single common strain, with evidence for a possible unrecognized common link only between two cases.

Typing of human *Listeria monocytogenes* isolates during the upsurge in cases was invaluable, as it supported the results of public health investigations which suggested

an increased incidence of sporadic disease rather than a large common source outbreak.

In consequence of the rise in the number of pregnancy-associated/neonatal cases in 2007, efforts have been made to develop appropriate messages for pregnant women, in particular those whose first language is not English. A leaflet highlighting ways to minimize the risk of listeriosis has been developed for pregnant women by Safefood ([www.safefood.eu/article.asp?article=2377](http://www.safefood.eu/article.asp?article=2377)). This leaflet has been translated into several languages.

Table 2. Listeriosis notifications by case type, Ireland 2004-2007

Case type	2004	2005	2006	2007	Total
Adult or juvenile	8	12	5	12	37
Pregnancy-related	3	0	1	6	10
Neonatal	0	0	1	3	4
<b>Total</b>	<b>11</b>	<b>12</b>	<b>7</b>	<b>21</b>	<b>51</b>

Table 3. Serotypes of *Listeria monocytogenes* isolates from 2007 referred to the NSRL

Serotype	Human	Food
1/2	4	15
4b	12	3
Untypeable	0	1
<b>Total</b>	<b>16</b>	<b>19</b>