



Listeriosis Surveillance 2010-2014

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Summary: Listeriosis in RI, 2010-2014



- Listeriosis is a serious infection of the bloodstream and/or the meninges caused by eating foods contaminated with the bacterium *Listeria monocytogenes*. The disease primarily affects older adults, pregnant women, newborns, and adults with weakened immune systems. The symptoms of listeriosis vary with the infected person:
 - Pregnant Women: Pregnant women typically experience fever and other non-specific symptoms, such as fatigue and aches. However, infections during pregnancy can lead to miscarriage, stillbirth, premature delivery, or life-threatening infection of the newborn.
 - **People other than pregnant women**: Symptoms can include headache, stiff neck, confusion, loss of balance, and convulsions in addition to fever and muscle aches.
- In 2014, 10 cases of listeriosis were reported for an incidence rate of 1.0 cases per 100,000 people. This was higher than what was observed in the United States in 2013, the most recent national data available, when the incidence rate was 0.26 cases per 100,000 people.
- Rhode Island has low case counts of listeriosis. In order to ensure patient privacy, data from 2010-2014 have been combined or averaged for analysis by age group, sex, county, and month of illness onset.

Figure 1: Reported Cases of Listeriosis by Year, RI, 2010-2014



Figure 1: Rhode Island had 10 cases of listeriosis reported in 2014, the most cases reported in Rhode Island since 1996 (10 cases were also reported). Although most of the 2014 cases were considered sporadic, three of the cases were associated with an outbreak at a restaurant. A case from 2013 was also associated with the same outbreak. From 2010 - 2013, Rhode Island's incidence rate of listeriosis cases was roughly the same as the national incidence rate. The rate of listeriosis ranged from 0.23 - 0.28 cases per 100,000 people nationally. Rhode Island's incidence rate ranged from 0.2 - 0.4 cases per 100,000 people.

Figure 2: Cumulative 5 Year Average Rate of Listeriosis Cases by Age Group, RI, 2010-2014



Figure 2: From 2010 – 2014, the highest incidence rates of listeriosis were in children age four or younger (4 of 5 cases were one month or younger) and adults age 60 or older. This was similar to what was seen nationally in 2013, the most recent national data available, where more than half of all listeriosis cases were in adults age 65 or older.

Figure 3: Cumulative 5 Year Average Rate of Listeriosis Cases by Sex, RI, 2010-2014



Figure 3: From 2010 – 2014, the listeria incidence rate in males was higher than in females (14 male cases, 8 female cases). This was slightly different from what was seen nationally. National data from 2013, the most recent year available, was near; y equally distributed: 285 male cases and 277 female cases. Nationally, both sexes had an incidence rate of 0.23 cases per 100,000 people.

Figure 4: Cumulative 5 Year Average Rate of Listeriosis Cases by County, RI, 2010-2014





County

Figure 4: From 2010 – 2014, the listeria incidence rate was highest in Kent County, followed by Providence County and Bristol County. No cases of listeriosis occurred in Newport or Washington Counties.

Figure 5: Cumulative 5-year Frequency of Listeriosis Cases by Month, RI, 2010-2014



Figure 5: From 2010 – 2014, the majority of listeriosis cases occurred between July and October. This trend is consistent with what is normally seen nationally.

Listeriosis Case Frequency and Rate by Year, RI, 2010-2014



Table 1. Frequency by Year					
	2010	2011	2012	2013	2014
Number of Cases	3	3	2	4	10

Table 2. Rate by Year					
	2010	2011	2012	2013	2014
Rate per 100,000	0.3	0.3	0.2	0.4	1.0

Cumulative 5-Year Listeriosis Case Frequency and Rate By Age Group, RI, 2010-2014



Table 3. 5 Year Average Frequencyand Rate by Age Group and Year					
	2010-2014	Rate			
0-4	5	1.7			
5-9	0	0			
10-19	<5	0.1			
20-29	<5	0.1			
30-39	<5	0.2			
40-49	0	0			
50-59	0	0			
60-69	<5	0.6			
70-79	<5	1.0			
≥80	8	3.1			
Total	22	0.4			

Cumulative 5 Year Listeriosis Case Frequency and Rate by Sex, RI, 2010-2014



Table 5. Cumulative 5-year Frequency by Sex				
	2010-2014			
Female	8			
Male	14			
Total	22			

Table 6. Average 5-year Rate by Sex					
2010-2014					
Female 0.3					
Male	0.6				
Total	0.4				

Cumulative 5-Year Listeriosis Case Frequency and Rate By County, RI, 2010-2014



Table 7. Frequency by County and Year					
	2010-2014	Rate			
Bristol	<5	0.4			
Kent	5	0.6			
Newport	0	0			
Providence	16	0.5			
Washington	0	0			
Total	22	0.4			

5-Year Cumulative Listeriosis Case Frequency by Month, RI, 2010-2014



Table 9. Frequency by Month					
	2010-2014				
Jan	0				
Feb	0				
Mar	0				
Apr	<5				
Мау	0				
Jun	<5				
Jul	<5				
Aug	6				
Sep	<5				
Oct	<5				
Νον	<5				
Dec	<5				
Total	22				

Frequency of *Listeria monocytogenes* Serotypes Identified, RI, 2010-2014



Table 10. Frequency of Serotypes	Year				
	2010	2011	2012	2013	2014
1/2a	1	1	0	0	3
1/2b	0	0	1	0	0
4b	1	2	1	4	7
Unknown	1	0	0	0	0
Total	3	3	2	4	10

Notes on Data



- Case counts include patients classified as confirmed and probable cases.
- "Event Date" (used to classify cases by month and year) is generated based on the availability of data in the following order:
 - 1. Illness onset date
 - 2. Specimen collection date
 - 3. Date of report to public health agency
- Rate is calculated per 100,000 people. The population denominator is based on 2010 US Census Population.