Chester County typically observes a higher incidence of Lyme disease than the state of Pennsylvania. During the 2023 season in Chester County, 598 cases of Lyme disease were reported, representing an incidence of 109.6 cases per 100,000 individuals. During the same time period, 8,374 cases of Lyme disease were reported in Pennsylvania with an incidence of 64.6 per 100,000 residents.

Each year, state and local health departments report cases of Lyme disease to the Centers for Disease Control (CDC). The CDC estimates that nearly 476,000 individuals are diagnosed and treated for Lyme disease each year. However, approximately 35,000 cases are reported. Pennsylvania leads the country in the highest state-wide incidence of Lyme disease for 11 of the past 12 years, according to the CDC.

Annual Trend

Chester County typically observes a higher incidence of Lyme disease than the state of Pennsylvania. Between 1/1/2023 and 8/31/2023, 598 cases of Lyme disease were reported in Chester County, representing an incidence of 109.6 cases per 100,000 individuals. During the same time period, 8,374 cases of Lyme disease were reported in Pennsylvania with an incidence of 64.6 per 100,000 residents.

<table>
<thead>
<tr>
<th></th>
<th>Pennsylvania Number of Cases (Incidence rate per 100,000)</th>
<th>Chester County Number of Cases (Incidence rate per 100,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>8,998 (70.3)</td>
<td>470 (89.5)</td>
</tr>
<tr>
<td>2020</td>
<td>3,334 (25.7)</td>
<td>310 (58.0)</td>
</tr>
<tr>
<td>2021</td>
<td>2,900 (22.4)</td>
<td>342 (63.5)</td>
</tr>
<tr>
<td>2022</td>
<td>8,413 (64.9)</td>
<td>601 (110.1)</td>
</tr>
<tr>
<td><em><em>2023</em> (YTD)</em>*</td>
<td>8,374 (64.6)</td>
<td>598 (109.6)</td>
</tr>
</tbody>
</table>

*Data for 2023 is preliminary.

Seasonal Trend

Although Lyme disease is reported year-round, individuals are more likely to contract Lyme disease from spring through fall, particularly between May and August. This is due to *Ixodes scapularis*, the tick that carries the Lyme disease-causing bacteria, being the most active during warmer months.

In 2023, 456 Lyme disease cases were reported between May and August. More Lyme disease cases were reported during these summer months in 2023 than reported in summer months of previous years.
A 7-day moving average was calculated for each season annually to better visualize trends of Lyme disease cases reported over time. To date, the 2023 season observed a sustained increase in transmission of Lyme disease throughout the warmer months with the most cases reported during July.

In 2022 and 2023, Lyme disease cases in high-incidence regions were based on laboratory evidence only. As of 2022, clinical symptoms were no longer needed for case classification. The previous case definition relied on both laboratory evidence and clinical symptoms, which may have led to fewer identified cases. The recently observed increase in cases in 2023 could be due to changes in case definition but could also be due to other reasons, such as warmer weather extending beyond typical patterns.

Notes

Lyme disease case counts prior to 2022 include confirmed and probable cases. In 2022, the case definition for Lyme disease changed. The case counts for 2022 and 2023 include probable cases only, as confirmed cases are no longer applicable in high-incidence jurisdictions.

Data for 2023 is preliminary.

Population data for the calculation of incidence rates are sourced from the Census American Community Survey. Population estimates for 2023 were not available at the time this report was published therefore 2022 population data was used for 2023 estimations.

Resources

1. Lyme Disease Information – Chester County Health Department
2. Tickborne Diseases – PA Department of Health
3. Lyme Disease Classification and Testing – PA Department of Health