



# Department of Health

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Good morning Senator Serino, Senator Hannon and distinguished committee members. Thank you for inviting Putnam County Department of Health here today to discuss the important topic of tick borne illness, including Lyme disease.

My name is Jean Ralston. I am a Public Health Nurse, and I work in Communicable Disease at the Putnam County Department of Health (PCDOH). Part of my daily work is to investigate the tick borne illness laboratory reports received in Putnam.

I am here today to tell you more about Putnam County's numbers and to discuss our efforts and strategies that we believe help the residents of Putnam County.

### Tick Borne Disease Summary

The incidence of tick borne diseases in Putnam County has been increasing over the past 10 years. (Table 1) In early 2000 Lyme disease was the primary focus of most tick borne investigations; however, this has expanded to include anaplasmosis, babesiosis and ehrlichiosis. Less common are Powassan and Rocky Mountain spotted fever.

**Table 1: Putnam County Tick Borne Disease Cases, 2016-2007**

Tick Borne Disease	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Anaplasmosis	20	16	8	26	19	34	15	27	30	20
Babesiosis	19	17	23	25	15	18	8	3	6	1
Ehrlichiosis	10	4	8	4	2	1	2	7	4	6
Lyme	N/A	322	323	294	242	345	171	132	248	140
Powassan	0	0	1	3	0	0	1	1	0	1
Rocky Mountain Spotted Fever	0	0	0	0	1	0	1	0	0	N/A

SOURCE: Putnam County Department of Health (DOH)

Anaplasmosis, babesiosis, ehrlichiosis, and Powassan all have lower incidence rates than Lyme disease. Lyme, babesiosis, anaplasmosis, and ehrlichiosis are all considered endemic to New York State, meaning that these diseases are regularly found in the local tick and human population.

**Lyme Disease:**

Putnam County is considered a Lyme endemic county; therefore, only 20% of all Lyme laboratory reports are investigated. Since 2011, Lyme disease incidence is extrapolated from the sample of these investigated results. This means that the exact burden of Lyme disease is not known; only estimated. In the past five years Putnam County has had one of the highest Lyme disease incidence rates within New York State (excluding New York City). (Table 2) For the past four years Columbia, Greene, Putnam and Rensselaer have been the counties with the highest Lyme disease incidence. Specifically, Putnam County has had a rate nearly five times greater than the New York State rate (excluding New York City).

**Table 2: Lyme Disease Incidence Rate per 100,000 Population, 2015-2011**

<b>County</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>	<b>2012</b>	<b>2011</b>
Columbia	623.0	474.0	484.8	546.8	562.6
Greene	658.8	505.6	669.8	414.7	629.8
Putnam	323.7	324.2	295.2	242.2	346.0
Rensselaer	338.6	268.9	382.3	317.5	411.5
Washington	120.3	111.0	216.1	188.4	460.3
New York State (excluding New York City)	65.1	51.9	60.9	47.6	64.9

SOURCE: Putnam County DOH; and New York State DOH Communicable Disease Annual Report

**Powassan Virus:**

Powassan virus is also transmitted to humans by infected ticks. Named after the town in Ontario, Canada, where it was first described in 1958, Powassan is potentially deadly, with a 10 percent fatality rate. Powassan, in comparison to other tick borne illness, is a rare disease.

Powassan cases in Putnam County have fluctuated over the past ten years, during which Putnam County cases represented 37 percent of the New York State total and 9 percent of the United States total cases. (Table 3) In 2013 Putnam County cases accounted for 60 percent of the cases in New York State and 20 percent of the cases in the United States.

**Table 3: Powassan Virus Cases, 2015-2006**

Area	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
Putnam County	0	1	3	0	0	1	1	0	1	0
New York State	1	1	5	1	0	1	3	1	6	0
United States	7	8	15	7	16	8	6	2	7	1

SOURCE: Putnam County DOH; and ArboNET, Arboviral Diseases Branch, Centers for Disease Control and Prevention

As this data shows, Putnam County residents are at an increased risk for acquiring tick borne illnesses. Research is vital and we applaud all the efforts currently being made to investigate methods of reduction of tick borne disease transmission.

In Putnam County we feel our resources are best spent on education. Putnam County Department of Health has focused on educating providers, the community at large and our Department of Health staff.

**Provider Education**

We need our providers to be aware of the latest trends in our state, the latest testing methods, and the importance of aiding the Department of Health in the process of investigating and reporting cases.

- In June Putnam County Department of Health sent a blast fax to our providers to educate them about preferred testing for tick borne illnesses, and to remind providers that the Putnam County Department of Health will be contacting their offices to investigate many of these cases.

- This fax also encouraged all providers to report a patient with an Erythema migrans (EM) rash. These patients count as a confirmed Lyme case, and yet often do not have any laboratory work drawn. We rely on providers to report these cases directly to the Department of Health. We suspect Lyme is underreported, due in part to the few cases of EM rash that are reported.
- On July 20<sup>th</sup> 2017 New York State Department of Health released a Health Advisory regarding Powassan Virus. This summary included a description of the differential diagnosis, and the appropriate testing that would be indicated. Putnam County Department of Health informed all providers in Putnam County of this advisory.
- At the Putnam County Department of Health we are changing our message to include all tick borne illnesses. This includes Lyme disease and others such as anaplasmosis, babesiosis, erlichiosis, and Powassan Virus. These are the tick borne illnesses of today. They will no doubt change overtime and other illnesses will be added to this list as ticks from more southern and western regions make their way to our area.

### **Community Education**

Putnam County Department of Health has a strong emphasis on prevention. By preventing a tick bite, we can potentially prevent disease. By removing a tick as soon as it is found, the risk of some diseases can be reduced. All members of our community, from the kindergarteners to the seniors, need to hear these important messages.

- Putnam County Department of Health participates in numerous community events. We are in the schools, at work site wellness events, at the senior centers, and at health fairs. We talk about preventing tick bites by wearing protective clothing, and using insect

repellents. The New York State Department of Health brochures are extremely helpful, as well as their you-tube video. <https://www.youtube.com/watch?v=aJbDM0bhS6s>

- How to do a tick check, and the removal of a tick is another topic we repeat at every event. The New York State Department of Health you-tube tick removal video is a quick, informative and easy guide. <https://www.youtube.com/watch?v=1Vj-qhxCJbA>
- The tick kits are invaluable, we hand them out at every event. I have provided each of you with a tick removal kit today.
- Reviewing signs and symptoms of tick borne illnesses with members of our community and when to call their provider is always emphasized.
- At the Putnam County Department of Health our messaging includes all tick borne illnesses.

### **PCDOH Education**

The Lyme Disease County Learning Collaborative held in Albany is a crucial learning experience. This Collaborative discusses the complexities of interpreting laboratory reports and the finer points of completing an investigation. The continued funding of such collaborative events where all of us dealing with tick borne illnesses can gather, hear from the experts, and exchange knowledge and strategies with our fellow coworkers from different counties in the state is vital for the accuracy of tick borne surveillance. This knowledge is then disseminated to our local providers.

In closing, the correct identification of tick borne illnesses will lead to the true level of disease burden a county faces. Without this knowledge we cannot find solutions. Thank you.

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