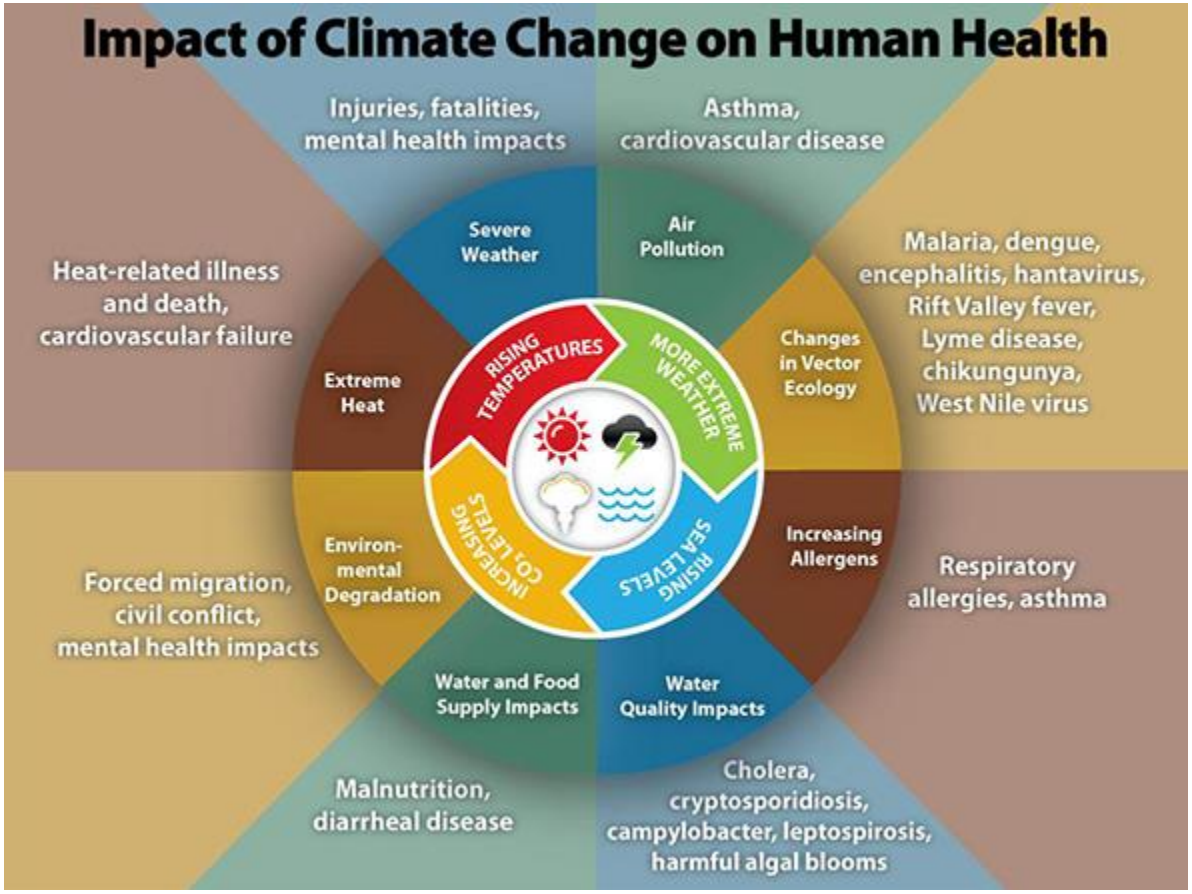
Public Health Indicators of Climate Change

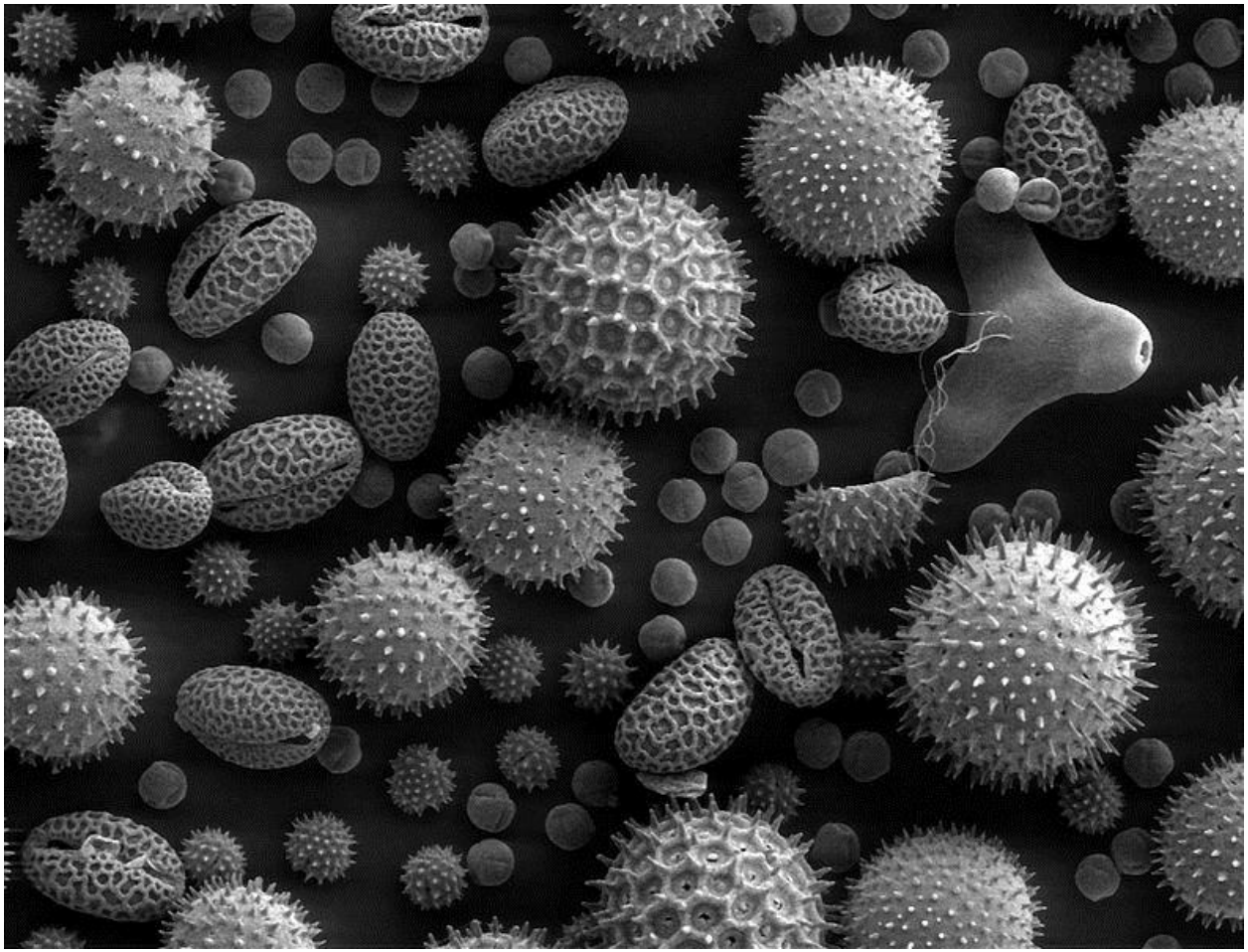
Aaron Fleischauer, PhD, MSPH

CDC

Climate Change and Public Health



Allergens/Pollen



Annual Accumulated Pollen Concentration

Summary of Trends

	Duration	Concentration	Peak Date
Trees	**None**	***Increasing***	**None**
Grasses	***Increasing*** ***(earlier start date)***	**None**	**None**
Weeds	***Increasing*** ***(earlier start date)***	**None** ***(*since 2003)***	**None**

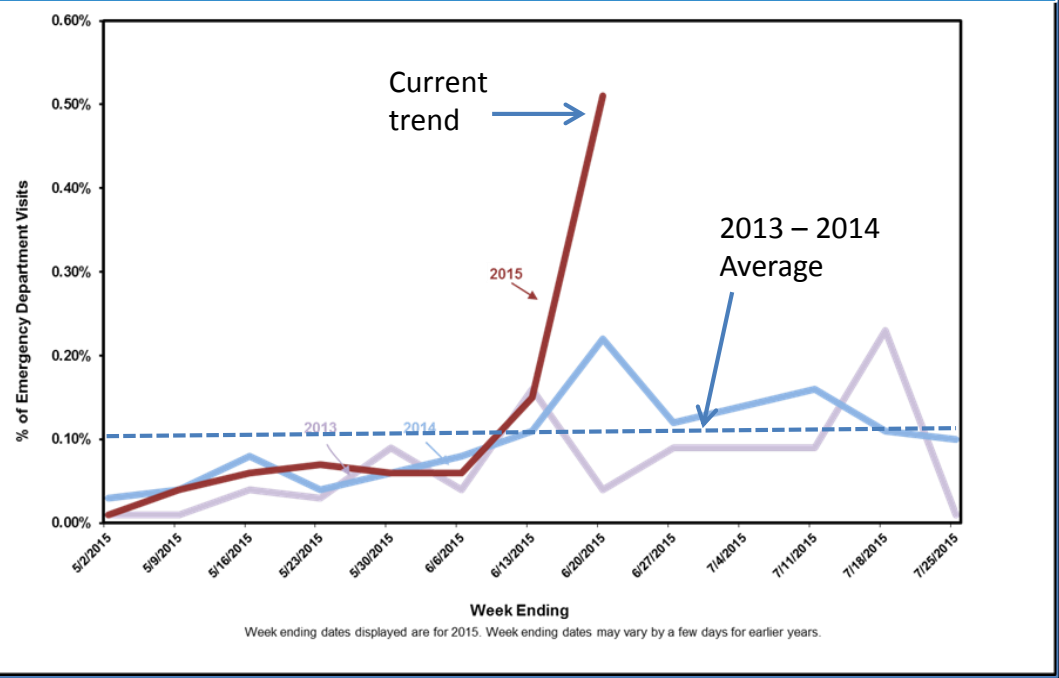
Heat Related Illness Dashboard

June 15 – 22, 2015

Average maximum heat index during this timeframe (RDU Airport)	Total Emergency Department visits for heat-related illness	Percent of Emergency Department visits Hospitalized
103°F	554	8%

Proportion of ED Visits attributed to Heat Related Illness

2015 compared with previous 2 years



Data Facts

- 75% of all ED visits for heat-related illness were among adults 18 to 64 years of age.
- Activities include both occupational (e.g., truck driving, warehouse, roofing, landscaping) and recreational (e.g., jogging, beach activities)

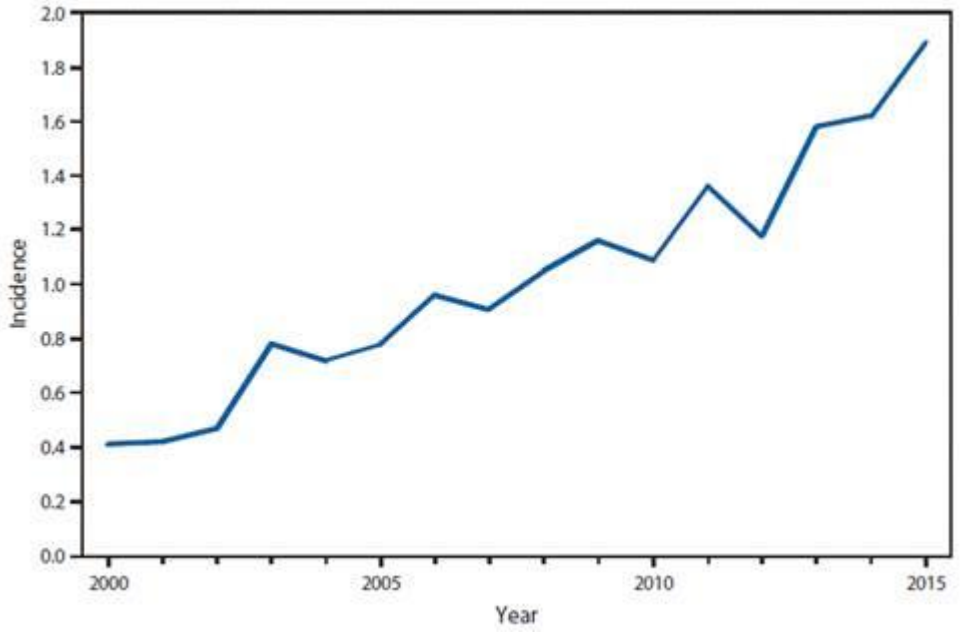
Recommendations

- Drink fluids
- Spend some time in air conditioning
- Reduce activity between 11 am – 4 pm
- Consult your doctor if you take medications that impact the body's ability to lose heat

Updated June 24, 2015

Legionellosis

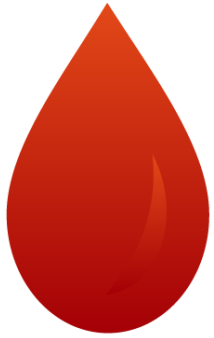
Incidence (per 100,000 population) of reported cases, by year — United States, 2000–2015



0°C
Bacterium dormant

20°C - 45°C
Legionella will multiply

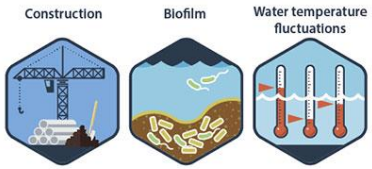
45°C - 60°C
Legionella will survive but cannot multiply



60°C +
Legionella will not survive

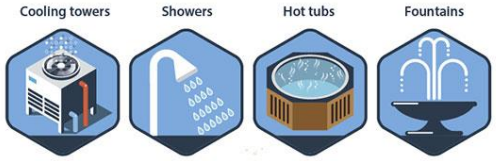
How *Legionella* affects building water systems and people

1. Internal and external factors can lead to *Legionella* growth in building water systems.

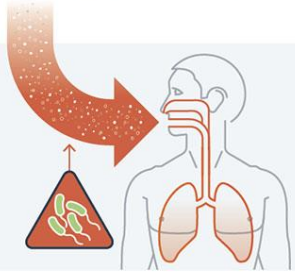


2. *Legionella* grows best in large, complex water systems that are not adequately maintained.

3. Water containing *Legionella* is aerosolized through devices.



4. People can get Legionnaires' disease when they breathe in mist or accidentally swallow water into the lungs containing *Legionella*. Those at increased risk are adults 50 years or older, current or former smokers, and people with a weakened immune system or chronic disease.

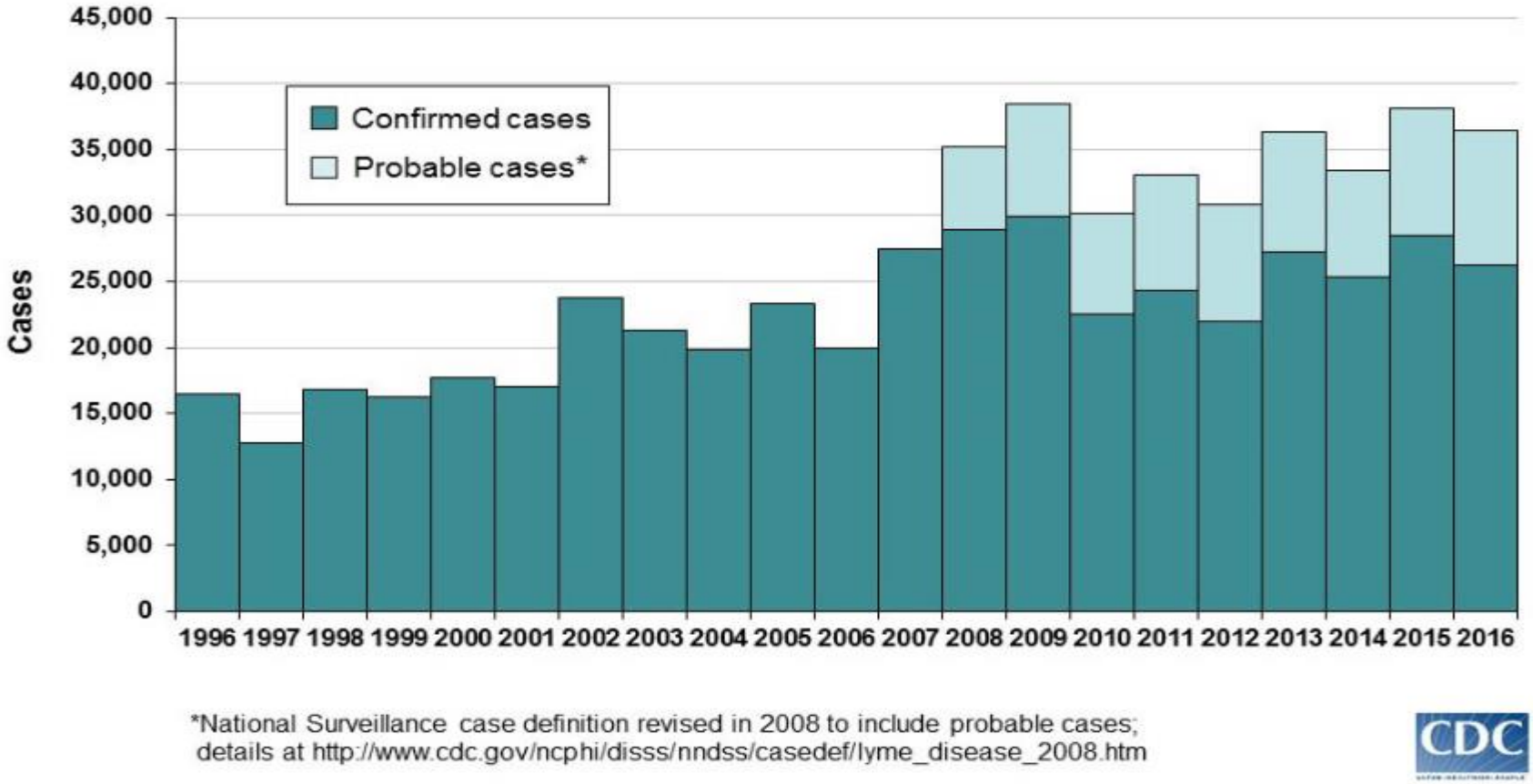


www.cdc.gov/legionella

01/12/2018

Lyme Disease

Reported Cases of Lyme Disease by Year, United States, 1996-2016



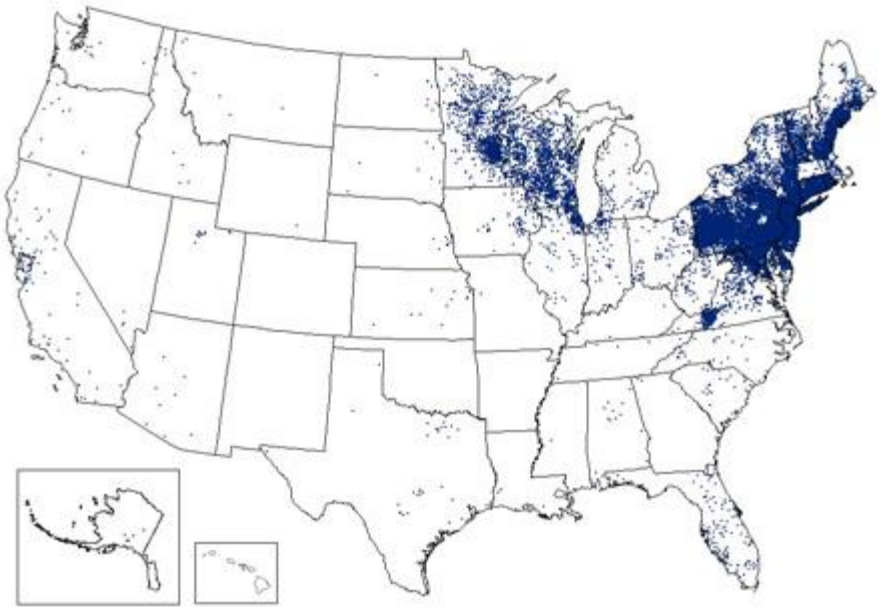
*National Surveillance case definition revised in 2008 to include probable cases; details at http://www.cdc.gov/ncphi/disss/nndss/casedef/lyme_disease_2008.htm

CDC

The graph displays the number of reported cases of Lyme disease from 1996 through 2016.

*National Surveillance case definition revised in 2008 to include probable cases.

Lyme Disease



1 dot placed randomly within county of residence for each confirmed case

Emerging Infections

- Vectorborne illness
  - West Nile virus, Zika virus, Chikungunya virus
- Zoonotic illness
  - Ebola virus, Monkeypox virus
- Waterborne illness
  - *Cholera, Cryptosporidia, Vibrio sp.*

Other outcomes

- Extreme weather events
- Wildfires
- Drought
- Air and water pollution
- Sun/UV exposure