



Appalachian Health Focus

Public Health: Protecting and improving your health throughout life.

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**Disease Report
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Overview of Tick-borne Illness in North Carolina

Diagnosis	Code	Cases
AIDS	950	0
Camphylobacter	50	1
Chlamydia	200	16
E. coli	53	0
Ehrlichiosis, Granulocytic	571	0
Ehrlichiosis, Monocytic	572	0
Gonorrhea	300	2
Hepatitis A	14	0
Hepatitis B, Carrier	115	1
Hepatitis B, Perinatal	116	1
HIV	900	0
Influenza death (<18 y.o.)	73	0
Legionellosis	18	0
Lyme Disease	51	1
Meningococcal Disease	27	0
Pertussis (Whooping Cough)	47	0
Rocky Mountain Spotted Fever	35	0
Salmonellosis	38	1
Shigellosis	39	0
Syphilis-Primary	710	1
Syphilis-Secondary	720	0
Staph aureus	74	1
Tuberculosis	*TB	0

Tick-borne, or rickettsial, diseases first cause flu-like symptoms and can be treated with antibiotics if caught early. Three illnesses transmitted by ticks are found in North Carolina and all three are reportable:

Rocky Mountain Spotted Fever is the most severe. It is common in this state, which often reports the most cases in the nation. *Rickettsia rickettsii*, a species of bacteria spread to humans by ixodid (hard) ticks can be difficult to diagnose in the early stages. Without prompt and appropriate treatment, it can be fatal.

Lyme disease, transmitted by deer ticks, is less common in N.C. with only about 50 cases reported statewide. Besides flu-like symptoms, a characteristic "bull's-eye" rash may be present.

Ehrlichiosis (causative agents *Ehrlichia chaffeensis*, *E. phagocytophila*, and other unspecified agents) may be underreported because diagnostic tests were not available until recently. In addition to fever, headache and malaise, thrombocytopenia, leucopenia and/or elevated liver enzymes may be present.

Laboratory criteria for diagnosis: Important to note in diagnosing RMSF or Ehrlichiosis is that if indirect immunofluorescence assay is used, a fourfold or greater change in antibody titer should be demonstrated. Two serum specimens should be tested: One during the acute phase and a second one 2-3 weeks later.

Reporting: Contact the health department for assistance in completing the CD Report Card and either the Tick-borne Rickettsial Case Report or the Lyme Disease Case Report Form.

Source: <http://www.epi.state.nc.us/epi/arbivirus/tick.html>
Photo: [#7372, 7646, 7663](http://phil.cdc.gov/Phil/quicksearch.asp)



COMING SOON!

The Appalachian District Health Department invites you to preview our new website at: <http://www.apphealth.com>

The website offers information on communicable disease, health promotion, clinic services, dental health, WIC, environmental health and other useful, public information.

The Health Focus Newsletter issues are also on-line!

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Spotlight on Mumps

In the United States, since 2001, an average of 265 mumps cases have been reported each year. However, recent events in the Midwest have caused health professionals to take a second look at this so-called “childhood disease.” In the first three months of 2006, 219 cases of mumps were reported in the state of Iowa in what has become the largest epidemic of mumps in the United States since 1988. At least 34 of these were university students. Of the 133 patients with investigated vaccine history, 65% had documentation of receiving 2 doses. This reflects a recent trend of in which outbreaks are occurring among **highly vaccinated populations**. Consider the following information in patient care regardless of vaccination status of the individual:

Disease Description:

Mumps is an acute viral infection characterized by fever and nonsuppurative swelling of the salivary glands. In fact, mumps is the only known cause of **epidemic** parotitis. Complications can include inflammation of the testicles or ovaries, meningitis/encephalitis, spontaneous abortion and deafness.

Clinical Case Definition:

An illness with acute onset of unilateral or bilateral tender, self-limited swelling of the parotid or other salivary gland, lasting >2 days, and without other apparent cause.

Sources: http://www.cdc.gov/nip/publications/surv-manual/chpt07_mumps.pdf; <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm55d330a1.htm>

Parasites of the Caribbean



As vacation season approaches, be aware that many of your patients may be traveling south. Certain vaccines and medications may be either required or recommended. Ideally, vaccines should be given at least 4 weeks prior to leaving the U.S. However, some schedules can be accelerated for travel. Specifically for the Caribbean, the following vaccines are recommended:

- Hepatitis A or immune globulin
- Hepatitis B
- Typhoid
- Tetanus-diphtheria & measles

Malaria:

Countries in the Caribbean at risk of Malaria are **Haiti** (except in the cruise port of Labadee (Labadie), the **Dominican Republic** and **La Altagracia Province**. Visit the CDC website below for updates. All travelers to Haiti and the Dominican Republic, including infants, children, and former residents of these countries, should take Chloroquine as their antimalarial drug.

Yellow Fever vaccine is recommended for travelers to **Trinidad** and **Tobago** but not required.

Round up the usual suspects: Travelers' Diarrhea

Travelers' diarrhea is generally self-limited and lasts 3-4 days even without treatment, but persistent symptoms may occur in a small percentage of travelers. Here is a list of the usual suspects:

Bacterial Enteric Pathogens

- Escherichia coli (ETEC/EAEC)
- Campylobacter jejuni
- Salmonella spp.
- Shigella spp.
- Vibrio spp.

Parasitic Enteric Pathogens

- Giardia intestinalis
- Cryptosporidium parvum
- Cyclospora cayetanensis
- Entamoeba histolytica
- Dientamoeba fragilis

Viral Enteric Pathogens

- Rotavirus
- Norovirus

Source: <http://www.cdc.gov/travel/>

Fun Fact: Diphtheria

Diphtheria takes its name from the Greek word for “leather.” The name alludes to the leathery, sheath-like membrane that grows on the tonsils, throat and in the nose.

Diphtheria is said to have claimed the life of **Elisha Otis**. Otis, who revolutionized the elevator industry, invented a safety device in 1852 that made elevators much safer by preventing them from falling if the hoisting cable broke.

Sources: http://en.wikipedia.org/wiki/Elisha_Graves_Otis
<http://www.answers.com/topic/diphtheria?method=22>

Did You Know?!

In November 2005, the State Laboratory of Public Health confirmed the first case in North Carolina of **Rabies** in an **Opossum** from Cumberland County. Opossums are considered low risk animals for contracting rabies due possibly either to the presence of a peptide (Lethal Toxin Neutralizing Factor) or to the opossum's lower body temperature.

Rabies Testing is recommended for Opossums that bite a person.

Communicable Disease Nurse in Your Area

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The communicable disease nurse in your area will be more than happy to assist you.

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