

Communicable Diseases

June-July 2010

July 13, 2010

Monthly Newsletter

For Joplin City and Jasper County

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Briefs

- ◆ Three laboratory-confirmed and 14 suspected cases of pertussis have been identified in two Schuyler County Amish communities.
- ◆ Three of the cases were hospitalized, all of whom were children (one is less than six months of age)
- ◆ Pertussis is highly communicable and can cause severe disease or death in very young children.
- ◆ Pertussis can occur at any age.

Pertussis Identified in Two North-Central Missouri

July 13, 2010

A total of three laboratory-confirmed and 14 suspected cases of pertussis have been identified in two Schuyler County Amish communities. Three of the cases were hospitalized, all of whom were children (one is less than six months of age). The Missouri Department of Health and Senior Services (DHSS) has issued an alert to health care providers about the cases in order to increase awareness that pertussis is circulating and to review current diagnostic, treatment, prophylaxis, as well as prevention recommendations.

Local public health officials identified the pertussis outbreaks among the two Amish communities during the past two weeks. Pertussis immunization coverage among children and adults is low in both communities

While statewide incidence of pertussis is not currently in excess of the 5-year median, pertussis cases have been reported in all regions of Missouri over the past month (82 total), 25% of whom were less than one year of age. Among these reports, a school-associated outbreak and a large household cluster were identified in Howell and Boone Counties, respectively.

What is Pertussis?

Pertussis is highly communicable and can cause severe disease or death in very young children. It begins with mild upper respiratory tract symptoms and progresses to cough. The condition can further progress to severe paroxysms, often with a characteristic inspiratory whoop followed by vomiting. Fever

is absent or minimal. Among older children and adults, the disease usually results in symptoms that can be mistaken for bronchitis and URI's-persistent cough, but no whoop. In infants younger than six months, apnea is a common manifestation and the whoop may be absent.

It is important to remember that while pertussis is most often considered a disease that affects young children, it can occur at any age. It should be considered in older children and adults who have a persistent cough lasting more than 7-14 days, which cannot be attributed to another specific illness. If untreated, these older children and adults can act as a reservoir for pertussis and infect younger children.

Source: Missouri Department of Health and Senior Services, DHSS

Local Pertussis Report

There has been one pertussis case reported in Joplin City and two in Jasper County year-to-date.

Statewide, 82 cases of pertussis have been reported in all regions of Missouri over the past month. However, the statewide occurrence is still within the 5-year median.

Cryptosporidiosis (Also known as Crypto)

Cryptosporidiosis is a diarrheal disease caused by microscopic parasites. The parasite is found in soil, food, water, or surfaces that have been contaminated with infected human or animal feces. If the parasite is swallowed, infection occurs.

Symptoms of *Crypto*

- ◆ Watery diarrhea and cramps
- ◆ Weight loss
- ◆ Vomiting
- ◆ Fever

Crypto can be mild but can also cause life threatening illness in people with weakened immune system. Symptoms generally begin 2 to 14 days (average 7 days) after becoming infected with the parasite. The parasite infect humans and a wide range of animals. The parasite is protected by an outer shell that allows it to survive outside the body for long periods of time and makes it very resistant to chlorine disinfection.

While this parasite can be transmitted in several different ways, water is a common transmission method and is one of the most frequent causes of waterborne disease (drinking water and recreational water) among humans in the United States.

Risk Factors

Crypto lives in the intestine of infected humans or animals. An infected person or animal sheds the parasites in the stool. Millions of Crypto parasites can be released in a bowel movement from an infected human or animal.

Shedding begins when the symptoms begin and can last for weeks after the symptoms (e.g., diarrhea) stop. You can become infected after accidentally swallowing the parasite. Crypto is not spread by contact with blood (See life cycle in figure 1).

How is Crypto spread

- ◆ By putting something in your mouth or accidentally swallowing something that has come in contact with the stool of an infected person or animal
- ◆ By swallowing recreational water that has been contaminated with Crypto.
- ◆ By ingesting water or beverages that has been contaminated by stool from infected humans or animals.

- ◆ By eating uncooked contaminated food. All fruits and vegetables you plan to eat raw should be thoroughly washed with uncontaminated water.
- ◆ By touching your mouth with contaminated hands.

Hands can become contaminated through;

- ◆ Touching contaminated surfaces,
- ◆ Changing diapers,
- ◆ Caring for an infected person,
- ◆ Handling an infected cow or calf.

Source: CDC

Local Crypto Report As of the End of June

Joplin City— 1

Jasper County— 3

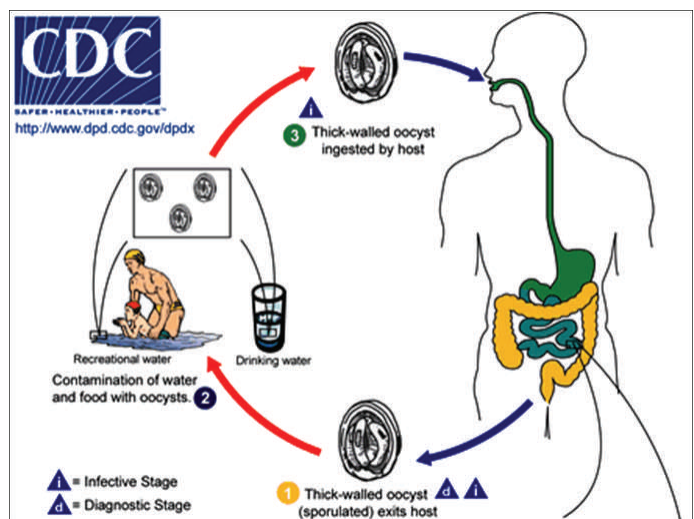
(See table 1)

In the United States, an estimated 300,000 cases of crypto occur each year.

Source: CDC and DHSS

Figure 1

Life Cycle of *Cryptosporidium*



Adapted from CDC (www.dpd.cdc.gov/dpdx)

Communicable Diseases Monthly Report—June 2010

Cumulative Cases from January Through June in Joplin and Jasper County (2009 & 2010)
 (Includes confirmed, probable and suspect cases)

Table 1

CONDITION / YEAR BY LPHA	JOPLIN		JASPER	
	2009	2010	2009	2010
ANIMAL BITES	100	32	84	29
CAMPYLOBACTERIOSIS	4	6	12	84
COCCIDIOIDOMYCOSIS	1	1	0	0
CRYPTOSPORIDIOSIS	0	1	0	3
E. COLI SHIGA TOXIN	0	1	2	1
EHRlichia CHAFFEENSIS	0	0	1	0
EHRlichia EWINGII	0	0	0	1
GIARDIASIS	0	1	3	4
HAEMOPHILUS INFLUENZAE	0	0	1	0
HEPATITIS A ACUTE	0	0	1	0
HEPATITIS B PREGNANCY	2	1	1	0
HEPATITIS B ACUTE	5	3	2	3
HEPATITIS B CHRONIC	1	3	4	2
HEPATITIS C ACUTE	1	1	0	1
HEPATITIS C, CHRONIC IN	40	18	40	22
MOTT	1	1	4	0
PERTUSSIS	1	1	15	2
ROCKY MOUNTAIN SPOT	2	2	1	1
SALMONELLOSIS	6	3	4	6
SHIGELLOSIS	0	3	0	2
TB DISEASE	2	0	0	0
TB INFECTION	19	4	22	11
VARICELLA (CHICKENPOX)	0	0	20	5

Source: Crystal Reports, MDHSS

Sexually Transmitted Diseases: Joplin City and Jasper

The overall rate of STDs (Chlamydia, Gonorrhea and Syphilis combined) as of the end of May 2010 was as follows;

- ◆ Joplin City - 417.5 per 100,000
- ◆ Jasper County - 163.5 per 100,000
- ◆ State of Missouri - 237.9 per 100,000

Additionally, based on individual STDs, Joplin City exceeded Jasper County as shown in table 2.

Rates were standardized using the 2000 census data

Table 2

		Cumulative Total: Jan-May 2010	Rate per 100,000
Jasper	Chlamydia	96	149.5
	Gonorrhea	7	10.9
	Syphilis	2	3.1
Joplin	Chlamydia	159	349.4
	Gonorrhea	30	65.9
	Syphilis	1	2.2

Population standardization: 2000 census data

Source: DHSS

Contacts

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For Questions, and/or Comments
about this newsletter, contact;

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UPCOMING TRAININGS AND EVENTS

TB Management in HIV Patients: A Webinar Series

- ◆ **July 27, 2010 Part 1:** Diagnosis of TB in the HIV Patient
- ◆ **August 3, 2010 Part 2:** Treatment of TB in the HIV Patient
- ◆ **August 17, 2010 Part 3:** Special Topics in the Management of TB in the HIV Patient. All webinars will be held at 12:00 – 1:30 pm CST. The webinar series is intended for TB program staff and clinical personnel e.g. physicians, nurses and other healthcare staff who manage and treat patients infected with TB and HIV. Contact Lead Educator: Robert.granger@uthct.edu. Registration closes July 23, 2010

Understanding and Managing Latent TB Infection – Aug 24, 2010.

- ◆ Location: Arnold, Missouri (St. Louis area). Target Audience: Local health department nurses and DOT workers who are tasked with the responsibility to identify and manage patients with, or at risk of, latent TB infection. Contact Lead Educator: elizabeth.mauldin@uthct.edu. Registration closes Aug 6, 2010

Contact Investigation Overview and Updates: A Webinar – Aug 26, 2010

- ◆ This webinar is intended for TB program staff, including nurses and health-care workers, who conduct or manage TB contact investigations. Contact Lead Educator: jessica.quintero@uthct.edu.

Reporting Diseases and Conditions in Missouri

A reportable disease is any disease or condition for which an official report is required according to state law ([Rule 19 CSR 20-20.020](#) and [19 CSR 20-20.080](#)) (health care provider and laboratory respectively).

These diseases/conditions shall be reported to the local health department or the Missouri Department of Health and Senior Services.

Why Report

The accurate identification and timely reporting of disease and environmental health conditions is an integral part of successful disease control that;

- ◆ Enables the health department to implement disease intervention without delay.
- ◆ Assists in identifying contacts who may be infected or other individuals at risk of infection. Failure to report or slow reporting may allow the disease to spread, which may require additional resources for intervention.
- ◆ Helps to determine occurrence of diseases in the communities.
- ◆ Enables provision of aggregate data on possible risk factors associated with diseases.

The data collected from disease reporting;

- ◆ Helps physicians evaluate their patients' illnesses.
- ◆ Assists the public to make better decisions regarding their own health and lifestyle.
- ◆ Enables public health agencies to target and implement prevention and control measures.
- ◆ Permits public health agencies to plan for resource allocation, implement initiatives and evaluate them.

Who Must Report

Healthcare providers or other institutions providing diagnostic testing, screening or care to any person with any disease or condition. Laboratories are also required to report any test that is positive for, or suggestive of, any disease listed as reportable.

A list of all reportable diseases in Missouri can be viewed from the following link;

<http://www.dhss.mo.gov/CommunicableDisease/reportablediseaselist2.pdf>

Source: Missouri Department of Health and Senior Services

"Enthusiasm is excitement with inspiration, motivation, and a pinch of creativity." Bo Bennett