

In this edition:



Animal Bites



"Crypto" Facts



Healthy Swimming

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ATTENTION! ATTENTION! ATTENTION!



THE COMMUNICABLE DISEASE NEWSLETTER IS GOING ELECTRONIC!

Starting with the fall edition, the Saginaw County Department of Public Health will no longer be distributing the Communicable Disease Newsletter by mail. The newsletter will be available via email, and will also be available on our website: www.saginawpublichealth.org.

If you would like to receive the newsletter by email please send an email stating such to: sborsenik@saginawcounty.com.

Animal Bites

Animal bites, even when they are minor, can become infected and spread bacteria or viruses such as rabies and tetanus to other parts of the body. Whether the bite is from a family pet or an animal in the wild, bites can carry disease and should be reported.

Animal bites require an obligatory report to the local health department where the bite occurred as well as where the patient resides. The report must be made within 24 hours of the biting incident and should include:

- The animal species inflicting the bite
- The animal owner's name, address, and phone number
- The Vaccination status of the animal
- The date and location of the biting incident
- The name, address, and phone number of the person bitten
- The location of the bite on the body
- The name of the reporter of the bite



Persons in need of rabies post exposure prophylaxis may obtain this treatment through their local emergency departments, physician offices; or for those who are medically indigent Chiron offers the RavAvert patient assistance program administered by RxHope. Providers may access this service by calling 1-866-9-RABIES or by visiting their website at www.rxhope.com



RECREATIONAL WATER ILLNESS

This summer, swimming pools will be filled with millions of people having fun and staying cool. But did you know that germs can contaminate swimming water even if it is treated with chlorine? Learning about recreational water illnesses (RWIs), which are spread by swimming in contaminated recreational waters such as swimming pools, waterparks, lakes, and the ocean, can protect you from illness.

RWIs are caused by germs like "Crypto" (KRIP-toe, short for *Cryptosporidium*), *Giardia* (gee-ARE-dee-uh), *E. coli* 0157:H7, and *Shigella* (Shi-GE-luh) and are spread by accidentally swallowing water that has been contaminated with fecal matter. How does a pool get contaminated? You share the water with everyone in the pool. If someone with diarrhea contaminates the water, swallowing the water can make you sick. The great news is that germs causing RWIs are killed by chlorine. However, chlorine doesn't work right away. It takes time to kill germs and some germs like "Crypto" are resistant to chlorine and can live in pools for days. That is why even the best maintained pools can spread illness. Therefore, Healthy Swimming behaviors are needed to protect you and your kids from RWIs and will help stop germs from getting in the pool in the first place.

Here are six "PLEAs" that promote Healthy Swimming:

1. PLEASE don't swim when you have diarrhea. This is especially important for kids in diapers. You can spread germs in the water and make other people sick.
2. PLEASE don't swallow the pool water. In fact, avoid getting water in your mouth.
3. PLEASE practice good hygiene. Take a shower before swimming and wash your hands after using the toilet or changing diapers. Germs on your body end up in the water.
4. PLEASE take your kids on bathroom breaks or change diapers often. Waiting to hear "I have to go" may mean that it's too late.
5. PLEASE change diapers in a bathroom and not at poolside. Germs can spread to surfaces and objects in and around the pool and spread illness.
6. PLEASE wash your child thoroughly (especially the rear end) with soap and water before swimming. Everyone has invisible amounts of fecal matter on their bottoms that ends up in the pool.

Want to learn more about recreational water illnesses (RWIs)? Why you shouldn't swim when ill with diarrhea? How some germs that cause RWIs can live for days in even the best-maintained pools? Go to www.cdc.gov/healthyswimming for more information. Take the Healthy Swimming IQ Quiz and a quick look at what swimmers are asking this year.

Reference:

1. www.cdc.gov/healthyswimming/media_release.htm

SALMONELLOSIS

Salmonellosis is an infection from bacteria called Salmonella. There are many different kinds of Salmonella bacteria. Salmonella serotype Typhimurium and Salmonella serotype Enteritidis are the most common in the United States. Salmonella has been known to cause illness for over 100 years. This bacteria was discovered by an American scientist named Salmon, for whom it is named.



This scanning electron micrograph (SEM) depicts a number of highly magnified rod-shaped, motile, Gram-negative *Salmonella infantis* bacteria, some of which are attached; Magnification 18875x.

Symptoms

The symptoms of Salmonellosis include acute enterocolitis, with sudden onset of headache, abdominal pain, diarrhea, nausea and sometimes vomiting. Dehydration, especially among infants or in the elderly, may be severe. Fever is almost always present. Anorexia and diarrhea often persist for several days. Infection may begin as acute enterocolitis and develop into septicemia or focal infection. Occasionally, the infectious agent may localize in any tissue of the body, produce abscesses and cause septic arthritis, cholecystitis, endocarditis, meningitis, pericarditis, pneumonia, pyoderma or pyelonephritis.

Transmission

Salmonellosis is usually transmitted to humans by eating foods contaminated with animal feces. Contaminated foods are often of animal origin, such as beef, poultry, milk, or eggs, but all foods, including raw fruits and vegetables may be infected with salmonella. Contamination often occurs through improper food processing, handling, or preparation. Salmonella may also be found in the feces of some pets. Reptiles are particularly likely to harbor Salmonella, and you should always wash your hands immediately after handling a reptile.

Diagnosis and Treatment

Identification of the Salmonellosis bacteria can be best made by laboratory tests that identify Salmonella in the stools of an infected person. Once Salmonella has been identified, further testing can determine its specific type, and which antibiotics should be used to treat it. Salmonella infections usually resolve within 5 to 7 days and often do not require treatment unless the patient becomes severely dehydrated or the infection spreads from the intestines. Severe vomiting and diarrhea may cause dehydration and necessitate fluid replacement. If the infection spreads from the intestines, antibiotic treatment is warranted.

Prevention

You can decrease your chance of coming in contact with Salmonellosis by following these preventive steps:

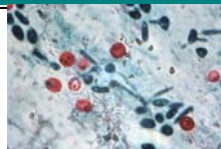
- Educate all food handlers about the importance of hand washing before, during, and after food preparation.
- Cook poultry, ground beef, and eggs thoroughly before eating.
- Do not eat or drink foods containing raw eggs or raw unpasteurized milk.
- Wash hands with soap after handling reptiles or birds.
- Do not work with raw poultry or meat and an infant at the same time.

References:

1. Control of Communicable diseases Manual, Heymann, David
2. www.cdc.gov

L. Editor. 18th Edition 2004. pp. 469-473.

This micrograph of a direct fecal smear is stained to detect *Cryptosporidium sp.*, an intracellular



CRYPTOSPORIDIOSIS: "CRYPTO"

Cryptosporidiosis or "crypto" as it is commonly known is a diarrheal disease caused by microscopic parasites called cryptosporidium. This parasite lives in the intestine of infected persons or animals and is passed in the stool. Crypto is found in soil, food, water, or surfaces that have been

contaminated with infected human or animal feces. If a person swallows the parasite, they become infected (fecal-oral route). The parasite has an outer shell that allows it to be resistant to disinfectants e.g. chlorine or iodine and survive for long periods on surfaces and in water. During the past two decades, crypto has become recognized as one of the most common causes of waterborne disease within humans in the United States, and can be found in drinking and recreational water around the world. Crypto can survive for 6-7 days in swimming pools even when they have adequate chlorine levels. (See related story on Recreational Water Illness and Healthy Swimming in this newsletter).

Signs and Symptoms

Symptoms of crypto usually begin 2-10 days (average 7 days) after infection with the parasite and can include the following:

- watery diarrhea often leading to dehydration weight loss
- fever
- nausea/vomiting
- stomach cramps/abdominal pain

If the above-listed symptoms are present, stool samples for ova and parasites may be collected over several days to test for the parasite. Persons with healthy immune systems may be asymptomatic or have mild to severe symptoms. Symptoms can last for 1-3 weeks, and while diarrhea continues, the disease is very contagious to others. Stool can remain infectious for several weeks after symptoms have resolved. Young children, pregnant women, and those with weakened immune systems are at most risk for dehydration and development of complications from crypto.

Treatment

Most people who have a healthy immune system will recover without treatment. Fluid replacement is important when diarrhea occurs to prevent dehydration. Persons with immune deficiencies, e.g. cancer or HIV/AIDS, may have anti-viral therapy prescribed.

Prevention

- Practice good hygiene. Always wash your hands after using the toilet, before handling or eating food, and after changing diapers.
- Protect others by not swimming if you are experiencing diarrhea.
- Do not swallow recreational water.
- Do not drink untreated water from shallow wells, lakes, rivers, springs, ponds, and streams.
- Do not drink untreated water during community-wide outbreaks of disease caused by contaminated drinking water.
- Do not use untreated ice or drinking water when traveling in countries where the water supply might be unsafe. If you are unable to avoid drinking the water in an area that may be contaminated, boil the water for at least 1 minute or use a filtered system that has an absolute pore size of at least 1 micron or one that has been National Sanitation Foundation rated for "cyst removal."
- Avoid food that might be contaminated- wash all fruits and vegetables with uncontaminated water and avoid uncooked foods.
- Avoid fecal exposure during sexual activity.

References:

1. Control of Communicable Diseases Manual. Heymann, David
2. www.nlm.nih.gov/medlineplus/ency/article000617.htm
3. www.cdc.gov/ncidod/dbmd/diseaseinfo/cryptosporidiosis.htm

D. Editor. 18th Edition 2004. pp.309-312.

**COMMUNICABLE DISEASE
REPORTED FOR SAGINAW COUNTY**

1/1/2007 – 3/31/2007

Disease	No. Reported
ANIMAL BITE	1
CHICKENPOX (Varicella)	2
CHLAMYDIA (Genital)	245
CRYPTOCOCCOSIS	1
FLU-LIKE DISEASE	10,245
GIARDIASIS	3
GONORRHEA	89
HIV	1
HEPATITIS C CHRONIC	45
MENINGITIS - ASEPTIC	5

This newsletter is provided to all Saginaw County healthcare providers, hospitals, schools, local colleges, universities, urgent care facilities, and local media.

**If you would like to get this newsletter by e-mail please submit your e-mail address to:
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Please visit our website at www.saginawpublichealth.org where our communicable disease pamphlets are available.

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