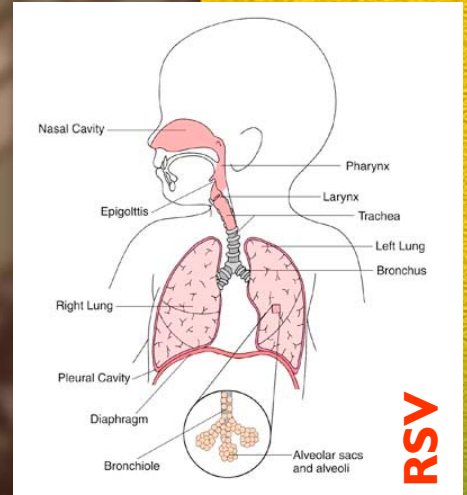


# Communicable Disease Newsletter

## In this edition:



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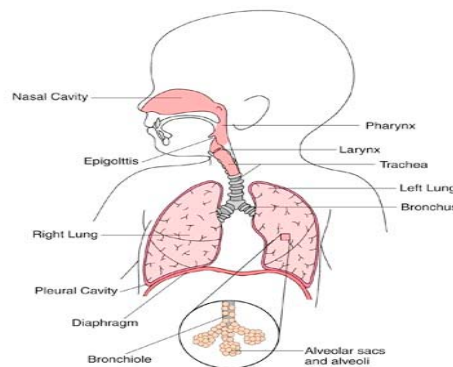


## Respiratory Syncytial Virus

According to the Centers for Disease Control (2008), respiratory syncytial virus (RSV) is the most common cause of bronchiolitis (inflammation of the small airways in the lung) and pneumonia in children under 1 year of age in the United States. Every year, 75,000 to 125,000 children in this age group are hospitalized due to RSV infection.

Outbreaks of RSV occur each year on a fairly predictable schedule that varies from one region to another, but in temperate climates such as Michigan, the RSV season usually begins in the late fall and lasts until spring. RSV is spread by direct contact with infectious respiratory secretions. This appears to be primarily by droplets from infected individuals within close proximity (e.g. through coughing and sneezing) and from contact with infectious secretions contaminating the environment. In this latter mode of spread, infectious secretions on surfaces, toys, clothes, and other objects are transmitted by touching, with subsequent inoculation of the virus occurring when the eyes or nose is touched. The virus may remain infectious on surfaces and skin from one half hour to more than a day depending on the temperature, humidity, and type of surface.

The period where a person is shedding the virus and contagious to others is usually 3-8 days, but shedding may last longer, especially in young infants and immunosuppressed individuals, in whom shedding may continue for as long as 3-4 weeks. The incubation period ranges from 2-8 days.



### SYMPTOMS:

Illness with RSV infection usually begins with a fever, runny nose, cough, and sometimes wheezing. During initial infections between 25-40 % of infants and young children have signs or symptoms of bronchiolitis or pneumonia and 0.5%-2% require hospitalization. Most children recover from illness in 8-15 days. The majority of children hospitalized from RSV infections are under 6 months of age and 2% of these infants die. RSV can cause repeated infection throughout life, usually associated with moderate to severe cold-like symptoms; however, severe lower respiratory tract disease may occur at any age, especially among the elderly or among those with compromised cardiac, pulmonary, or immune systems. Another high-risk group is infants born prematurely (35 weeks gestation or less). Children born prematurely often have underdeveloped lungs and many have not received enough antibodies from their mother to help them fight off RSV disease once they have been exposed to it. Other factors that can cause premature infants to be at increased risk of developing RSV disease include:

- ◆ attending day care
- ◆ a crowded household (more than 4 people in the home)
- ◆ school-aged brothers or sisters
- ◆ exposure to tobacco smoke
- ◆ multiple births
- ◆ male sex
- ◆ not breast feeding

### DIAGNOSIS:

The season, age, and clinical presentation, especially bronchiolitis, allow a presumptive diagnosis in many infants. Specific diagnosis may be made by viral isolation from respiratory secretions, which usually require 3-7 days, or by a rapid diagnostic test from antigen in respiratory secretions.

### TREATMENT:

For children and adults with mild disease, no specific treatment is necessary other than the treatment of symptoms. Children with severe disease may require oxygen therapy and sometimes mechanical ventilation. Medications that are usually prescribed for treatment of other respiratory conditions and infections including inhaled bronchodilators, corticosteroids, and antibiotics would not be indicated in most cases of RSV.

### PREVENTION:

There is no vaccine at this time to prevent RSV. Since RSV is highly contagious and virtually all children get infected with the virus within the first two years of life, routine infection-control practices are recommended.

## Respiratory Syncytial Virus Cont'd

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These practices include:

- ◆ frequent hand washing
- ◆ proper disposal of used tissues
- ◆ avoiding crowded areas such as shopping centers, child-care centers
- ◆ avoidance of those with a known illness
- ◆ avoidance of sharing cups and eating utensils
- ◆ frequent cleaning and disinfecting of toys and surfaces in the home
- ◆ avoiding exposure to cigarette smoke
- ◆ administration of flu vaccine for infants 6-23 months of age

Infants and children at highest risk (history of chronic lung disease or premature birth of less than 35 weeks gestation) may receive Synagis (palivizumab), a monoclonal antibody that is administered intramuscularly once a month from November to March, during the RSV season. This drug can help prevent development of serious RSV disease, but it cannot help cure or treat children already suffering from serious RSV infection. Due to the high cost of this therapy, recommendations are that prophylaxis should be reserved for infants in the high risk group who are younger than 6 months of age at the start of the RSV season. Palivizumab does not interfere with the response to routine childhood vaccines.

### REFERENCES:

American Academy of Pediatrics. *Red Book 2006 Report of the Committee on Infectious Diseases*. 2006. pp.560-566.

Chin, James MD, MPH. Editor. *Control of Communicable Diseases Manual*. 18<sup>th</sup> ed. 2004. pp. 456-459.

<http://www.cdc.gov/rsv>

<http://www.nlm.nih.gov/medlineplus/ency/article/001564.htm>

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## Health Care Personnel Vaccination Recommendations

### Hepatitis B

Healthcare personnel (HCP) who perform tasks that may involve exposure to blood or body fluids should receive a 3-dose series of hepatitis B vaccine at 0-, 1-, and 6-month intervals. Test for hepatitis B surface antibody (anti-HBs) to document immunity 1–2 months after dose #3.



- If anti-HBs is at least 10 mIU/mL (positive), the patient is immune. No further serologic testing or vaccination is recommended.
- If anti-HBs is less than 10 mIU/mL (negative), the patient is unprotected from hepatitis B virus (HBV) infection; revaccinate with a 3-dose series. Retest anti-HBs 1–2 months after dose #3.
- If anti-HBs is positive, the patient is immune. No further testing or vaccination is recommended.
- If anti-HBs is negative following 6 doses of vaccine, the patient is a non-responder.

**For non-responders:** HCP who are non-responders should be considered susceptible to HBV and should be counseled regarding precautions to prevent HBV infection and the need to obtain HBIG prophylaxis for any known or probable parenteral exposure to hepatitis B surface antigen (HBsAg)-positive blood.<sup>1</sup> It is also possible that non-responders are persons who are HBsAg positive. Testing should be considered. HCP found to be HBsAg positive should be counseled and medically evaluated.

**Note:** Anti-HBs testing is not recommended routinely for previously vaccinated HCP who were not tested 1–2 months after their original vaccine series. These HCP should be tested for anti-HBs when they have an exposure to blood or body fluids. If found to be anti-HBs negative, the HCP should be treated as if susceptible.<sup>1</sup>

### REFERENCES:

<http://www.immunize.org>

**COMMUNICABLE DISEASE  
REPORTED FOR SAGINAW COUNTY  
7/1/2008 – 9/30/2008**

Disease	No. Reported
CAMPYLOBACTER	5
CHICKENPOX (VARICELLA)	3
CHLAMYDIA (Genital)	260
CRYPTOCOCCOSIS	1
FLU-LIKE DISEASE	922
GIARDIASIS	1
GONORRHEA	70
HIV	7
HEPATITIS B CHRONIC	10
HEPATITIS C CHRONIC	78
LEGIONELLOSIS	2
MENINGITIS ASEPTIC	2
SALMONELLOSIS	7
SHIGELLOSIS	2
STAPHYLOCOCCUS	1

**COMMUNICABLE DISEASE YTD  
REPORTED FOR SAGINAW COUNTY  
1/1/2008 – 9/30/2008**

Disease	No. Reported
ANIMAL BITE	3
AMEBIASIS	1
CAMPYLOBACTER	10
CHICKENPOX (VARICELLA)	23
CHLAMYDIA (Genital)	729
COCCIDIOIDOMYCOSIS	1
CRYPTOCOCCOSIS	1
CRYPTOSPORIDIOSIS	1
ESCHERICHIA COLI	2
FLU-LIKE DISEASE	8941
GIARDIASIS	7
GONORRHEA	219
HIV	18
HEPATITIS B CHRONIC	20
HEPATITIS C CHRONIC	290
INFLUENZA	11
LEGIONELLOSIS	3
MENINGITIS ASEPTIC	3
SALMONELLOSIS	18
SHIGELLOSIS	2
STAPHYLOCOCCUS	1
STREPTOCOCCAL DISEASE	2

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

**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](http://www.saginawpublichealth.org) where our communicable disease pamphlets are available.



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