

Infectious Diseases

There are certain infectious diseases that laboratories, physicians and other health care providers are required, by law, to report to their county, district or state health department. These diseases are referred to as “notifiable diseases.” This section provides data and prevention tips on specific notifiable diseases. DeKalb County Board of Health monitors and investigates notifiable diseases to understand trends and to prevent and control outbreaks in the county.

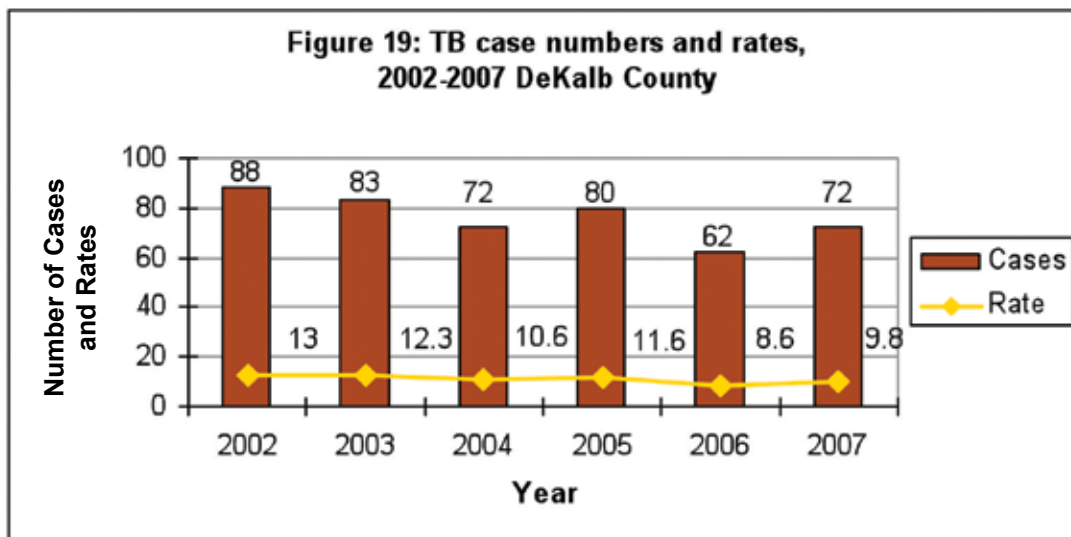
TUBERCULOSIS

Tuberculosis (TB) is caused by a bacterium called *Mycobacterium tuberculosis* that usually attacks the lungs. If not treated properly, TB can be fatal. Tuberculosis is spread through the air from one person to another.

From 2002 through 2007 in DeKalb County (Figure 19):

- There were 457 cases of TB reported.
- The number of cases per year decreased from 88 to 72.

In 2007, DeKalb County had the second highest number of TB cases out of Georgia’s 159 counties and the highest TB rate of Georgia’s 18 health districts.



Source: 2007 Georgia Tuberculosis Report, Georgia Department of Human Resources, Division of Public Health, Atlanta, Georgia, October 2008. Publication No: DPH08.327HW.

Like any other disease, there are specific risk factors for becoming ill with TB (Table 27). Certain risk factors may cause a person’s immune system to weaken and make it hard to fight TB.

Foreign born	60%
Human Immunodeficiency Virus (HIV)	12%
Substance abuse	12%
Homeless	11%
Inmate	3%
Nursing home	3%

Source: 2007 Georgia Tuberculosis Report, Georgia Department of Human Resources, Division of Public Health, Atlanta, Georgia, October 2008. Publication No: DPH08.327HW.

What may put you at risk

- If you were born in another country where tuberculosis is common.
- If you are HIV positive.
- If you are an injection drug user or other substance abuser.
- If you are a baby, a young child or elderly.
- If you have been infected with tuberculosis in the last two years.
- If you were not treated correctly for tuberculosis in the past.
- If you have certain medical conditions (e.g., diabetes, cancer or being underweight).

What you can do

- Protect your family and others. Get a skin or blood test for TB.
- Cover your mouth when you cough.
- If you have TB, take all medications prescribed by your doctor.

For more information

- Centers for Disease Control and Prevention, Division of Tuberculosis Elimination: www.cdc.gov/tb/.
- Georgia Department of Community Health, Division of Public Health, Georgia Tuberculosis Section: 404-657-2634, <http://health.state.ga.us/programs/tb/index.asp>.

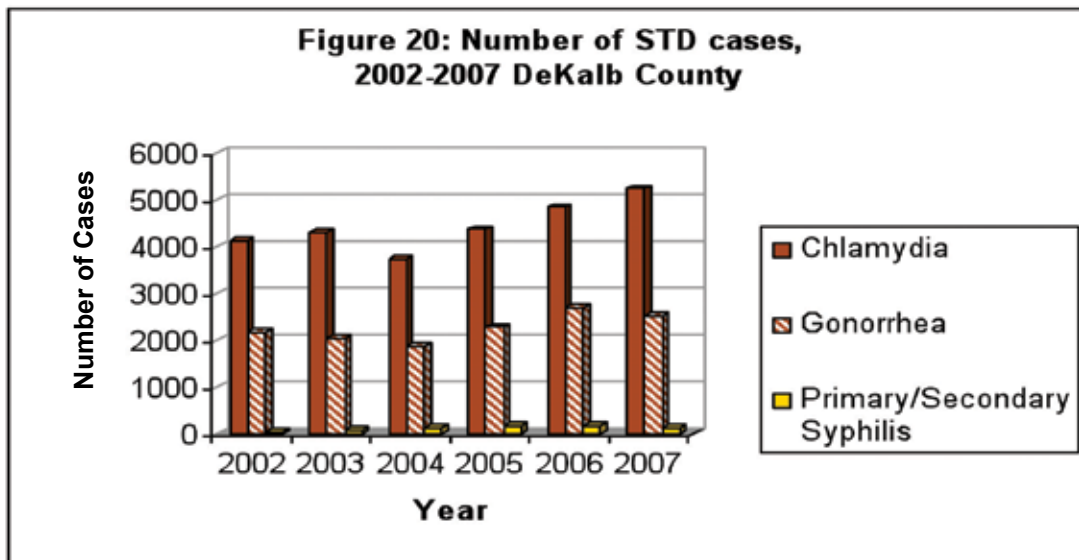


SEXUALLY TRANSMITTED DISEASES

Chlamydia, gonorrhea and syphilis are sexually transmitted diseases (STDs) spread during unprotected vaginal, anal or oral sex. They can also pass from mother to baby in the womb and during vaginal childbirth. Syphilis has many disease stages. This section will focus on primary and secondary syphilis.

From 2002 through 2007 in DeKalb County:

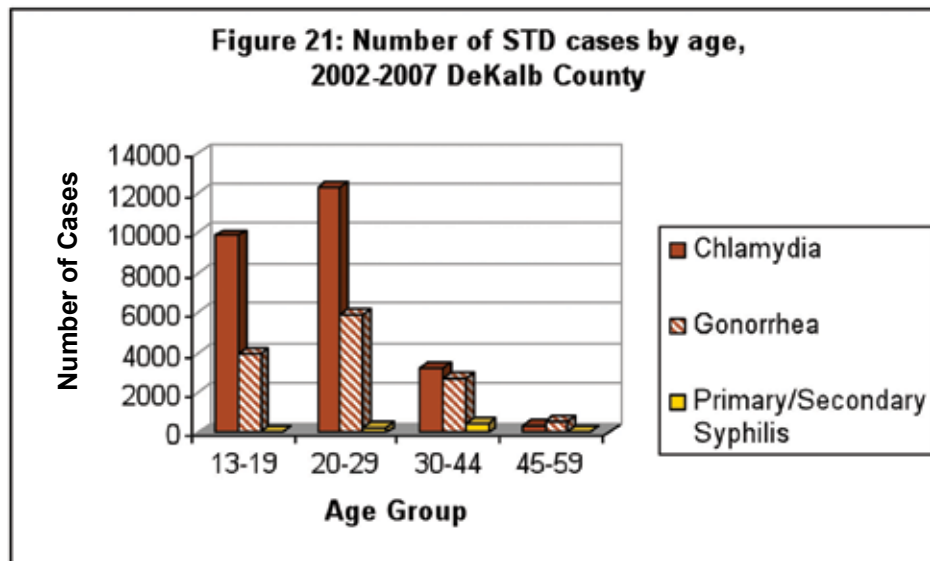
- Males were 21 times more likely to have primary or secondary syphilis than females.
- Females were three times more likely to have chlamydia than males.
- 26,594 cases of chlamydia, 13,592 cases of gonorrhea and 828 cases of primary and secondary syphilis were reported (Figure 20).
- The number of chlamydia cases increased 27 percent, gonorrhea cases increased 16 percent and primary and secondary syphilis cases increased 107 percent.



Source: Online Analytical Statistical Information System (OASIS), Georgia Department of Community Health, Division of Public Health.

Between 2002 and 2007 (Figure 21):

- The highest numbers of chlamydia and gonorrhea cases occurred among persons 20 to 29 years of age.
- The highest numbers of primary and secondary syphilis cases occurred among persons 30 to 44 years old; this age group also had the highest rate of primary and secondary syphilis.
- 13 to 19 year olds had the highest rate for chlamydia and gonorrhea.



Source: Online Analytical Statistical Information System (OASIS), Georgia Department of Community Health, Division of Public Health.

What you can do

- Practice abstinence.
- Use condoms each time to prevent sexually transmitted infections.
- Visit your doctor.
- Know your status. Get tested for STDs (including HIV).
- Know the status of your sexual partner.
- Parents: Talk to your teens.
- Teens: Talk to your parents.
- Be honest with your partner if you have an STD.

For more information

- Centers for Disease Control and Prevention, Division of STD Prevention: <http://www.cdc.gov/std/>.
- Georgia Department of Community Health, Division of Public Health, Sexually Transmitted Disease Section: <http://health.state.ga.us/programs/std/index.asp>.
- DeKalb County Board of Health, STD Program: 404-294-3762, www.dekalbhealth.net.



HUMAN IMMUNODEFICIENCY VIRUS

Human immunodeficiency virus (HIV) is the virus that causes Acquired Immunodeficiency Syndrome (AIDS). The virus weakens the immune system and leaves a person vulnerable to other potentially life-threatening infections. HIV is spread person to person by infected blood, semen, vaginal fluids and breast milk.

Prevention remains crucial to reducing the number of new HIV/AIDS cases. For those who are already infected with HIV, treatment options continue to improve. They allow HIV-positive individuals to live longer and healthier lives.

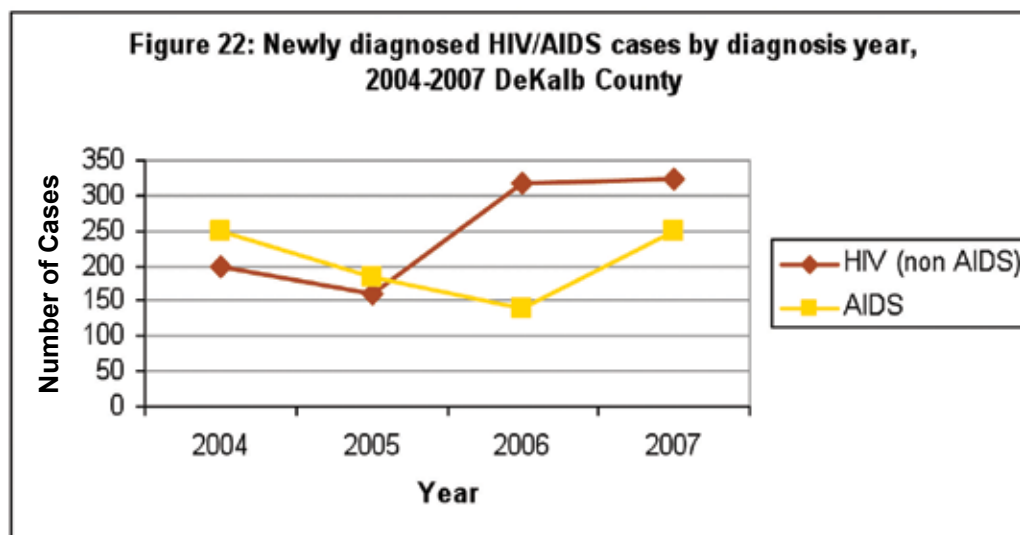
DeKalb County is greatly affected by HIV/AIDS. In fact, in 2007:

- The county had the second highest rate of persons living with HIV/AIDS of Georgia's 18 public health districts. Fulton County had the highest rate.
- The county's HIV rate was 312.2 cases/100,000 people, while its AIDS rate was 452.5 cases/100,000 people.
- A total of 5,845 of the county's residents were living with HIV/AIDS, of which 42 percent had HIV (non-AIDS) and 58 percent had AIDS.

Unfortunately, despite prevention efforts, DeKalb residents are still becoming infected with HIV and developing AIDS. See Figure 22.

From 2004 through 2007 in DeKalb County:

- A total of 1,821 newly diagnosed HIV/AIDS cases were reported.
- Newly diagnosed HIV (non-AIDS) cases increased 62 percent.

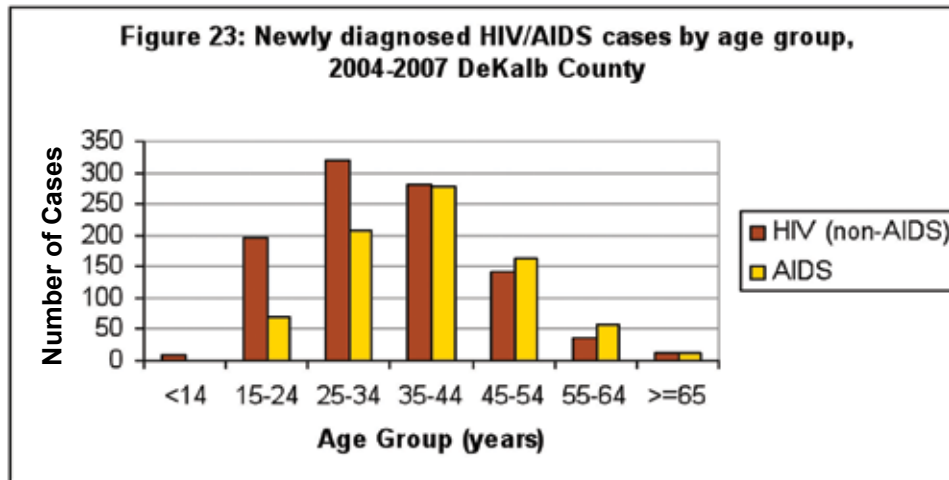


Source: Georgia Department of Community Health, Division of Public Health, HIV/AIDS Epidemiology Section.

Most of DeKalb County's newly diagnosed HIV and AIDS cases are among young adults. See Figure 23.

From 2004 through 2007 in DeKalb County:

- Persons age 25 to 34 years old were newly diagnosed with HIV (non-AIDS) more often than other age groups.
- Persons age 35 to 44 years old were newly diagnosed with AIDS more often than other age groups.

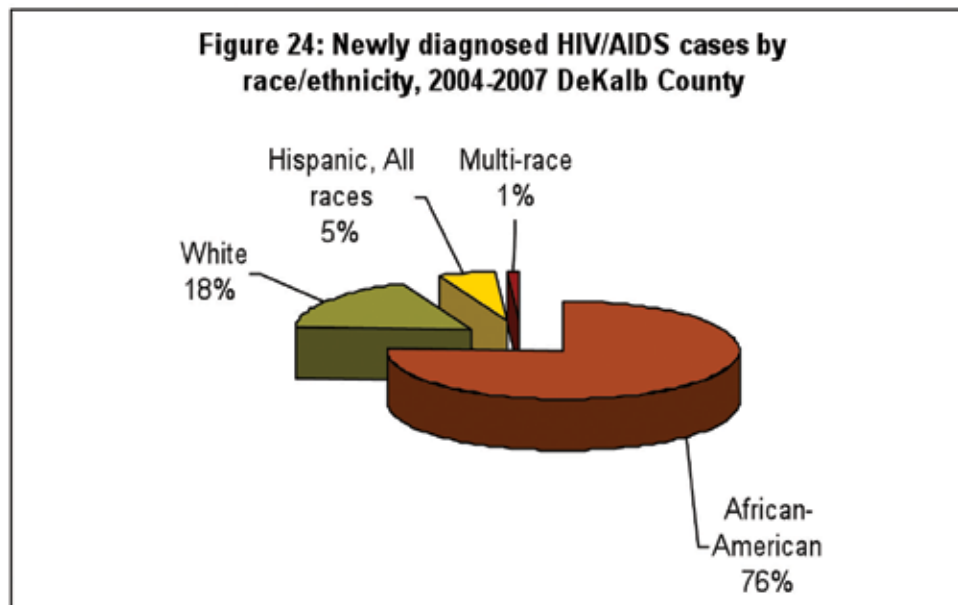


Source: Georgia Department of Community Health, Division of Public Health, HIV/AIDS Epidemiology Section.

DeKalb County's African Americans are overly burdened by HIV/AIDS. See Figure 24.

The data reveal that:

- 76 percent of the new HIV/AIDS cases diagnosed between 2004 and 2007 were in African Americans.
- Between 2004 and 2007, African Americans were four times more likely than whites to be newly diagnosed with HIV/AIDS.



Source: Georgia Department of Community Health, Division of Public Health, HIV/AIDS Epidemiology Section.

Both males and females become infected with HIV most often through sex with HIV-positive men. See Tables 28 and 29.

Table 28: Method of HIV/AIDS transmission among adult males newly diagnosed, 2004-2007 DeKalb County		
	HIV	AIDS
Male-to-male sexual contact	89%	86%
Heterosexual contact	5%	3%
Injection drug use	3%	7%
Male-to-male sexual contact and injection drug use	2%	4%

Source: Georgia Department of Community Health, Division of Public Health, HIV/AIDS Epidemiology Section.

Table 29: Method of HIV/AIDS transmission among adult females newly diagnosed, 2004-2007 DeKalb County		
	HIV	AIDS
Heterosexual contact	74%	77%
Injection drug use	26%	23%

Source: Georgia Department of Community Health, Division of Public Health, HIV/AIDS Epidemiology Section.

What you can do

- Practice abstinence.
- Know your status. Get tested for HIV.
- Know the HIV status of your sexual partner.
- Use condoms each time you have sex.
- Limit the number of sexual partners.
- Don't use drugs.
- Avoid needle sharing.
- Be honest with your sexual partner if you have an STD.

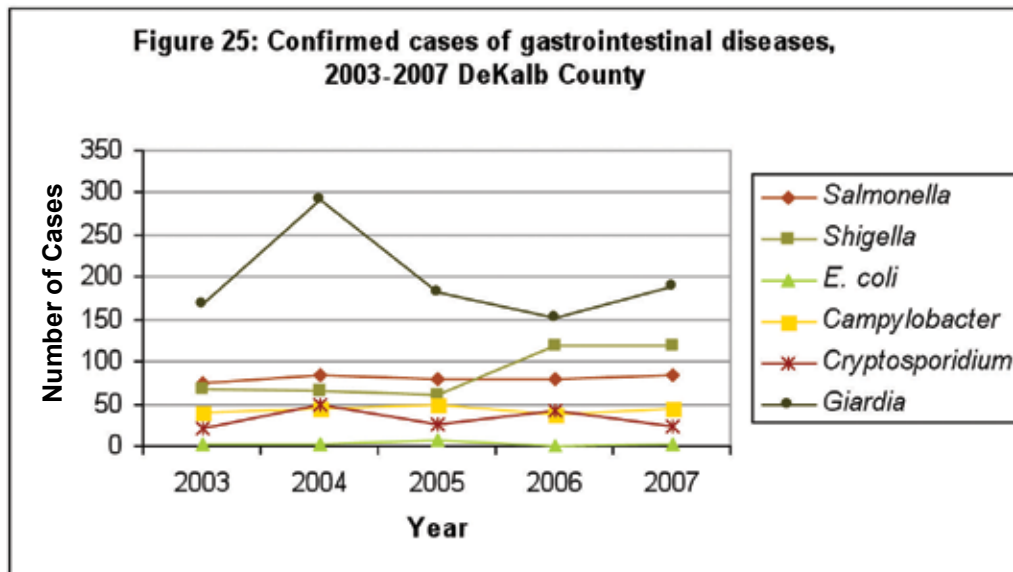
For more information

- Centers for Disease Control and Prevention, Division of HIV/AIDS Prevention: <http://www.cdc.gov/hiv/>.
- Georgia Department of Community Health, Division of Public Health, HIV Unit: <http://health.state.ga.us/programs/stdhiv/index.asp>.
- DeKalb County Board of Health, Ryan White Early Care Clinic: 404-508-7866, http://www.dekalbhealth.net/HealthServices/HIV_AIDS.html.

GASTROINTESTINAL DISEASES

Gastrointestinal diseases, also called gastrointestinal infections or gastroenteritis, are caused when organisms such as a bacteria, viruses or parasites irritate or infect a person's stomach and intestines.

The graph below shows the six most commonly reported gastrointestinal diseases in DeKalb County. In order for a disease to be reported, a doctor needs to collect a stool specimen for laboratory testing. Since this does not happen with every illness, many cases of gastrointestinal disease go undetected. Therefore, the numbers below most likely represent a small percentage of all gastrointestinal diseases.



Source: Georgia Department of Community Health, Division of Public Health.

Giardia:

- Is a parasitic organism.
- Accounted for the largest increase in gastrointestinal disease between 2003 (168 cases) and 2007 (190 cases) (Figure 25).
- Is tested for among refugees from other countries who resettle in DeKalb County. For this reason, DeKalb has more reports of Giardia than other gastrointestinal diseases.
- Spiked to 291 cases in 2004, due to an increase in the number of refugees (Figure 25).

Shigella:

- Is a bacterium that causes the shigellosis illness.
- Is a very contagious diarrheal disease, which can be spread easily from person to person.
- Cases increased from 61 cases in 2005 to 118 cases in 2006 (Figure 25).
- This increase in reported cases may have been a result of an increase in household clusters (persons living in the same household who become ill) of disease. The cause of the increase in household clusters is unknown.

What may put you at risk

- If you are very young or elderly.
- If you have a weakened immune system:
 - Pregnant women.
 - Undergoing chemotherapy or radiation.
 - HIV positive.
- If you do not wash your hands regularly with soap and water or hand sanitizer.
- If you do not clean cooking surfaces after preparing meals with raw meats, dairy products and eggs.
- If you swallow untreated water (from creeks, lakes or streams).

What you can do

- Wash your hands regularly with soap and water or hand sanitizer.
- Avoid swallowing untreated water (from creeks, lakes or streams).
- Practice safe food preparation and avoid cross contamination.
- Go to the doctor if you have symptoms of gastrointestinal disease (nausea, diarrhea and/or vomiting).
- Ask your doctor to test a stool sample.

For more information

- DeKalb County Board of Health, Office of Infectious Diseases: 404-508-7847, <http://www.dekalbhealth.net/HAP/OID.html>.
- DeKalb County Board of Health, Division of Environmental Health: 404-508-7900, www.dekalbhealth.net/EnvironmentalHealth/foodsfty.html.

VACCINE-PREVENTABLE DISEASES

Vaccine-preventable diseases are illnesses caused by bacteria and viruses that can be prevented by routine immunizations. In 2008, over 90 percent of DeKalb County daycare, kindergarten and 6th grade students received all of their recommended vaccines. As shown in Table 30, very few vaccine-preventable diseases are reported in DeKalb County.

The vaccine-preventable diseases discussed in this section are spread from person to person by respiratory droplets. Respiratory droplets can be released when a person coughs, sneezes, spits, drools or has a runny nose.

	2003	2004	2005	2006	2007
Measles	1	0	0	0	0
Mumps	1	0	0	0	0
Rubella	0	1	0	0	0
Pertussis	8	4	6	5	1

Source: Georgia Department of Community Health, Division of Public Health.

Reports of pertussis, also known as whooping cough, decreased notably between 2003 and 2007 (Table 30). This may be in part because of a new pertussis booster vaccine for adolescents and adults that was licensed in 2005. The booster vaccine is not mandatory, but is now recommended for persons 10 to 64 years of age.

What you can do

- Get vaccinations according to the recommended schedule.
- Wash your hands regularly with soap and water or hand sanitizer.
- Cover your coughs and sneezes with your elbow or sleeve.
- Avoid direct contact with others who are sick (includes not sharing eating utensils or drinking glasses).
- If caring for someone who is sick, avoid face-to-face contact and wash hands frequently.

For more information

- Georgia Department of Community Health, Division of Public Health, Immunization Section: 404-657-3158, <http://health.state.ga.us/programs/immunization/>.
- DeKalb County Board of Health, Office of Infectious Diseases: 404-508-7847, www.dekalbhealth.net/HAP/OID.html.

HEPATITIS

Hepatitis is an inflammation of the liver and a major cause of liver disease in the United States. Infectious hepatitis can be caused by one of five viruses (named A through E). Hepatitis A, B and C are commonly seen in the United States and in Georgia.

Hepatitis A:

- Is spread through contact with the feces of an infected person via, for example, contaminated water, contaminated food and certain sexual practices.
- Can last from a few weeks to six months.
- Is preventable through vaccination.

Hepatitis B:

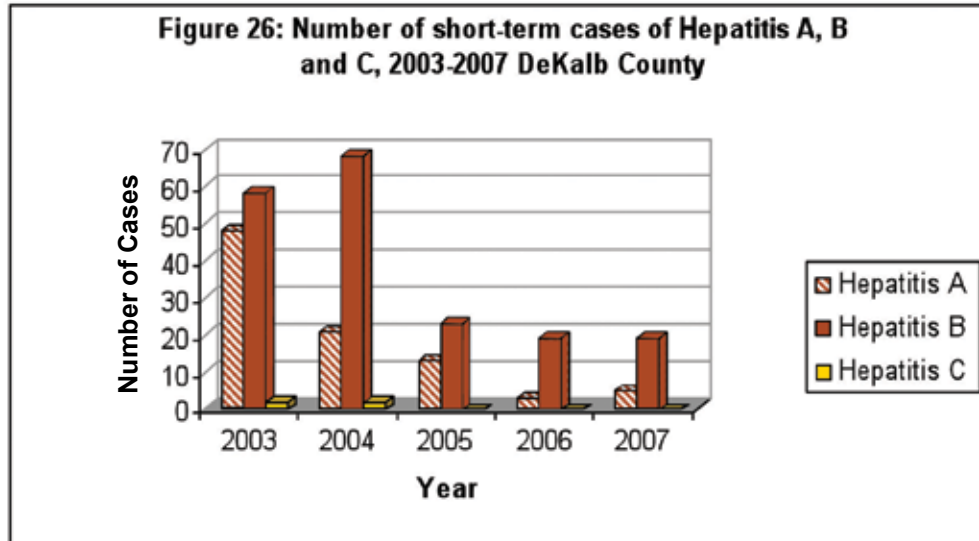
- Is spread through infected blood and other body fluids or from an infected mother to her newborn baby.
- Can last from a few weeks to a lifetime.
- Can result in liver cancer and cirrhosis (scarring of the liver).
- Is preventable through vaccination.

Hepatitis C:

- Is spread through exposure to the blood of an infected person or from an infected mother to her newborn baby.
- Is usually long term and can last a lifetime.
- Can result in liver cancer and cirrhosis.
- Is not preventable through vaccination.

As shown in Figure 26:

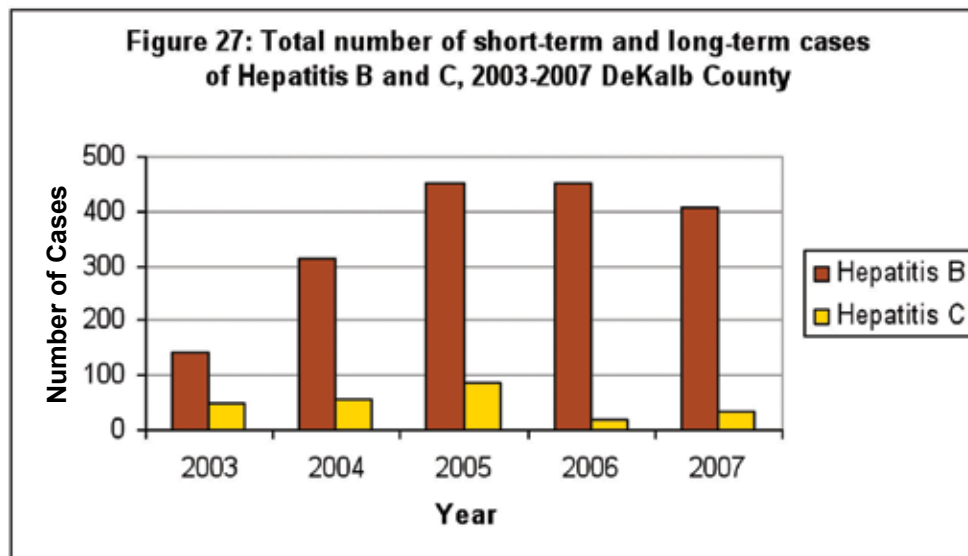
- After a 2003 outbreak, the number of short-term Hepatitis A cases (infections occurring within the previous four months) reported in DeKalb County decreased.
- The large drop from 2004 to 2005 in short-term Hepatitis B case is most likely from a change in the way cases were classified and reported.



Source: Georgia Department of Community Health, Division of Public Health.

The total burden (short-term and long-term cases) of Hepatitis B and C in DeKalb County can be seen in Figure 27:

- Hepatitis B cases increased 189 percent from 2003 to 2007.
- Hepatitis C cases decreased 32 percent from 2003 to 2007.



Source: Georgia Department of Community Health, Division of Public Health.

What may put you at risk

Hepatitis A:

- If an infected person does not wash his or her hands properly after going to the bathroom.
- If a parent or caregiver does not properly wash his or her hands after changing diapers or cleaning up the stool of an infected person.
- If engaging in certain sexual activities, such as oral-anal contact with an infected person.

Hepatitis B and C:

- If you are having unprotected sex with someone who has hepatitis.
- If you have shared or are sharing needles, razors or toothbrushes with someone who has hepatitis (or anything that might have blood on it).
- If you received a body piercing or tattoo from non-sterile instruments.

What you can do

- Wash your hands regularly with soap and water or hand sanitizer.
- Get vaccinations according to the recommended schedule.
- If you are pregnant, get tested for hepatitis and work with your doctor to make sure that your baby is protected from getting hepatitis from you.
- Practice safe sex (use a condom).
- Avoid sharing needles, razors or toothbrushes with others (or anything that might have blood on it).

For more information

- Centers for Disease Control and Prevention, Division of Viral Hepatitis: <http://www.cdc.gov/hepatitis/>.
- Georgia Department of Community Health, Division of Public Health: <http://health.state.ga.us/epi/disease/hepatitis/index.asp>.
- DeKalb County Board of Health, Office of Infectious Diseases: 404-508-7847, <http://www.dekalbhealth.net/HAP/OID.html>.



INVASIVE BACTERIAL DISEASES

Invasive bacterial diseases occur when bacteria cause an infection in a part of the body that is typically protected from them. Examples include blood, cerebrospinal fluid and fluid around the joints (elbow, wrist, knee, etc.). These diseases, presented in Table 31 below, can cause severe illness and death.

	2003	2004	2005	2006	2007
<i>Streptococcus pneumoniae</i>	59	79	82	99	96
<i>Haemophilus influenzae</i>	12	10	5	12	7
Meningococcal disease	1	2	0	0	3

Source: Georgia Department of Community Health, Georgia Division of Public Health.

***Streptococcus pneumoniae* (Pneumococcal Disease):**

- Is caused by the bacteria *Streptococcus pneumoniae*.
- Is the most common cause of ear infections in children.
- Can result in illnesses such as meningitis (infection of the lining of the brain and spinal cord) and bacteremia (infection of the blood).
- Is also a common cause of pneumonia (infection of the lungs).
- Has many strains that have become resistant to commonly used antibiotics.
- Elderly persons are at the highest risk for severe pneumonia illness. Fortunately there are vaccines for children and adults to help protect them from *Streptococcus pneumoniae* infections.
- The number of reported cases of invasive *Streptococcus pneumoniae* in DeKalb County increased by 63 percent from 2003 to 2007 (Table 31).
- The cause of this increase is unknown, but could be due in part to better disease reporting and diagnostic methods.

***Haemophilus influenzae* type b (Hib):**

- Usually strikes children under the age of five years old.
- Was once the most common cause of bacterial infection in infants and young children.
- Can cause meningitis, bacteremia and pneumonia.
- Is vaccine preventable, therefore due to widespread use of Hib vaccine in children, few cases are reported each year.
- Is spread from person to person by sneezing, coughing or speaking closely.



Meningococcal Disease (Meningitis or Bacteremia):

- Is a rare but serious illness caused by the bacteria *Neisseria meningitidis*.
- Is spread through contact with respiratory droplets.
- May be prevented by receiving the meningococcal vaccine, available for persons 11 through 18 years of age, and is often recommended for young people entering their first year of college.

Methicillin-resistant *Staphylococcus aureus* (MRSA):

- Is a type of *Staphylococcus aureus* (also called “Staph”) that has become resistant to some commonly used antibiotics and is therefore difficult to treat.
- Can cause many different types of illnesses, from skin infections (such as lesions, boils and abscesses) to respiratory illnesses (such as pneumonia) to more invasive, severe diseases (such as meningitis and bacteremia).

Is spread most commonly by skin-to-skin contact or by hands contaminated with fluid from a draining lesion. It also can be spread when an infected person uses and then shares an item like a towel, soap, razor or athletic equipment without first cleaning or sanitizing it.

MRSA was designated as a notifiable disease in Georgia beginning in 2005. Information is reported in Georgia only for severe cases of MRSA. A severe case is one resulting in hospitalization or death that occurs in the community, not infections that occur in a hospital or health care facility. Between 2005 and 2007, 39 cases of severe, community-associated MRSA infections were reported in DeKalb County.

What you can do

- Wash your hands regularly with soap and water or hand sanitizer.
- Cover your coughs and sneezes with your elbow or sleeve.
- Get vaccinations according to the recommended schedule.
- Avoid direct contact with others who are sick (this includes not sharing eating utensils or drinking glasses).
- If you are caring for someone who is sick, avoid face-to-face contact and wash your hands frequently.
- Cover draining lesions until they are scabbed over.
- Avoid sharing personal items such as towels, razors, soap and athletic equipment.

For more information

- Centers for Disease Control and Prevention, National Center for Immunizations and Respiratory Diseases: www.cdc.gov/vaccines/.
- Georgia Department of Community Health, Division of Public Health, Acute Disease Epidemiology Section: <http://health.state.ga.us/epi/bacterial/>.
- DeKalb County Board of Health, Office of Infectious Diseases: 404-508-7847, <http://www.dekalbhealth.net/HAP/OID.html>.

WEST NILE VIRUS

West Nile virus (WNV) is a mosquito-borne virus that affects the central nervous system and can cause serious, life-altering and even fatal disease. WNV usually infects birds, but it can be spread to humans by mosquitoes that feed on infected birds and then bite humans.

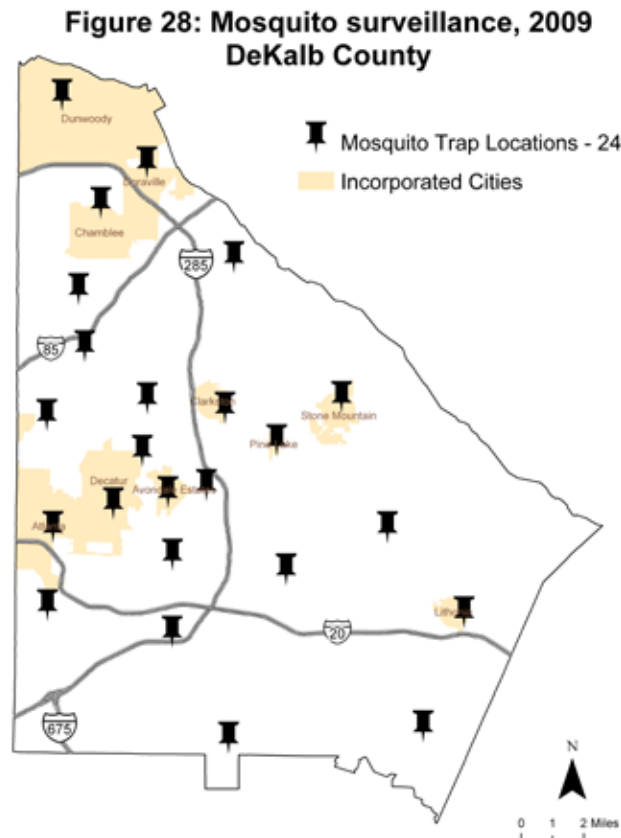
In DeKalb County:

- WNV was first confirmed in July 2001 in a Cooper’s hawk.
- Over 8,000 dead bird reports have been received and mapped for analysis.
- A total of 858 dead birds have been submitted for analysis and 310 (36%) have tested positive for WNV.
- Additionally, 3,983 collections of mosquitoes have been analyzed resulting in 160 (4%) WNV-positive results.

	2001	2002	2003	2004	2005	2006	2007	2008
Human Cases	0	5	0	1	3	0	4	0
Deaths	0	1	0	0	0	0	0	0

Source: DeKalb County Board of Health, Division of Environmental Health.

DeKalb County has managed to keep the number of human cases to 13 for the last eight years (Table 32), compared to 207 cases in Georgia. The following maps illustrate mosquito and West Nile virus activity.



Source: DeKalb County Board of Health, Division of Environmental Health; Atlanta Regional Commission.