Save the Date

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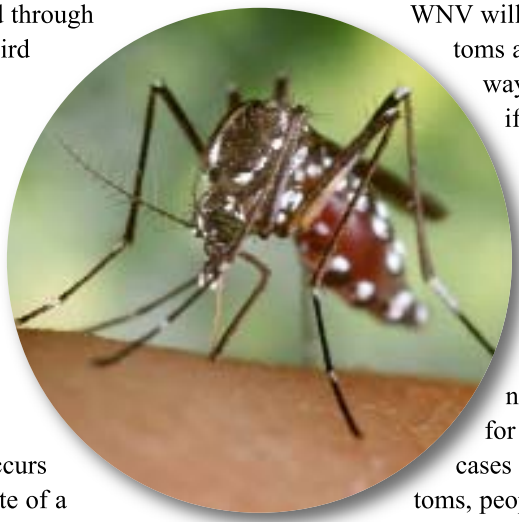
West Nile Virus in Texas

West Nile Virus (WNV) is a seasonal epidemic with peak incidence of human cases occurring from late August to early September in North America. WNV first appeared in the United States in 1999 and rapidly spread across the nation, reaching Texas in 2002. According to the Texas Department of State Health Services, a total of 1,117 human cases and 103 fatalities have been reported statewide since that time.

WNV is maintained through a mosquito vector and bird reservoir host cycle in which mosquitoes acquire WNV by feeding on infected birds, and in turn, spread the disease to other birds during blood meal feeding. People, horses, and other mammals are incidental dead-end hosts for WNV.



Human infection occurs primarily through the bite of a WNV-infected mosquito. Human cases of WNV usually occur between late summer and early fall; however, in Texas, WNV can be transmitted year round due to mild temperatures. Therefore, it is necessary to practice personal preventive measures continually to significantly reduce the risk of exposure to infected mosquitoes.

What Are the Symptoms of WNV?

- **Serious Symptoms in a Few People**. About one in 150 people infected with WNV will develop severe illness. The severe symptoms can include high fever, headache, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, vision loss, numbness and paralysis. These symptoms may last several weeks, and neurological effects may be permanent.
- **Milder Symptoms in Some People**. Up to 20 percent of the people who become infected will display symptoms which can include fever, headache, and body aches, nausea, vomiting, and sometimes swollen lymph glands or a skin rash on the chest, stomach and back. Symptoms can last for as short as a few days, though even healthy people have been sick for several weeks.
- **No Symptoms in Most People**. Approximately 80 percent of people (about 4 out of 5) who are infected with WNV will not show any symptoms at all, but there is no way to know in advance if you will develop an illness or not.

Typically people develop symptoms between 3 and 14 days after they are bitten by the infected mosquito. There is no specific treatment for WNV infection. In cases with milder symptoms, people experience symptoms such as fever and aches that pass on their own, although illness may last weeks to months even in healthy persons. In more severe cases, people usually need to go to the hospital where they can receive supportive treatment including intravenous fluids, help with breathing, and nursing care.

What Should I Do if I Think I Have WNV?

Milder WNV illness will improve on its own, and people do not necessarily need to seek medical attention for this infection though they may choose to do so. If you develop symptoms of severe WNV illness, such as unusually severe headaches or confusion, seek medical attention immediately. Severe WNV illness generally requires hospitalization. Pregnant women and nursing mothers are encouraged to talk to their doctor if they develop symptoms that could be WNV.

*See **West Nile**, page 4*

MOSQUITOES 101

Why do mosquitoes bite?
Only female mosquitoes bite. Female mosquitoes require a blood meal to acquire the protein needed to produce eggs. Females lay multiple batches of eggs during their lifespan, and a new blood meal is needed to produce each batch. Different mosquito species prefer different host species; some mosquitoes will seek blood meals from birds, others from mammals - and some are generalists. The female inserts her needle-like proboscis - a slender, tubular, feeding and sucking organ - under the victim's skin, drawing blood into her abdomen. She will feed until her abdomen is full, unless discovered and brushed away.

Why do mosquitoes seem to bite some people, but not others?
This phenomenon is not completely understood. Mosquitoes are attracted by the carbon dioxide that we - and other animals - exhale. They may also be attracted by various odors - perfume, perspiration, lactic acid, detergents - that combine in unique ways to make one victim more attractive than another as a meal. Because dark colors absorb heat and lighter colors tend to reflect heat, mosquitoes also tend to be more attracted to victims dressed in darker clothes.

Why do mosquitoes bites itch and swell?
The itching, swelling, and burning from a mosquito bite are actually caused by the body's autoimmune response to the saliva injected by the mosquito when she feeds. This saliva contains anti-coagulating agents that prevent the victim's blood from clotting as it is sucked into the mosquito's abdomen. A bite may take several days to heal and stop itching; treat it with Calamine lotion or a topical anti-itch medication.

Where do mosquitoes breed?
Mosquitoes breed in wet, swampy

*See **Mosquitoes 101**, page 3*

Be Smart *About the Sun*

Source: www.sunsmart.com.au

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As summer approaches, Texans will flock to beaches and playgrounds, pools, or other outdoor activities that expose them to the sun. For construction workers and others summer is also the peak time for job-related sun exposure. The vast majority of cancer experts agree that exposure to the sun's ultra violet radiation (UVR) leads to DNA damage that can cause cancer, cataracts, immune system dysfunction and even death, sometimes many years down the road. Children are particularly vulnerable to this stealthy process since close to 80% of lifetime sun exposure occurs before the age of 18. Remarkably, a single instance of childhood sunburn severe enough to cause blistering doubles the lifetime probability of developing melanoma. Experts estimate more than three-fourths of the 1.3 million skin cancer cases arising in the U.S. each year could be prevented simply by providing barriers between children and the sun – shade, a hat, UVR-impervious clothing, application and frequent reapplication of SPF 15+ sunscreen. Many public misperceptions surrounding sun exposure such as, "If you don't feel hot you aren't getting burned" and "A tan protects you from the sun" still exist.

The vast majority of skin cancers are either basal cell carcinoma (80%) or squamous cell carcinoma (16%). Even though malignant melanoma (MM) represents just 4% of the annual cases of skin cancer, melanoma exacts a heavy toll, accounting for three-fourths of skin-cancer deaths.

Melanoma Trends in the U.S.

One in five people in the U.S. and one in three in the Sunbelt will develop skin cancer at some point in their lives. MM incidence is growing faster than any other cancer and over the past quarter century the incidence of MM has more than doubled. In fact, MM is the most frequently diagnosed cancer for the 25 – 29 age cohort, and is second only to breast cancer among women 30 – 35 years of age. In the U.S. there are now a staggering 50,000+ cases per year, a number which exceeds new HIV infections. On a single bright note, as the result of wider screening and improvements in treatment, over the past three decades mortality grew only one-third as fast as incidence. Caught early, skin cancer is highly curable with survival rates exceeding 95% for non-MM. The American Cancer Society recommends monthly full-body skin self-examination using a mirror, noting that MM may appear on areas not normally exposed to the sun.

Australia Has Become SunSmart

For many years Australia claimed the unenviable title of skin cancer capital of the planet. A lifestyle oriented to the outdoors, generally clear skies, relative proximity to the equator and a depleted protective ozone layer yield high exposure to UVR. and a rate of skin cancer – four times that of the U.S or the U.K.

More than 25 years ago Australia embarked on SunSmart, a highly successful public health campaign that tackles skin cancer on multiple fronts. In a sustained effort SunSmart succeeded in changing the Australian public's beliefs and behavioral norms about skin protection for themselves and their children. "Slip [on a shirt]; Slap [on a hat]; Slop [on sunscreen]" is a way of life among Australians. Program materials are widely used by educators and the media, and high-SPF clothing characterized as "SunSmart" is considered fashionable. Shade structures are now routinely provided in venues where people are exposed to the sun. Health care practitioners are active in screening. As a result, skin cancer incidence peaked in 1985 and related deaths have begun to fall among younger people. SunSmart has become a by-word for good sun practices and a model for other countries including some, like the U.K, which are hardly known for sunny skies.

Taking on Skin Cancer the Texas Way

Texas ranks 3rd among the states in MM incidence, making MM a focal health problem. Like SunSmart, Texas Cancer Council's Action Plan on Skin Cancer for the State of Texas (*http://www.tcc.state.tx.us/skincancer/cover.html*) lays out a broad approach to disease prevention. The Plan discusses policies for schools and day-care facilities, workplaces, and recreational facilities to educate and enable the public to protect themselves.

No step is more important than engaging children in a lifetime of safe sun practices. A decade ago, The University of Texas M. D. Anderson Cancer Center developed Project S.A.F.E.T.Y. (Sun Awareness For Educating Today's Youth) with Texas Cancer Council funding (*http://www.mdanderson.org/departments/projectsafety/*). Funded by both the original Texas Cancer Council grant and donations to the cancer center's Block Out Skin Cancer Initiative (BOSC) the interactive -CD ROM and 90-page Teacher's Guide, targeting grades 4-12, continues to be supplied free of charge to educators throughout the Sunbelt. For further info, contact: Michael J. Ahearn, Ph.D., Project S.A.F.E.T.Y. Director at mahearn@mdanderson.org.

CHRONIC DISEASE PREPAREDNESS: *a challenge for the public health body*

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The current focus on preparedness is important and essential. In a world of globalization what happens here, in Texas, and in the rest of the world are intricately connected. This applies not only to the private business sector, but also to the public in general. One community's health vulnerability is everyone's health vulnerability. In Texas, we have a unique mix of cultures, ethnicity, and socio-economic status. Preparedness for Texas is not only preparedness from bioterrorism and communicable diseases, our priorities should also focus on preparedness for the chronic disease epidemics of obesity and diabetes that we are currently experiencing. The economic burden of chronic disease and the increasing number of uninsured magnifies the problem even more.

During Public Health Week 2007, Dr. Eduardo Sanchez addressed the importance of chronic disease preparedness and outlined four Texas perspectives that should guide the state's preparedness priorities. These are as follows:

Texas Perspective #1

- An aging population with increasing medical care cost
- An increasing Hispanic population
- An epidemic of obesity
- An explosion of type 2 diabetes

Texas Perspective #2

- A shortage of healthcare and public health providers
- Wide and growing health disparities
- The challenge of improving health literacy
- Texas has the highest percentage of uninsured creating a vulnerable population

Texas Perspective #3

- Only 29% of Texans 25-34 yrs hold a 2yr degree or higher compared to 39% nationwide
- Low education attainment leads to uninformed decisions about health

Texas Perspective #4

- Local public health issues:
- Local health departments expend fewer dollars per capita for public service
- Are more dependent on local & federal funds than state funds
- Employ fewer personnel per size of jurisdiction
- Provide services that equaled or exceeded other state's services
- Funding out of balance
- The resources are there, but the allocation is inappropriate

As professionals charged with the public's health, we need to think outside the box and look at what's truly driving our health and health economic burdens. How do we address these drivers in a way that includes the communities we serve, our partners and stakeholders? This seems like a monumental task, but if we, as a public health body, including local, state, federal, public and private health entities, would set aside individual agendas and territorial competitions and come to the same table to listen, learn and create, this does not have to be an impossible task. If this is not addressed in a comprehensive and unified way, we will continue fighting an uphill battle as we have been for years watching chronic disease grow before our eyes along with widening health disparities and the uninsured.

Sun Safety Action Steps


Limit Time in the Midday Sun


Seek Shade


Wear a Hat


Cover Up


Wear Sunglasses that Block 99-100% of UV Radiation


Always Use Sunscreen


Avoid Sunlamps and Tanning Parlors


Watch for the UV Index

Source: www.epa.gov/sunwise

Mosquitoes 101 *continued from page 1*

areas, where they lay their eggs. The eggs hatch in the water, and the young mosquitoes spend their pupal stages in the water. Mosquitoes lay eggs in both fresh and polluted water, and seek still waters such as those found in small puddles, ditches, and ponds. Even a small amount of standing water - say, in the bottom of a flower pot - will provide sufficient habitat for mosquito eggs. These eggs usually hatch about 5 days after they are laid. A key factor in mosquito prevention is the elimination of standing water in your area.

Source: U.S. Geological Survey's

Upcoming conferences

NEHA 71st Annual Educational Conference & Exhibition - (National Environmental Health Association (NEHA)) - June 18-21, 2007, Atlantic City, NJ

2007 Public Health Performance Summit - (The Performance Institute) - June 27-29, 2007, Arlington, VA

NACCHO Annual Conference 2007 - (National Association of County and City Health Officials (NACCHO)) - July 11-13, 2007, Columbus, Ohio

APHA 135th Annual Meeting & Exposition - (American Public Health Association (APHA)) - November 3-7, 2007, Washington, DC

2007 National Prevention and Health Promotion Summit: Creating a Culture of Wellness - (Centers for Disease Control and Prevention (CDC), Office of Disease Prevention and Health Promotion, HHS (ODPHP)) - November 27-29, 2007, Washington, DC

The Librarian's Corner

What is a webcast?

A webcast is an online video which can be live or recorded. It is the combination of broadcast and web. The video could be part of a series that is created on a daily, weekly, or monthly basis, similar to a television show. It could also be a channel, similar to television, which is streamed live over the internet. Lately, several of the large providers of online video have been on the news- YouTube *(http://www.youtube.com*), Google video (*http://video.google.com*), and MSN video (*http://video.msn.com*). These provide videos from many different sources with mostly the general public contributing. However, more and more academic and government institutions are adding quality content to these sites, providing the public with access to lectures, presentations, and more.

Public Health related webcasts

There are many useful public health related webcasts available. As shown below, they come from a variety of sources (academic, government, and nonprofit organizations), and cover a broad range of topics. All of the videos listed are free.

Alabama Department of Public Health webcasts
http://www.adph.org/ALPHTN/default.asp?TemplateNbr=3&DeptID=143&TemplateId=2306

CDC's Public Health Training Network
http://www2a.cdc.gov/PHTN/default.asp

Kaiser Health Policy Video Library
http://www.kaiseredu.org/picks/documentary_search.aspx

KaiserEDU
http://www.kaiseredu.org/

Medscape's Video Editorials
http://www.medscape.com/index/section_2054_0

Public Health Grand Rounds from University of North Carolina at Chapel Hill School of Public Health and CDC
http://www.publichealthgrandrounds.unc.edu/

Public Health Planet
http://blog.lib.umn.edu/sphpod/sphprograms/

Robert Wood Johnson Foundation videos
http://www.rwjf.org/portfolios/features/webcastlist.jsp?iaid=141&type=3

Texas Public Health Training Center (TPHTC) Public Health Grand Rounds
http://www.txphtrainingcenter.org/GrandRounds.htm

US Dept of Health and Human Services, Alcohol & Drug Information videos
http://ncadistore.samhsa.gov/catalog/media.aspx?topic=128&h=publications

University of North Carolina at Chapel Hill School of Public Health Webcasts
http://www2.sph.unc.edu/about/webcasts/

If you have any questions, please feel free to contact me:
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The Texas Public Health Training Center (TPHTC) is a workforce development consortium of the University of Texas School of Public Health at Houston; the University of North Texas Health Science Center, School of Public Health and the Texas A&M University System Health Science Center, School of Rural Public Health. TPHTC is a formal partner with the UT Center for Biosecurity and Public Health Preparedness. Principal funding for the Center provided through a grant from the Health Resources and Services Administration (HRSA) of the US Department of Health and Human Services (USDHHS).

www.txphtrainingcenter.org

West Nile *continued from page 1*

What Is the Risk of Getting Sick from WNV?

- People over 50 at higher risk to get severe illness. People over the age of 50 are more likely to develop serious symptoms of WNV if they do get sick and should take special care to avoid mosquito bites.
- Being outside means you're at risk. The more time you're outdoors, the more time you could be bitten by an infected mosquito. Pay attention to avoiding mosquito bites if you spend a lot of time outside, either working or playing.
- Risk of obtaining WNV through medical procedures is very low. All donated blood is checked for WNV before being used. The risk of getting WNV through blood transfusions and organ transplants is very small, and should not prevent people who need surgery from having it.
- Pregnancy and nursing do not increase risk of becoming infected with WNV. The risk that WNV may present to a fetus or an infant infected through breastmilk is still being evaluated.
- WNV is not spread through casual contact such as touching or kissing a person with the virus.

How Can I Protect Against WNV?

Follow the "Four D's" of prevention: drain, dusk/dawn, dress, and DEET.

- Eliminate mosquito breeding sites by removing all standing water on private property, i.e. drain flower pots, bird baths, and clogged gutters and remove containers that may collect water such as wheelbarrows, wading pools, trash-can lids and recycling bins. Keep swimming pool water aerated and chlorinated; cover when not in use. Trim grass regularly.
- Limit outside activity during dusk and dawn, the times when mosquitoes are most active.
- When outdoors, wear protective clothing including socks, long sleeves, and long pants, and apply an effective insect repellant containing DEET to exposed skin as well as clothing for additional protection.
- Other prevention techniques include placing mosquito netting around infant carriers and ensuring screens fit well around doors and windows.

References:
www.cdc.gov/ncidod/dvbid/westnile
www.dshs.state.tx.us/idcu/disease/arboviral/westNile

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