

**Working Papers
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12.

WEST NILE II

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After This Year's First Cases of West Nile Virus, Four in Ten Americans in High-Mosquito Areas Are Not Yet Taking Precautions Against Mosquitoes

Nearly Half of People in High-Mosquito Areas Concerned They or a Family Member May Get West Nile Virus Within Next 12 Months

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BOSTON, MA — A new study, conducted by the Harvard School of Public Health Project on the Public and Biological Security shortly after this year's first human cases of West Nile virus in the U.S., finds that nearly four in ten (38%) residents of high-mosquito areas have not yet taken any precautions against mosquito bites. These findings are similar to those found at the end of last year's outbreak of West Nile virus.

"This suggests the need for better communication by public health officials and health professionals to educate Americans on what steps they should take to protect themselves against West Nile virus," said Robert J. Blendon, professor of Health Policy and Political Analysis at the Harvard School of Public Health.

The survey also shows that nearly half (48%) of people in high-mosquito areas are concerned that they or a family member may get sick from West Nile virus in the next 12 months.

These findings, based on interviews with 1,015 Americans nationwide, including 471 who said there are a lot of mosquitoes where they live, come shortly after the nation's first human case of West Nile virus was confirmed. So far in 2003, 16 human cases of illness from West Nile have been reported in the United States (as of July 25, 2003). Last year 4,156 human cases of illness from West Nile, resulting in 284 deaths, were reported nationwide. West Nile is a virus that is mainly transmitted by mosquito bites.

Precautions against Mosquito Bites

In high-mosquito areas, nearly four in ten (38%) report not having taken any precautions against mosquito bites since the beginning of June 2003. At the end of last year's outbreak of the disease, a similar proportion (43%) reported not having taken any precautions. Given the number of cases of West Nile in 2002 and the fact that the disease has recurred in humans this year, this finding raises an important public health concern.

The Centers for Disease Control and Prevention (CDC) recommend using mosquito repellent containing DEET, but only 46% of Americans living in high-mosquito areas say they have used such a repellent (including the brands Off and Cutter) since the beginning

of June. Three in ten (32%) have used a mosquito repellent containing citronella, and 13% report using some other kind of mosquito repellent.

Fewer than half of Americans living in high-mosquito areas report that they have taken each of four other specific recommended precautions since the beginning of June. Four in ten report having removed standing water from spare tires, gutters, bird baths, kiddie pools, and other places where water collects (44%) and having avoided going outdoors at the peak mosquito hours of dawn and dusk (40%). Three in ten (30%) say they have worn long-sleeve shirts and other protective clothing outdoors. Twenty percent report having replaced or repaired window screens.

Much smaller numbers report having taken other precautions, such as using a “bug zapper” in their yard (11%) or buying mosquito netting (4%). Neither precaution has been specifically recommended by the CDC.

We cannot tell from these results if people are taking these precautions specifically to protect against getting the West Nile virus. In high-mosquito areas, separating general precautions against mosquitoes from those aimed at dealing with a specific mosquito-borne threat is difficult. Many people living in high-mosquito areas, in order to prevent the annoyance of mosquito bites and probably aware of other dangers such as encephalitis, would take precautions in any case.

Not surprisingly, far fewer residents of areas where there are not very many mosquitoes report having taken precautions against bites (32%, compared with 62% in high-mosquito areas). No more than one in five took any of the individual precautions, including using mosquito repellents that contain DEET (19%).

(For information about preventive measures, go to the CDC website, www.cdc.gov/ncidod/dvbid/westnile/index.htm.)

Methodology

This study was designed and analyzed by researchers at the Harvard School of Public Health. The project director is Robert J. Blendon of the Harvard School of Public Health. The research team also includes John M. Benson, Catherine M. DesRoches, Elizabeth Raleigh, and Kathleen Weldon of the Harvard School of Public Health and Melissa J. Herrmann of ICR/International Communications Research. Fieldwork was conducted via telephone for the Project by ICR/International Communications Research of Media (PA) between July 18 and July 22, 2003. The survey was conducted with a nationally representative sample of 1,015 adults age 18 and over, including 471 who said they lived in areas where there are a lot of mosquitoes. The margin of error for the total sample is plus or minus 3 percentage points; for residents of high-mosquito areas, plus or minus 4.5 percentage points.

Precautions Against Mosquito Bites

Residents of High Mosquito Areas

Have taken precautions to avoid mosquito bites



Removed standing water



Avoided going out at peak hours, dawn/dusk



Wore long-sleeved shirts/other protective clothing outdoors



Replaced/repared window screens



Bought mosquito netting



Haven't taken precautions



Harvard School of Public Health Project on the Public and Biological Security, West Nile Virus Survey, July 2003.

Use of Mosquito Repellents

Residents of High Mosquito Areas

Off, Cutter or other mosquito repellent containing DEET



Skin-So-Soft or other mosquito repellent containing citronella



"Bug-zapper" in your yard



Some other kind



Harvard School of Public Health Project on the Public and Biological Security, West Nile Virus Survey, July 2003.

Table 1

Precautions against mosquito bites			
		Live in areas with a lot of mosquitoes (self-described)	
	Total Public (n=1015)	Yes (n=471)	No (n=524)
Have taken precautions to avoid mosquito bites, since beginning of June 2003:			
Yes	46%	62%*	32%
No	54%	38%	68%*
Have done the following things to avoid mosquito bites, since beginning of June 2003:			
Removed standing water from spare tires, gutters, bird baths, kiddie pools, other places water collects	31%	44%*	20%
Avoided going outdoors at peak hours, dawn/dusk	28%	40%*	17%
Wore long-sleeve shirts/other protective clothing outdoors	22%	30%*	16%
Replaced or repaired window screens	14%	20%*	9%
Bought mosquito netting	3%	4%	2%
Have used following types of mosquito repellents, since beginning of June 2003:			
Off, Cutter, or other mosquito repellent containing DEET	31%	46%*	19%
Skin-So-Soft or other mosquito repellent containing citronella	21%	32%*	12%
“Bug-zapper” in your yard	6%	11%*	2%
Some other kind	9%	13%*	5%

Table 2

Concern about and perceived likelihood of getting sick from West Nile Virus			
		Live in areas with a lot of mosquitoes (self-described)	
	Total Public	Yes	No
Concerned you/someone in family may get sick from West Nile virus in next 12 months	(n=498) 32%	(n=229) 48%*	(n=261) 17%
Very/somewhat likely you /someone in family will get sick from West Nile virus in next 12 months	(n=517) 17%	(n=242) 25%*	(n=263) 11%

**Harvard School of Public Health
Project on the Public and Biological Security**

WEST NILE VIRUS SURVEY

**July 18-22, 2003
N=1015 adults nationwide**

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I N T E R N A T I O N A L C O M M U N I C A T I O N S R E S E A R C H

WEST NILE SURVEY
Harvard School of Public Health
Topline Results

The West Nile Virus Excel insert was conducted by telephone July 18-22, 2003 among a nationally representative sample of 1015 adults, age 18 and older. Field work by ICR/International Communications Research of Media, PA. The margin of error for this sample is +/-3 percentage points.

(Asked of one-half of total respondents; N=517)

WN-1. I'm going to read you a list of things and ask you how likely it is that each of them will happen to you or someone in your immediate family DURING THE NEXT 12 MONTHS. First, (READ FIRST ITEM)? Do you think that it is very likely to happen to you or someone in your immediate family, somewhat likely, not very likely, or not at all likely? How about (READ NEXT ITEM)?

a. Getting the flu

	LIKELY			NOT LIKELY			Don't know	Refused
	Net	Very	Somewhat	Net	Not very	Not at all		
7/22/03	66	21	45	34	18	15	1	--
11/12/02**	77	30	47	22	13	8	1	--

**Trend HSPH West Nile Survey, n=500

b. Contracting SARS

	LIKELY			NOT LIKELY			Don't know	Refused
	Net	Very	Somewhat	Net	Not very	Not at all		
7/22/03	6	2	4	91	29	62	3	--

c. Contracting smallpox

	LIKELY			NOT LIKELY			Don't know	Refused
	Net	Very	Somewhat	Net	Not very	Not at all		
7/22/03	4	1	3	95	29	66	1	*
11/12/02**	8	1	7	89	34	56	2	--

**Trend HSPH West Nile Survey, n=500

d. Getting sick from the West Nile virus

	LIKELY			NOT LIKELY			Don't know	Refused
	NET	Very	Somewhat	NET	Not very	Not at all		
7/22/03	17	2	15	79	36	43	4	*
11/12/02**	23	6	17	73	39	33	5	*

**Trend HSPH West Nile Survey, n=500

WEST NILE INTRO: Now I'm going to ask you some questions about the West Nile virus, which can cause West Nile Fever and other complications.

(Asked of one half of total respondents; N=498)

WN-2. Are you concerned that you or someone in your immediate family may get sick from the West Nile virus DURING THE NEXT 12 MONTHS, or aren't you concerned about that?

(Asked of those concerned)

WN-2a. How concerned are you? Are you very concerned, somewhat concerned, or not very concerned?

Q2/2a West Nile Concern Combination Table

	CONCERNED OF WEST NILE				Not Concerned of West Nile	Don't know	Refused
	Net	Very	Somewhat	Not very			
7/22/03	32	10	19	3	68	*	--
11/12/02**	32	11	18	2	65	3	--

**Trend HSPH West Nile Study, n=501

WN-3. Where you live, are there a lot of mosquitoes around during the summer, or aren't there very many mosquitoes?

	A lot of mosquitoes	Not very many mosquitoes	Don't know	Refused
7/22/03	46	51	2	*
11/12/02**	52	46	2	*

**Trend HSPH West Nile Study, n=1001

WN-4. Since the beginning of June have you taken any precautions to avoid getting mosquito bites, or not?

	Yes, have taken precautions	No, have not taken precautions	Don't know	Refused
7/22/03	46	54	*	--
11/12/02**	45	54	1	*

**Trend HSPH West Nile Study, n=1001 (During the past summer, did you take)

WN-5. Since the beginning of June have you done any of the following things to avoid getting mosquito bites? Have you (INSERT ITEM)?

a. Wear long-sleeved shirts or other protective clothing outdoors

	Yes	No	Don't know	Refused	Didn't take precautions
7/22/03	22	24	--	--	54
11/12/02**	24	21	--	*	55

****Trend HSPH West Nile Study, n=1001** (During the past summer, did you take)

b. Replace or repair window screens

	Yes	No	Don't know	Refused	Didn't take precautions
7/22/03	14	31	*	--	54
11/12/02**	16	29	*	--	55

****Trend HSPH West Nile Study, n=1001** (During the past summer, did you take)

c. Avoid going outside during the peak mosquito hours of dawn or dusk

	Yes	No	Don't know	Refused	Didn't take precautions
7/22/03	28	18	--	--	54
11/12/02**	24	21	*	*	55

****Trend HSPH West Nile Study, n=1001** (During the past summer, did you take)

d. Remove standing water from spare tires, gutters, bird baths, kiddie pools, or other places where water collects

	Yes	No	Don't know	Refused	Didn't take precautions
7/22/03	31	15	*	*	54
11/12/02**	31	14	*	--	55

****Trend HSPH West Nile Study, n=1001** (During the past summer, did you take)

e. Buy mosquito netting

	Yes	No	Don't know	Refused	Didn't take precautions
7/22/03	3	43	*	--	54
11/12/02**	4	41	--	--	55

****Trend HSPH West Nile Study, n=1001** (During the past summer, did you take)

f. Avoid activities or areas that would bring you in contact with mosquitoes

	Yes	No	Don't know	Refused	Didn't take precautions
7/22/03	26	20	*	--	54
11/12/02**	25	20	*	--	55

****Trend HSPH West Nile Study, n=1001** (During the past summer, did you take)

WN-6. Since the beginning of June, have you use any of the following types of mosquito repellents? How about (READ ITEM)?

a. A “bug zapper” in your yard

	Yes	No	Don't know	Refused	Didn't take precautions
7/22/03	6	39	--	--	54
11/12/02**	7	38	--	*	55

****Trend HSPH West Nile Study, n=1001** (During the past summer, did you)

b. Off, Cutter, or some other mosquito repellent containing DEET

	Yes	No	Don't know	Refused	Didn't take precautions
7/22/03	31	14	*	--	54
11/12/02**	31	13	1	*	55

****Trend HSPH West Nile Study, n=1001** (During the past summer, did you)

c. Skin-So-soft or some other mosquito repellent containing citronella

	Yes	No	Don't know	Refused	Didn't take precautions
7/22/03	21	23	1	--	54
11/12/02**	21	23	1	*	55

****Trend HSPH West Nile Study, n=1001** (During the past summer, did you)

d. Some other kind of mosquito repellent

	Yes	No	Don't know	Refused	Didn't take precautions
7/22/03	9	37	*	--	54
11/12/02**	10	34	*	*	55

****Trend HSPH West Nile Study, n=1001** (During the past summer, did you)