

# WEST NILE VIRUS: PERSONAL PRECAUTIONS

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*Analysis of data from the Rapid Risk Factor Surveillance System*



Author: Shelby Huffman, Health Data Analyst

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## ABOUT RRFSS

The Rapid Risk Factor Surveillance System (RRFSS) is a public health surveillance survey that initiated with a pilot project through the Durham Region Health Department in 1999. It is coordinated by the Institute for Social Research at York University, and has been a multi-health unit collaborative surveillance project since 2000. Health units across Ontario have had the option of participating in RRFSS for an annual fee, and are able to participate in the development and revision of topic-based interview modules in RRFSS (RRFSS Working Group, 2010).

RRFSS is administered as a 10- to 20-minute telephone survey using random digit dialing. It targets 60 to 200 adult (18+) respondents per month from each participating health region. As of 2018, the sampling frame in Grey Bruce includes both landlines and cellphones.

This report presents data analysed only for the Grey Bruce region.

## ABOUT THIS DOCUMENT

The rates presented in this document are estimates based on RRFSS survey results. These are presented with the upper and lower limits of their 95% confidence intervals following in parentheses.

Figures noted with an asterisk (\*) should be used with caution, as the estimates have wide confidence intervals and are therefore less reliable.

All statistical analyses were written and conducted in Stata version 14.1.

## INTRODUCTION TO MODULE

The *Mosquito Protection Personal* module asks five questions to monitor personal protective behaviour against mosquitoes (RRFSS Working Group, 2010). This module was asked between May and August of 2018 (313 respondents) to adults 18+.

## QUESTIONS

The next few questions are about what you did last month to protect yourself from being bitten by mosquitoes.

1. In the last month, how often have you covered up with long sleeves, long pants and socks during your outdoor activities to protect yourself from being bitten by mosquitoes? Would that be all of the time, most of the time, about half the time, less than half the time or never or almost never?
2. In the last month, how often have you used insect repellent with DEET such as Off Skintastic, Deep Woods OFF or Muskol during your outdoor activities to protect yourself from being bitten by mosquitoes? Would that be all of the time, most of the time, about half the time, less than half the time or never or almost never?
3. *For those who did not answer all of the time or most of the time to question 1:* Could you tell me the MAIN reason you did not COVER UP more often in the last month, was it because there were not enough mosquitoes out, you were not

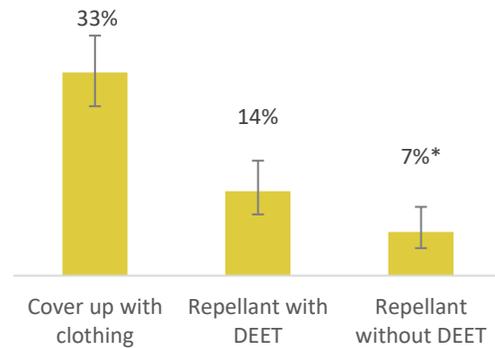
worried about being bitten by mosquitoes, you didn't go to places where mosquitoes were found, it was too hot to cover up or was there some other reason?

4. *For those who did not answer all of the time or most of the time to question 2:* Could you tell me the MAIN reason why you did not use an INSECT REPELLANT with DEET more often during outdoor activities in the last month?
5. In the last month how often have you used insect repellent that did NOT contain DEET, such as OFF Botanicals, or products containing citronella oil, lavender or soybean oil during your outdoor activities to protect yourself from being bitten by mosquitoes? Would that be all of the time, most of the time, about half the time, less than half the time or never or almost never?

## OVERVIEW

Most Grey Bruce adults do not take regular precautions to protect themselves from mosquito bites during their outdoor activities in spring and summer. In 2018, one-third of Grey Bruce adults regularly covered up with clothing to prevent mosquito bites, while 14% regularly used insect repellent with DEET, and 7%\* regularly used insect repellent without DEET. The most commonly cited reason for not taking regular precautions was that there weren't enough mosquitoes out at the time.

Figure 1. Regular Precautions Taken to Protect Self from Mosquitoes During Outdoor Activities in Spring and Summer, Grey Bruce 2018



\* interpret with caution

## USE CLOTHING AS PROTECTION

Between May and August of 2018, **33%** of Grey Bruce adults had covered up in the past month with long sleeves, long pants and socks during their outdoor activities to protect themselves from being bitten by mosquitoes (95% C.I. 27.1% – 38.4%). This has not changed significantly since 2004, when 38% of Grey Bruce adults covered up regularly (95% C.I. 32.5% – 42.7%).

Females were significantly more likely than males to cover up all or most of the time. Thirty-nine percent (32.2% – 46.7%) of females covered up regularly compared to 21% (13.3% – 30.3%) of males.

## REASONS FOR NOT USING CLOTHING AS PROTECTION

Among Grey Bruce adults who had not covered up most or all of the time to prevent mosquito bites, just over half said the main reason they neglected to do so was because there weren't enough mosquitoes out at the time. Twenty-one percent said their main reason for not covering up more often was that they weren't worried about being bitten by mosquitos, 13%\* said it was too hot to cover up, 5%\* said they didn't go to places where mosquitos were present, and 6%\* gave some other reason (Table 1).

Table 1. Main Reason for Not Using Clothing to Protect Against Mosquitos More Often, Grey Bruce 2018

|   | Percent (95% C.I.)    |
|---|-----------------------|
| <b>Didn't go to places where mosquitoes are</b>     | 5.0%* (2.8% – 8.9%)   |
| <b>Too hot to cover up</b>                          | 13.1%* (8.4% – 19.8%) |
| <b>Not worried about being bitten by mosquitoes</b> | 21.1% (15.6% – 28.0%) |
| <b>Not enough mosquitoes out</b>                    | 52.5% (45.0% – 59.9%) |
| <b>Never go outside</b>                             | <i>suppressed</i>     |
| <b>Other</b>  | 6.1%* (3.2% – 11.5%)  |

\* interpret with caution

## USE INSECT REPELLANT WITH DEET FOR PROTECTION

Between May and August of 2018, **14%** of Grey Bruce adults used insect repellent with DEET all or most of the time during their outdoor activities to protect themselves from being bitten by mosquitoes (95% C.I. 9.8% – 18.4%). This has not changed significantly since 2004, when 16% of Grey Bruce adults regularly used insect repellent with DEET (95% C.I. 11.9% – 19.7%).

## REASONS FOR NOT USING INSECT REPELLANT WITH DEET FOR PROTECTION

Among Grey Bruce adults who had not regularly used insect repellent with DEET to prevent mosquito bites, 45% said the main reason they neglected to do so was because there weren't enough mosquitoes out. Twenty-one percent said their main reason for not using repellent with DEET more often was that they don't like using chemicals like DEET on their skin, while 14%\* weren't worried about being bitten by mosquitoes, 8%\* didn't go to places where mosquitoes were present, and 8%\* gave some other reason (Table 2).

**Table 2. Main Reason for Not Using Insect Repellent with DEET to Protect Against Mosquitoes More Often, Grey Bruce 2018**

|   | <b>Percent (95% C.I.)</b> |
|---|---------------------------|
| <b>Didn't go to places where mosquitoes are</b>     | 8.0%* (5.2% – 12.0%)      |
| <b>Not worried about being bitten by mosquitoes</b> | 14.4%* (10.2% – 19.9%)    |
| <b>Don't like using chemicals like DEET on skin</b> | 20.6% (15.8% – 26.4%)     |
| <b>Not enough mosquitoes out</b>                    | 46.2% (39.7% – 52.9%)     |
| <b>Never go outside</b>                             | <i>suppressed</i>         |
| <b>Other</b>  | 8.2%* (5.1% – 12.9%)      |

\* interpret with caution

## USE INSECT REPELLANT WITHOUT DEET FOR PROTECTION

Between May and August of 2018, **7%\*** of Grey Bruce adults used insect repellent without DEET all or most of the time during their outdoor activities to protect themselves from being bitten by mosquitoes (95% C.I. 4.4% – 11.0%).

## REFERENCES

RRFSS Working Group. (2010). History. Retrieved from <http://www.rfss.on.ca/index.php?pid=3#History>

RRFSS Working Group. ((2010, December 22). Mosquito Protection Personal: Data Dictionary. Rapid Risk Factor Surveillance System.