

$$\chi^2 = \sum_{i=1}^k \frac{(O-E)^2}{E}$$

## Department of Biostatistics

Winthrop University Hospital

**December 2nd, 2015**

### Announcements:

- The Department of Biostatistics will offer a 3-session lecture series starting in **January 2016**, covering hypothesis testing, study design, and analysis. An e-mail will be sent shortly with dates and location.
- To view faculty bios, read our policies or to download a collaboration request form, please visit our website:

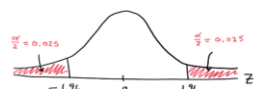
<http://www.winthrop.org/biostatistics-epidemiology>

- **Trying to analyze your own data and need help? E-mail Biostatistics your questions and we can send workshop notes, introductory articles, and practice data sets.**

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## Collaborations with Winthrop Investigators – highlighted research:

Wilkenfeld M, Fazzari M, Segelnick J, Stecker M. **Neuropathic Symptoms in World Trade Center Disaster Survivors and Responders.** *J Occup Environ Med.* 2015 Nov 24

**OBJECTIVE:** The objective of this research is to determine whether responders and survivors of the World Trade Center (WTC) disaster experience symptoms of neuropathy at a rate higher than those not exposed.

**METHODS:** A survey of neuropathic symptoms in patients who were and were not exposed at the WTC based upon the Michigan Neuropathy Screening Instrument (MNSI).

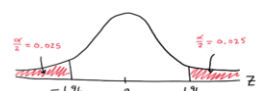
**RESULTS:** Even after correction for medical comorbidities, age, and depression, neuropathic symptoms are much more common in those exposed to WTC dust and increase with increasing exposure.

**CONCLUSIONS:** This study provides evidence that exposure to WTC dust is associated with neuropathic symptoms.

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## **Evaluating the literature – some helpful guides:**

<http://www.aafp.org/fpm/2004/0500/p47.pdf>

*There are many different ways to analyze an abstract or journal article, some more rigorous than others. The author has found a simple but effective way to identify a valid or relevant article.*

<http://circ.ahajournals.org/content/61/1/1.full.pdf+html>

## **Biostatistics: How to Detect, Correct and Prevent Errors in the Medical Literature.**

*This is an older article, but still really helpful. Describes the difference between standard deviation and standard error, what a p-value is, and common errors in the use of the t-test.*

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