

1271. Differences in Self-Reported Severity of Symptoms Between Women and Men Experiencing Influenza-Like Illness

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Background. Sex-based differences on the severity of influenza-like illness (ILI) among healthy young adults are understudied. Here we compared self-reported symptom severity for non-influenza infections between women and men.

Methods. We enrolled otherwise healthy adults who presented with influenza-like illness (ILI) at five US military hospitals between 2009 and 2014. Respiratory

pathogens were diagnosed by single and multiplex PCR tests. Individuals were asked to classify symptoms as either none, mild, moderate or severe; composite scores were calculated through seven days of illness in the following four categories: (1) lower respiratory: cough, breathing difficulty, hoarseness or chest pain, (2) upper respiratory: earache, runny nose, sore throat or sneezing; (3) systemic: chills, muscle ache, headache and fatigue; (4) total sum.

Results. A total of 897 respiratory infections were analyzed, including 492 cases (55%) from men and 405 (45%) from women. The median age of women and men were (28 yr, IQR [23–35]) and (29 yr, IQR [24.2–35.6]). Women were less likely to be active-duty military (64% versus 92%, $p < 0.001$) or smoke cigarettes (17% versus 25%, $p = 0.002$). Rhinovirus/enterovirus ($n = 218$), influenza ($n = 173$) and coronavirus ($n = 102$) accounted for 55% of all infections. No pathogen was detected in 38.5% of cases ($n = 345$); distributions were similar between women and men. Given significant differences in vaccine rates between men and women, influenza cases were removed from the analysis. Combining all remaining infections and adjusting for age, military status and recent respiratory infection, we found that women were significantly more likely to report severe hoarseness (18.2% versus 11.7%, $p = 0.04$), fatigue (40.1% versus 30.4%, $p = 0.02$), earache (14.9% versus 7.1%, $p < 0.01$), muscle ache (27.1% versus 15.7%, $p < 0.01$), nausea (8.2% versus 4.1%, $p = 0.04$) and sore throat (36.3% versus 27.9%, $p = 0.04$). Composite severity scores did not differ between women and men on the first two days of illness; however, women reported higher severity scores on days 3-7 of illness.

Conclusion. In this study of healthy young adults, women reported more severe respiratory symptoms than men. Further research regarding sex-based differences on the natural history of respiratory infection is warranted.

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