|  |
| --- |
| SUPPLEMENT TABLE SI Age-standardized1 prevalence (P) and prevalence odds ratios (POR) of moderate and more severe airflow obstruction among ever-employed U.S. adults aged 18-792 years by occupational exposures and ever smokers, NHANES 2007-2008 to 2011-2012 |
|   | Moderate and more severe airflow obstruction3 |
|   | Overall | Ever Smokers |
|   | P4 (%) | 95% CI | POR5 | 95% CI | P4 (%) | 95% CI |
| TOTAL | 3.05 | 2.67-3.43 |   |   | 5.45 | 4.70-6.20 |
|  |  |  |  |  |  |  |
| Self-Reported Exposure (NHANES) |   |   |   |   |   |   |
|  Mineral dust | 4.00 | 3.27-4.74 | 1.31 | 0.86-2.00 | 6.15 | 5.01-7.29 |
|  No exposure | 2.62 | 2.12-3.11 |  Ref.  |   | 4.97 | 3.82-6.11 |
|  >0-9 years exposure | 2.52 | 1.75-3.30 | 0.89 | 0.56-1.44 | 4.10 | 2.70-5.50 |
|  10-19 years exposure | 4.29 | 2.44-6.15 | 1.42 | 0.75-2.70 | 6.18 | 3.41-8.94 |
|  ≥20 years exposure | 8.17\* | 2.69-13.64 | **1.87** | 1.18-2.96 | \*\* | \*\*  |
|  Organic dust | 4.30 | 3.32-5.28 | **1.41** | 1.10-1.81 | 7.00 | 5.50-8.51 |
|  No exposure | 2.67 | 2.34-3.01 |  Ref.  |   | 4.83 | 4.11-5.55 |
|  >0-9 years exposure | 3.46 | 2.06-4.87 | 1.23 | 0.82-1.85 | 5.64 | 3.37-7.91 |
|  10-19 years exposure | 5.70 | 2.88-8.51 | **1.71** | 1.02-2.88 | 8.24 | 4.23-12.25 |
|  ≥20 years exposure | \*\* | \*\*  |   |   | \*\* | \*\*  |
|  Exhaust Fumes | 4.68 | 3.93-5.44 | **1.55** | 1.22-1.98 | 6.89 | 5.64-8.14 |
|  No exposure | 2.51 | 2.11-2.91 |    Ref. |   | 4.77 | 3.94-5.59 |
|  >0-9 years exposure | 3.35 | 2.24-4.46 | 1.20 | 0.83-1.74 | 5.11 | 3.28-6.95 |
|  10-19 years exposure | 5.06 | 3.05-7.06 | 1.49 | 0.90-2.46 | 5.83 | 3.59-8.07 |
|  ≥20 years exposure | \*\* | \*\*  |   |   | \*\* | \*\*  |
|  Other gases/vapors/fumes | 3.51 | 2.69-4.33 | 1.02 | 0.75-1.39 | 5.56 | 4.26-6.85 |
|  No exposure | 2.82 | 2.36-3.29 |    Ref. |   | 5.34 | 4.35-6.33 |
|  >0-9 years exposure | 3.13 | 1.95-4.32 | 0.98 | 0.63-1.53 | 5.31 | 3.31-7.31 |
|  10-19 years exposure | 3.37 | 1.74-4.99 | 0.90 | 0.52-1.55 | 4.09 | 1.89-6.28 |
|  ≥20 years exposure | \*\* | \*\*  |   |   | \*\* | \*\*  |
|  Ever dust and/or fumes | 3.57 | 2.98-4.16 | 1.16 | 0.85-1.56 | 5.78 | 4.72-6.83 |
|  Never dust and/or fumes | 2.49 | 1.98-2.99 |  Ref.  |   | 4.93 | 3.74-6.11 |
|  |  |  |  |  |  |  |
| COPD-JEM occupational exposures |   |   |   |   |   |   |
|  Mineral dust |   |   |   |   |   |   |
|  Low | 3.04 | 2.65-3.42 |  Ref.  |   | 5.61 | 4.82-6.40 |
|  Medium | 2.16\* | 0.75-3.57 | 0.58 | 0.30-1.11 | 3.57\* | 1.25-5.89 |
|  High | 4.84 | 2.59-7.10 | 1.29 | 0.76-2.19 | 5.97 | 3.02-8.93 |
|  Organic dust |   |   |   |   |   |   |
|  Low | 2.96 | 2.63-3.29 |  Ref.  |   | 5.35 | 4.65-6.05 |
|  Medium | 4.35\* | 1.66-7.05 | 1.67 | 0.88-3.19 | 6.89\* | 2.09-11.69 |
|  High | 3.04 | 1.39-4.68 | 1.00 | 0.55-1.81 | 5.07 | 2.24-7.90 |
|  Combined dust |   |   |   |   |   |   |
|  Low | 2.92 | 2.58-3.26 |  Ref.  |   | 5.46 | 4.67-6.26 |
|  Medium | 3.02 | 1.66-4.38 | 1.01 | 0.61-1.69 | 4.70 | 2.29-7.11 |
|  High | 4.48 | 2.88-6.07 | 1.39 | 0.87-2.21 | 6.38 | 4.02-8.75 |
|  Diesel exhaust |   |   |   |   |   |   |
|  Low | 2.91 | 2.51-3.31 |  Ref.  |   | 5.37 | 4.54-6.19 |
|  Medium | 2.23 | 1.05-3.41 | 0.63 | 0.37-1.05 | 3.79 | 1.65-5.92 |
|  High | 5.91 | 4.43-7.39 | **1.67** | 1.16-2.42 | 7.96 | 5.89-10.04 |
|  Vapor-gas |   |   |   |   |   |   |
|  Low | 2.99 | 2.62-3.35 |    Ref. |   | 5.64 | 4.83-6.45 |
|  Medium | 3.65 | 2.42-4.89 | 1.14 | 0.81-1.60 | 5.75 | 3.77-7.73 |
|  High | 2.63 | 1.44-3.82 | 0.72 | 0.43-1.20 | 4.00 | 2.09-5.91 |
|  Sensitizers |   |   |   |   |   |   |
|  Low | 2.81 | 2.45-3.16 |  Ref.  |   | 5.11 | 4.34-5.87 |
|  Medium | 4.06 | 2.81-5.32 | 1.38 | 0.96-1.98 | 7.10 | 4.84-9.36 |
|  High | 3.11 | 1.99-4.24 | 1.06 | 0.72-1.55 | 5.00 | 2.97-7.03 |
|  Fumes |   |   |   |   |   |   |
|  Low | 2.97 | 2.55-3.40 |   |   | 5.28 | 4.47-6.09 |
|  Medium | \*\* |  \*\* |   |   | \*\* | \*\*  |
|  High | \*\* | \*\*  |   |   | \*\* | \*\*  |
|  Overall exposure |   |   |   |   |   |   |
|  Low | 2.50 | 2.17-2.82 |  Ref.  |   | 4.76 | 3.93-5.59 |
|  Medium | 4.57 | 3.45-5.70 | **1.72** | 1.20-2.45 | 7.23 | 5.48-8.97 |
|  High | 3.65 | 2.42-4.88 | 1.38 | 0.96-1.98 | 5.53 | 3.49-7.56 |
| 1Age-standardized prevalence estimates based on the age distribution of the 2000 U.S. Census Population age structure for 18-79 year-old adult samples. NHANES examination sampling weights were used for moderate and more severe airflow obstruction outcomes. 2Sample 18-79 years of age with valid spirometry, height, and longest held occupation data were evaluated for moderate and more severe airflow obstruction. 3Moderate and more severe airflow obstruction was defined as FEV1/FVC<LLN and FEV1 <70% of the predicted value. 4Prevalence blank due to small numbers. 5POR adjusted for age, sex, race, and smoking status. Bold font indicates significant (95% CI does not include 1.00). \*RSE for the estimated prevalence with moderate and more severe airflow obstruction >30% and ≤36%. \*\*RSE for the estimated prevalence with moderate and more severe airflow obstruction >36% and not reported because it is potentially unreliable. Ref.=Reference group. |