**Supplemental Table 1. Association between intake of supplements**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Multivitamin | Vitamin C | Vitamin D | Vitamin E | Zinc |
| Multivitamin | 1 | 0.64 | 0.71 | 0.73 | 0.68 |
| Vitamin C |  | 1 | 0.77 |  0 .76 | 0.67 |
| Vitamin D |  |  | 1 | 0.77 | 0.75 |
| Vitamin E |  |  |  | 1 | 0.79 |
| Zinc |  |  |  |  | 1 |

Note: The strength of associations was assessed using Cramer’s V. With 1 degree of freedom, Cramer’s V of 0.5 or large is conventionally interpreted as large.

**Supplemental Table 2. Association between each supplement and the number of symptoms experienced**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Model 1** | **Model 2** | **Model 3** | **Model 4** | **Model 5** |
| **Variables** | $$β$$ | **p** | $$β$$ | **p** | $$β$$ | **p** | $β$ | **p** | $$β$$ | **p** |
| Multivitamin (yes vs. no) | 0.230 | <0.001 |  |  |  |  |  |  |  |  |
| Vitamin C (yes vs. no) |  |  | 0.242 | <0.001 |  |  |  |  |  |  |
| Vitamin D (yes vs. no) |  |  |  |  | 0.240 | <0.001 |  |  |  |  |
| Vitamin E (yes vs. no) |  |  |  |  |  |  | 0.274 | <0.001 |  |  |
| Zinc (yes vs. no) |  |  |  |  |  |  |  |  | 0.207 | 0.001 |
|  |  |  |  |  |  |  |  |  |  |  |
| Smoking (occasional vs. no) | 0.040 | 0.546 | 0.032 | 0.628 | 0.045 | 0.490 | 0.000 | 0.999 | 0.034 | 0.618 |
| Smoking (frequent vs. no) | 0.174 | 0.042 | 0.194 | 0.022 | 0.186 | 0.028 | 0.157 | 0.063 | 0.168 | 0.053 |
| Underlying conditions (yes vs. no) | 0.283 | <0.001 | 0.292 | <0.001 | 0.283 | <0.001 | 0.279 | <0.001 | 0.272 | <0.001 |
| Race (black vs. white) | 0.096 | 0.274 | 0.092 | 0.289 | 0.099 | 0.256 | 0.062 | 0.482 | 0.119 | 0.182 |
| Race (others vs. white) | 0.106 | 0.123 | 0.112 | 0.100 | 0.101 | 0.142 | 0.089 | 0.193 | 0.115 | 0.100 |
| Biological sex (female vs. male) | 0.037 | 0.521 | 0.003 | 0.560 | 0.038 | 0.511 | 0.058 | 0.310 | 0.055 | 0.348 |
| Age | 0.002 | 0.483 | 0.002 | 0.354 | 0.002 | 0.417 | 0.002 | 0.408 | 0.003 | 0.345 |

Note: Negative binomial regression models were estimated separately for different supplements. The same set of controlled variables were used.

**Supplemental Table 3. Association between each supplement and symptom severity**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Model 1** | **Model 2** | **Model 3** | **Model 4** | **Model 5** |
| **Variables** | $$β$$ | **p** | $$β$$ | **p** | $$β$$ | **p** | $β$ | **p** | $$β$$ | **p** |
| Multivitamin (yes vs. no) | 3.059 | 0.001 |  |  |  |  |  |  |  |  |
| Vitamin C (yes vs. no) |  |  | 3.745 | <0.001 |  |  |  |  |  |  |
| Vitamin D (yes vs. no) |  |  |  |  | 3.323 | <0.001 |  |  |  |  |
| Vitamin E (yes vs. no) |  |  |  |  |  |  | 3.914 | <0.001 |  |  |
| Zinc (yes vs. no) |  |  |  |  |  |  |  |  | 2.602 | 0.014 |
|  |  |  |  |  |  |  |  |  |  |  |
| Smoking (occasional vs. no) | 1.109 | 0.341 | 0.887 | 0.433 | 1.144 | 0.318 | 0.476 | 0.684 | 1.006 | 0.391 |
| Smoking (frequent vs. no) | 4.595 | 0.002 | 4.710 | 0.002 | 4.655 | 0.002 | 4.216 | 0.005 | 4.463 | 0.004 |
| Underlying conditions (yes vs. no) | 4.195 | <0.001 | 4.264 | <0.001 | 4.193 | <0.001 | 4.160 | <0.001 | 4.120 | <0.001 |
| Race (black vs. white) | 1.301 | 0.286 | 1.187 | 0.307 | 1.323 | 0.283 | 0.811 | 0.502 | 1.602 | 0.201 |
| Race (others vs. white) | 0.915 | 0.408 | 0.890 | 0.413 | 0.839 | 0.444 | 0.659 | 0.544 | 1.065 | 0.344 |
| Biological sex (female vs. male) | 0.863 | 0.395 | 0.838 | 0.401 | 0.902 | 0.369 | 1.183 | 0.244 | 1.109 | 0.280 |
| Age | -0.003 | 0.938 | 0.006 | 0.879 | 0.002 | 0.953 | 0.003 | 0.940 | 0.010 | 0.820 |

Note: Linear regression models were estimated separately for different supplements. The same set of controlled variables were used.