|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Risk Factor** | **Individual-level analysisa** | | **Individual-level analysis**  **(also adjusting for comorbidity score)b** | | **DZ-pair analysis** | | **MZ-pair analysis** | |
|  | **OR (95% CI)** | ***p*-value** | **OR (95% CI)** | ***p*-value** |  | |  | |
| **Individual Medical Conditions** | | | | | | | | |
| Arthritis | n=2770 | | n=2745c | | n=100 (50 pairs) | | n=148 (74 pairs) | |
| **1.8 (1.4-2.2)** | **<0.001** | **1.7 (1.3-2.2)** | **<0.001** | 1.4 (0.4-4.5) | 0.57 | 0.6 (0.2-1.7) | 0.35 |
| Diabetes | n= 2776 | | n= 2748d | | N=102 (51 pairs) | | n=146 (73 pairs) | |
| 1.2 (0.8-1.9) | 0.33 | 1.2 (0.8-1.9) | 0.46 | 1.0 (0.2-5.0) | 0.66 | 0.3 (0.03-3.3) | 0.35 |
| Hypertension | n= 2770 | | n= 2770d | | N=102 (51 pairs) | | n=146 (73 pairs) | |
| **1.3 (1.0-1.5)** | **0.04** | 1.2 (0.9-1.5) | 0.14 | 0.8 (0.3-2.2) | 1.0 | 2.0 (0.7-5.4) | 0.17 |
| Coronary Artery Disease (CAD) | n= 2771 | | n= 2744d | | N=102 (51 pairs) | | N=146 (73 pairs) | |
| **1.6 (1.0-2.3)** | **0.05** | 1.5 (0.9-2.3) | 0.09 | 1.5 (0.2-9.1) | 0.60 | 3.0 (0.3-29) | 0.35 |
| **Overall Comorbidity Burden** | | | | | | | | |
| Medical comorbidity score | n=2740 | | - | | N=96 (48 pairs) | | N=144 (72 pairs) | |
| **1.2 (1.1-2.3)** | **<0.001** | **-** | - | 1.1 (0.8-1.4) | 0.68 | 1.2 (0.9-1.6) | 0.30 |
| Items **in bold** are statistically significant at p<0.05  Sample sizes indicate # of individuals with complete data for these variables, and within-pair analyses are restricted to pairs with complete data for all variables.  aModels adjusting for age, race, education  bModels adjusting for age, race, education, and comorbidity score  cModel adjusting for age, race, education, and comorbidity score (arthritis not included in calculation of comorbidity score)  dModel adjusting for age, race, education, and comorbidity score (diabetes, hypertension, and CAD not included in calculation of comorbidity score) | | | | | | | | |

**Table S1: Incidence of Chronic Back Pain over 11-year Follow-up:** Associations between medical conditions and incident chronic back pain, in those without physician-assessed back problems at baseline, with analyses stratified by zygosity\*