**Supplementary Table S1:** Sensitivity analysesdisplaying adjusted\* Rate Ratios (RRs) for the associations between Parkinson's disease and β2-agonists according to their duration of action, and β-antagonists according to their β-selectivity property**.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **β-adrenoceptor drugs** | **Sensitivity analysis** | | | |
| ***Adjusting for covariates prior to entry date***  *(n=124,454)* | ***Excluding cases of PD not prescribed dopaminergic drugs***  *(n=100,342)* | ***Additional adjustment for socioeconomic status (SES)*** *(n=109,090)* | ***Excluding cases and controls with essential tremor***  *(n=110,098)* |
| **β2-agonists**  *Short-acting* β-agonists *(SABA)*  *Long-acting* β-agonists *(LABA)*  *Ultra-Long-acting* β-agonists *(Ultra-LABA)* | 0.89 (0.82-0.96)  0.85 (0.78-0.94)  0.50 (0.26-0.95) | 0.89 (0.81-0.97)  0.88 (0.79-0.98)  0.49 (0.23-1.05) | 0.89 (0.83-0.97)  0.84 (0.76-0.93)  0.49 (0.26-0.94) | 0.87 (0.80-0.95)  0.83 (0.74-0.92)  0.46 (0.22-0.93) |
| **β-antagonists**  *Non-selective*  *β1-selective* | 1.97 (1.84-2.12)  1.00 (0.95-1.05) | 2.14 (1.97-2.32)  1.01 (0.95-1.07) | 2.09 (1.94-2.26)  0.97 (0.94-1.05) | 1.53 (1.40-1.67)  1.02 (0.97-1.08) |

\*adjusted for residence (urban vs. rural), asthma, chronic obstructive lung disease, ischemic heart disease, congestive heart failure, hypertension, diabetes mellitus, migraine, smoking, alcohol consumption, aspirin, ibuprofen, statins, valproate, calcium channel blockers, and simultaneously for the use of short-acting β-agonists (SABA), long-acting β-agonists (LABA), ultra-Long-acting β-agonists (Ultra-LABA), non-selective β-antagonists, and β1-selective β-antagonists.

**Supplementary Table S2:** Sensitivity analysesdisplaying adjusted\* Rate Ratios (RRs) for the associations between Parkinson's disease and β-adrenoceptor drugs\*\*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **β-adrenoceptor drugs** | **Sensitivity analysis** | | | |
| ***Adjusting for covariates prior to entry date***  *(n=124,454)* | ***Excluding cases of PD not prescribed dopaminergic drugs***  *(n=100,342)* | ***Additional adjustment for socioeconomic status (SES)*** *(n=109,090)* | ***Excluding cases and controls with essential tremor***  *(n=110,098)* |
| **β2-agonists**  *Salbutamol*  *Formoterol*  *Vilanterol* | 0.87 (0.81-0.95)  0.83 (0.73-0.94)  0.40 (0.17-0.91) | 0.87 (0.80-0.95)  0.87 (0.75-1.00)  0.38 (0.14-1.04) | 0.89 (0.81-0.95)  0.81 (0.71-0.92)  0.39 (0.17-0.90) | 0.87 (0.80-0.95)  0.79 (0.69-0.90)  0.39 (0.16-0.96) |
| **β-antagonist**  *Propranolol* | 2.57 (2.38-2.79) | 2.71 (2.49-2.96) | 2.60 (2.40-2.83) | 1.90 (1.72-2.09) |

\*adjusted for residence (urban vs. rural), asthma, chronic obstructive lung disease, ischemic heart disease, congestive heart failure, hypertension, diabetes mellitus, migraine, smoking, alcohol consumption, aspirin, ibuprofen, statins, valproate, calcium channel blockers, and simultaneously for the use salbutamol, formoterol, vilanterol, and propranolol.   
\*\*drugs included in this analysis are those found to be significantly associated with risk of PD in the main analysis