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| **SUPPLEMENTARY MATERIAL**  Restrictive spirometry pattern is associated with low physical activity levels. *A population based international study* |

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* **Table S1.** Odds Ratio (OR) and 95% confidence interval of all variables included in the models for low physical activity in ECRHS and SAPALDIA
* **Figure S1.** Odds ratios (OR) for low physical activity in restrictive spirometry pattern compared to normal spirometry pattern (reference group) using logistic regression stratified by sex, BMI and smoking status. Meta-analysed estimates from ECRHS and SAPALDIA
* **Figure S2.** Sensitivity analyses. Odds ratios (OR) for low physical activity in restrictive spirometry pattern compared to normal spirometry pattern (reference group) using logistic regression, in ECRHS (dashed line), SAPALDIA (dotted line) and meta-analysed (solid line)
* **Local Principal Investigators, senior scientific teams and funding agencies for the European Community Respiratory Health Survey**

**Table S1.** Odds Ratio (OR) and 95% confidence interval of all variables included in the models for low physical activity in ECRHS and SAPALDIA

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| --- | --- | --- | --- | --- | --- |
|  |  | **Low physical activity 1** | | **Low physical activity 2** | |
|  |  | <1st tertile of total MET·min/week | | <2 times/week or <1h/week | |
|  |  | ECRHS | SAPALDIA | ECRHS | SAPALDIA |
|  |  | OR 95%CI | OR 95%CI | OR 95%CI | OR 95%CI |
| Normal spirometry |  | 1 | 1 | 1 | 1 |
| Restrictive spirometry pattern | | 1.44 (1.03-2.02) | 1.35 (0.83-2.19) | 1.43 (1.01-2.01) | 1.28 (0.79-2.09) |
| Age |  | 0.98 (0.89-1.07) | 0.86 (0.76-0.96) | 1.21 (1.12-1.32) | 1.22 (1.10-1.35) |
| Sex | male | 1 | 1 | 1 | 1 |
|  | female | 1.18 (0.99-1.40) | 1.08 (0.88-1.33) | 1.30 (1.11-1.53) | 1.38 (1.14-1.67) |
| BMI |  | 1.03 (1.01-1.05) | 1.02 (0.99-1.04) | 1.03 (1.01-1.04) | 1.01 (0.99-1.04) |
| Education level | low | - | 1 | 1 | 1 |
|  | mid | - | 0.70 (0.42-1.16) | 0.79 (0.57-1.10) | 0.68 (0.38-1.19) |
|  | high | - | 1.08 (0.64-1.81) | 0.80 (0.58-1.11) | 0.58 (0.32-1.04) |
| Smoking | never | - | 1 | 1 | 1 |
|  | ex | - | 1.10 (0.89-1.36) | 0.80 (0.67-0.95) | 0.92 (0.76-1.12) |
|  | current | - | 1.13 (0.84-1.53) | 1.55 (1.22-1.97) | 1.57 (1.18-2.09) |
| Physically active 10-year before | | 0.50 (0.41-0.59) | 0.58 (0.47-0.72) | 0.33 (0.28-0.39) | 0.28 (0.23-0.33) |
| Depression |  | 1.23 (0.98-1.55) | NA | 1.22 (0.97-1.52) | NA |
| Diabetes |  | 1.19 (0.80-1.78) | - | 1.23 (0.84-1.81) | - |
| Heart disease |  | 1.13 (0.64-2.01) | NA | - | NA |
| Hypertension |  | 1.14 (0.91-1.43) | 1.24 (0.98-1.58) | - | - |
| Stroke |  | 2.80 (1.16-6.73) | 1.38 (0.63-3.03) | - | 4.62 (1.36-15.69) |

OR: Odds Ratio. 95%CI: 95% Confidence Interval. NA: not available in this study.

Lowest study-specific tertile: ECRHS: <1390. SAPALDIA: <2550 MET·min/week.

**Figure S1.** Odds ratios (OR) for low physical activity in restrictive spirometry pattern compared to normal spirometry pattern (reference group) using logistic regression stratified by sex, BMI and smoking status. Meta-analysed estimates from ECRHS and SAPALDIA



**Low physical**

**activity 2**

**Low physical**

**activity 1**

**Low physical**

**activity 2**

**Low physical**

**activity 1**

**Low physical**

**activity 2**

**Low physical**

**activity 1**

Lowest study-specific tertile: ECRHS: <1390, SAPALDIA: <2550 MET·min/week. Combined estimates (meta-analysed OR) for low physical activity comparing subjects with restrictive spirometry pattern to subjects with normal spirometry, adjusted for same confounders as in main model (figure 2, table S1).

**Figure S2.** Sensitivity analyses. Odds ratios (OR) for low physical activity in restrictive spirometry pattern compared to normal spirometry pattern (reference group) using logistic regression, in ECRHS (dashed line), SAPALDIA (dotted line) and meta-analysed (solid line)



**Low physical activity 2 (<2 times/week or <1 h/week)**

**Low physical activity 1 (<1st tertile of total MET·min/week)**

Lowest study-specific tertile: ECRHS: <1390, SAPALDIA: <2550. GLI eq: GLI-equations were used instead of study-specific equations to define spirometry patterns. Fixed cut: fixed cut-off <2000 MET·min/week. Excl. asthma: excluding asthmatics. Excl. res symp: excluding subjects with respiratory symptoms. Adj %fat mass: adjusted for % fat mass (ECRHS only). Pre-BD: using lung function from pre-bronchodilator. IPW cor: estimates were corrected for loss of follow-up using inverse probability weights (ECRHS only) All estimates adjusted for same confounders as in main model (figure 2, table S1).

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