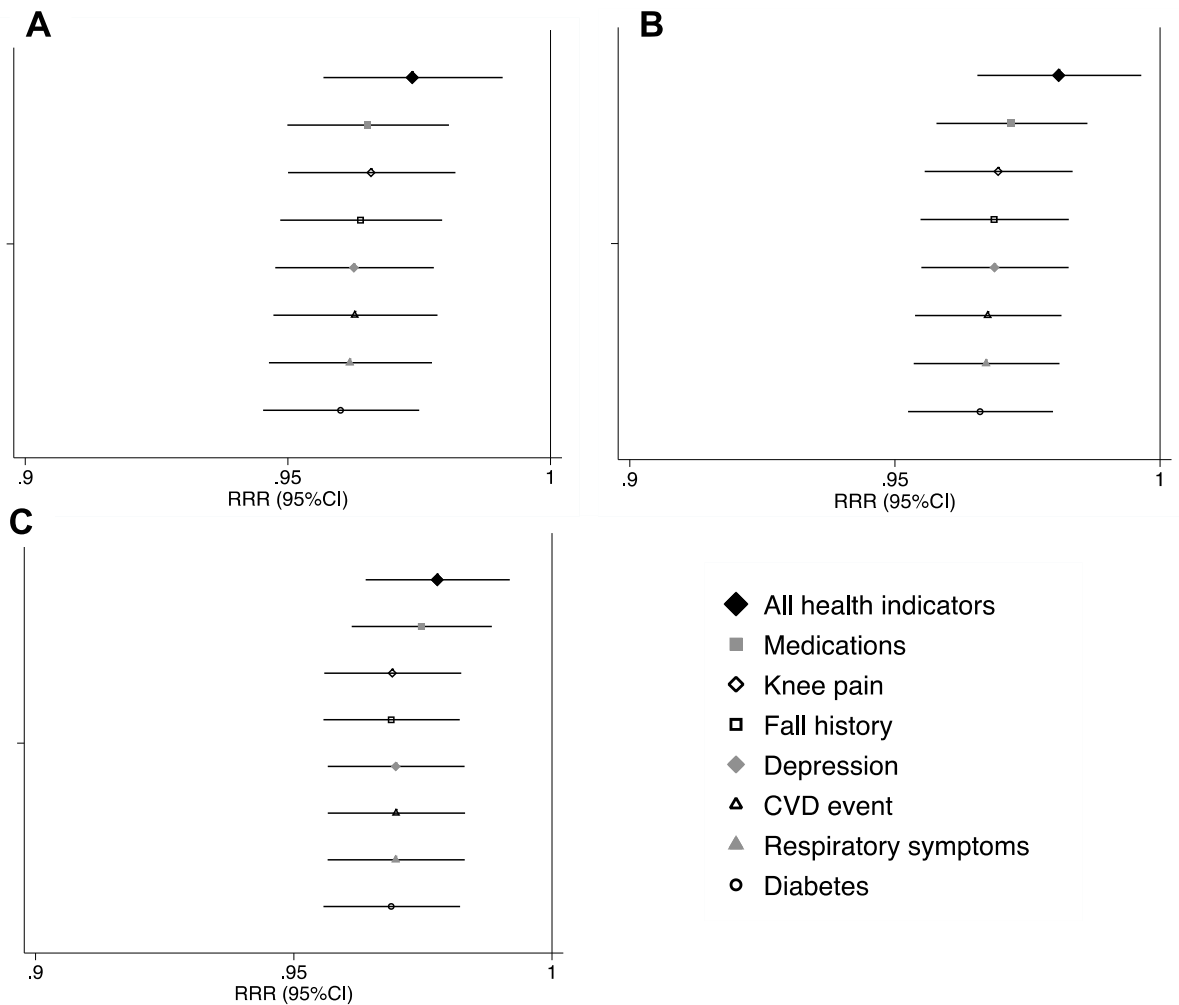
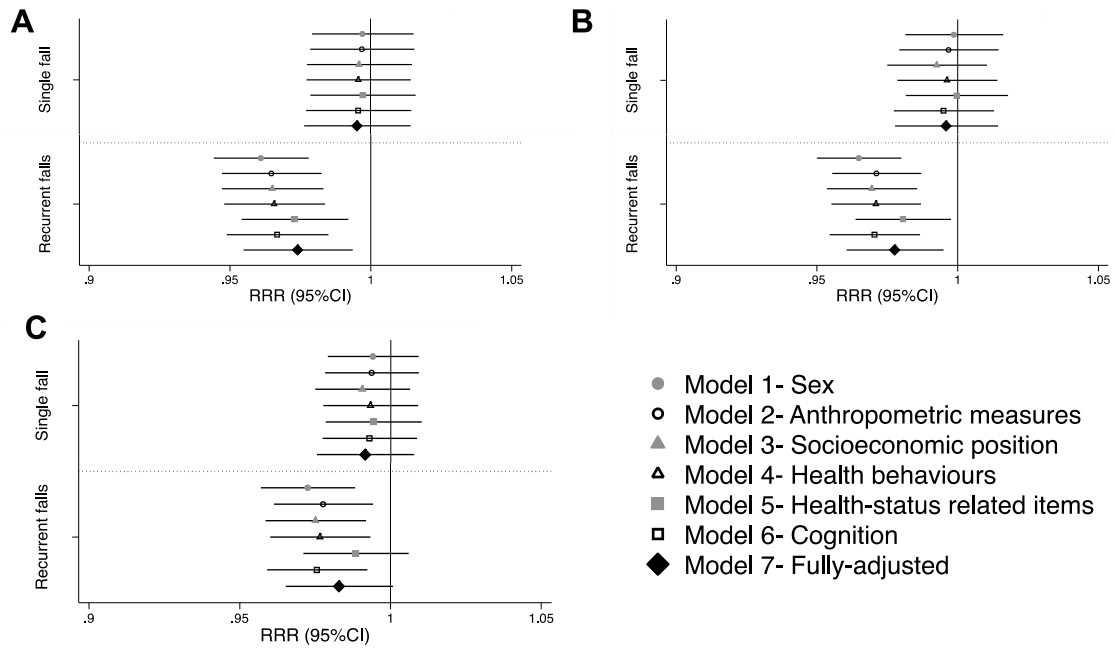


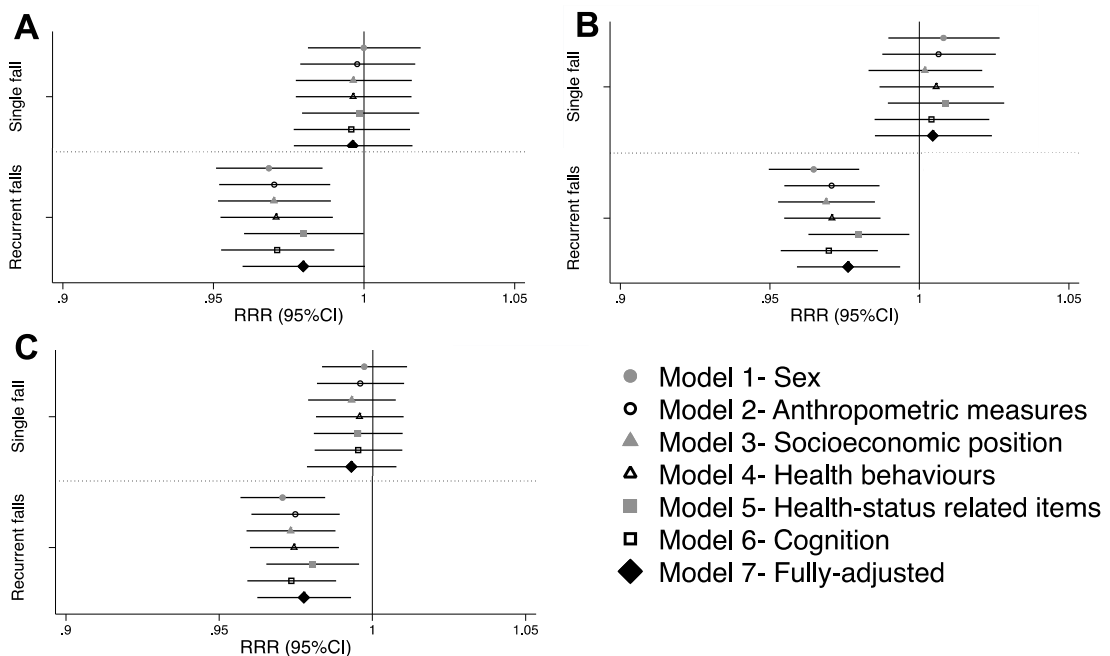
**Appendix Figure 1.** Relative risk ratios, adjusted for individual health related indicators, per 1s increase in balance with eyes open at age A. 53 and recurrent falls at age 60-64 (n=2052); B. age 53 and recurrent falls at age 68 (n=2110); C. 60-64 and recurrent falls at age 68 (n=1920) [corresponding to Table 2, Model 5]



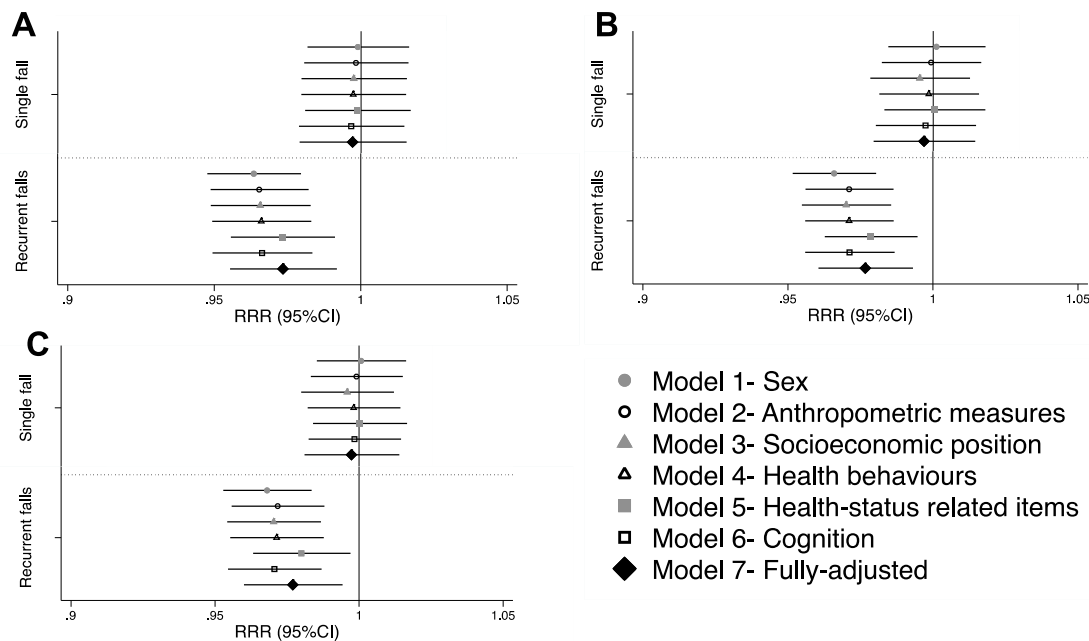
**Appendix Figure 2.** Relative risk ratios per 1s increase in balance with eyes open at age A. 53 and recurrent falls at age 60-64 (n=1793); B. age 53 and recurrent falls at age 68 (n=1855); C. 60-64 and recurrent falls at age 68 (n=1420) **in complete cases only**



**Appendix Figure 3.** Relative risk ratios per 1s increase in balance with eyes open at age A. 53 and falls at age 60-64 (n=2061); B. 53 and falls at age 68 (n=2123); C. 60-64 and falls at age 68 (n=1866) **excluding those unable to perform the balance test due to health reasons who were assigned a time of 0s in main analyses**



**Appendix Figure 4.** Relative risk ratios per 1s increase in balance with eyes open at age A. 53 and falls at age 60-64 (n=1975); B. 53 and falls at age 68 (n=2029); C. 60-64 and falls at age 68 (n=1549) **excluding those with a history of falling within the previous 12 months of balance assessment**



**Appendix Table 1.** Relative risk ratio indicating the association between change in balance (eyes open) from age 53 to 60-64 and single falls<sup>a</sup> at age 68

Group	Defined	Sex-adjusted model	Fully-adjusted
<b>Stable high</b> (n=821; 44.9%)	Achieved 30s at ages 53 and 60-64	<i>Reference group</i>	<i>Reference group</i>
<b>Improved</b> (n=157; 8.6%)	Improved from 0-14.99s to 15-30s or from 15-29.99s to 30s	0.73 (0.40, 1.31) p= 0.29	0.79 (0.43, 1.44) p= 0.44
<b>Declined</b> (n=638; 34.9%)	Declined from 30s to 0-29.99s or from 15-29.99s to 0-14.99s	1.00 (0.73, 1.38) p=0.98	1.07 (0.76, 1.48) p=0.71
<b>Stable middle</b> (n=70; 3.8%)	Recorded 15-29.99s at both ages	0.87 (0.39, 1.99) p= 0.75	1.00 (0.43, 2.33) p= 0.99
<b>Stable low</b> (n=141; 7.7%)	Stayed in 0-14.99s group	1.09 (0.63, 1.92) p= 0.76	1.22 (0.67, 2.21) p= 0.52

<sup>a</sup>Estimates from multinomial logistic regression presented in Table 2

[Estimates greater than 1 suggest an increased risk, while estimates less than 1 suggest a reduced risk; statistical significance is indicated if 95% Confidence intervals do not cross 1.]