



Leisure-time and commuting physical activity and subsequent sickness absence among young and early midlife employees

A register-linked follow-up study 2017–2020

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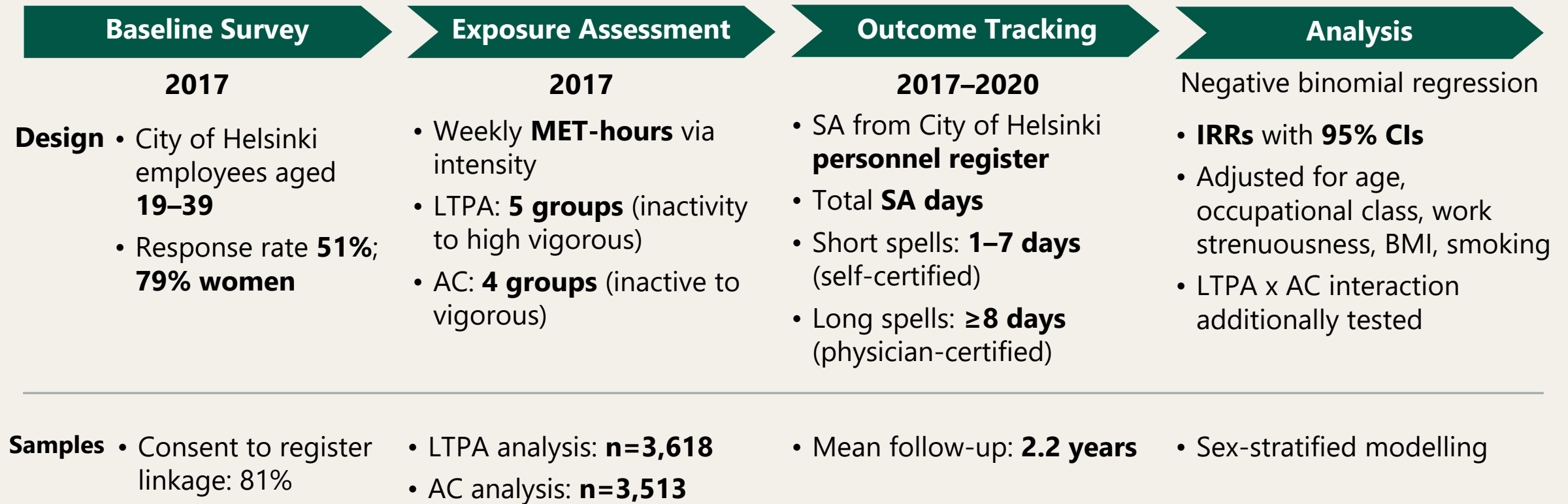
Physical activity and sickness absence in young employees



- Sickness absence (SA) accumulates already in **early working life**, making young employees an important target group for prevention.
- Increasing moderate-to-vigorous leisure-time physical activity (LTPA) by as little as **5 minutes per day** could reduce population mortality by up to 10%.
- Among Finnish employees, work ability declines already between ages **31 and 46**.
- **Evidence remains limited** regarding the associations of LTPA and active commuting (AC) with subsequent SA spells of different lengths.

Early promotion of physical activity is important: SA already accumulates in young employees, while evidence on the effects of different activity types remains scarce.

Helsinki Health Study tracked employees aged 19–39 from 2017 to 2020

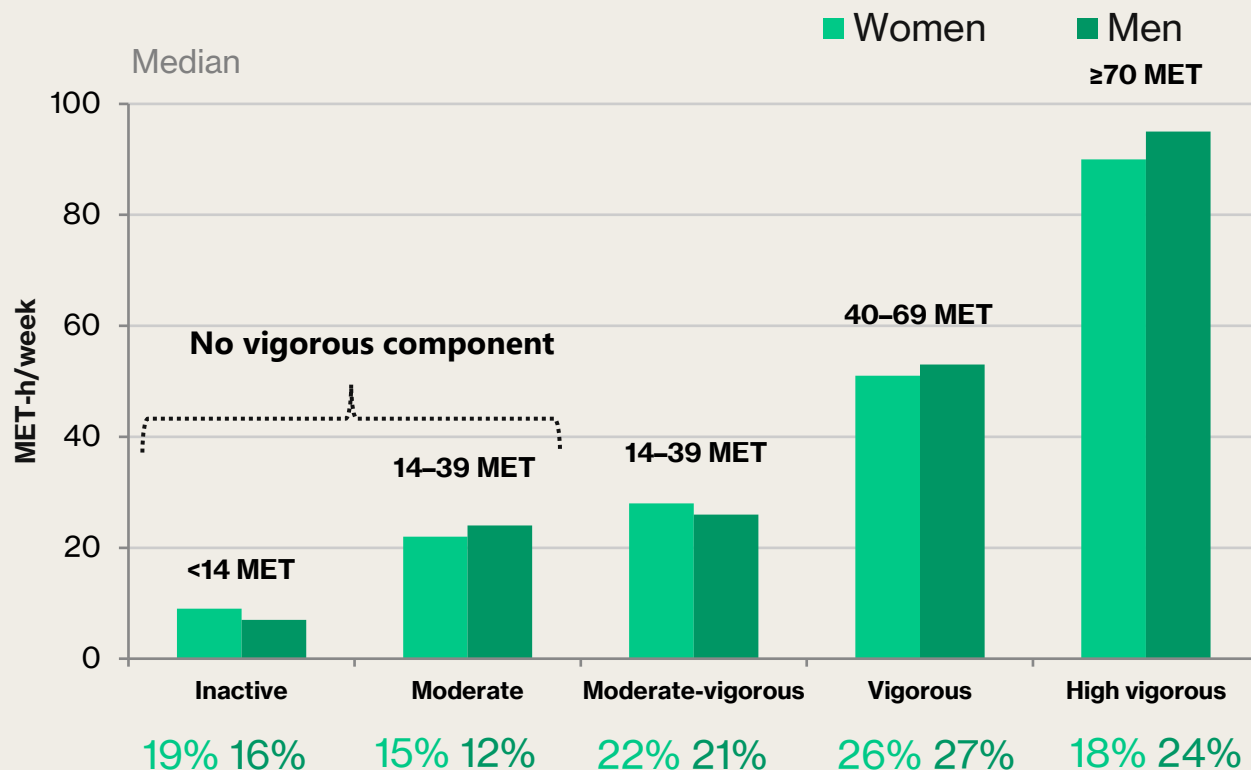


The register-linked design avoids self-report bias in the outcome, and sex-stratified modelling exposes differential activity–SA pathways.



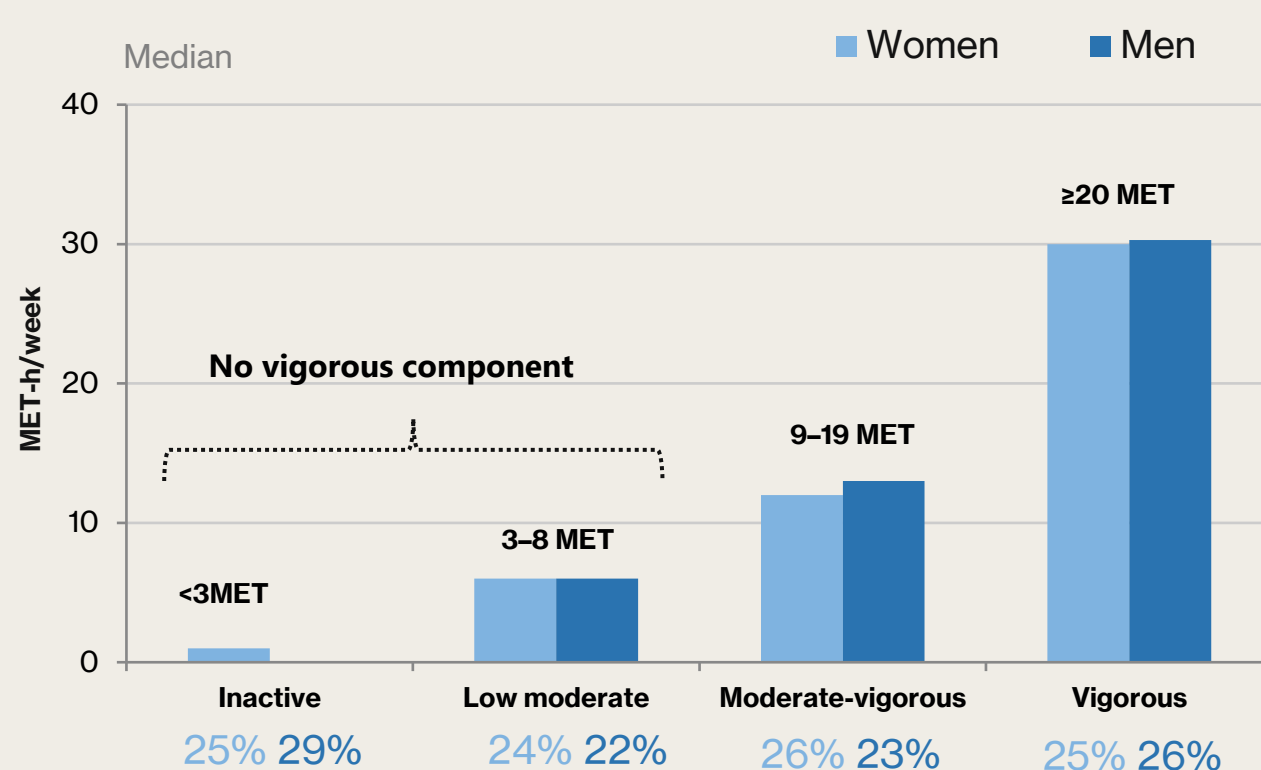
n=3,618

Leisure-time physical activity (LTPA) MET-h/week



n=3,513

Active commuting (AC) MET-h/week

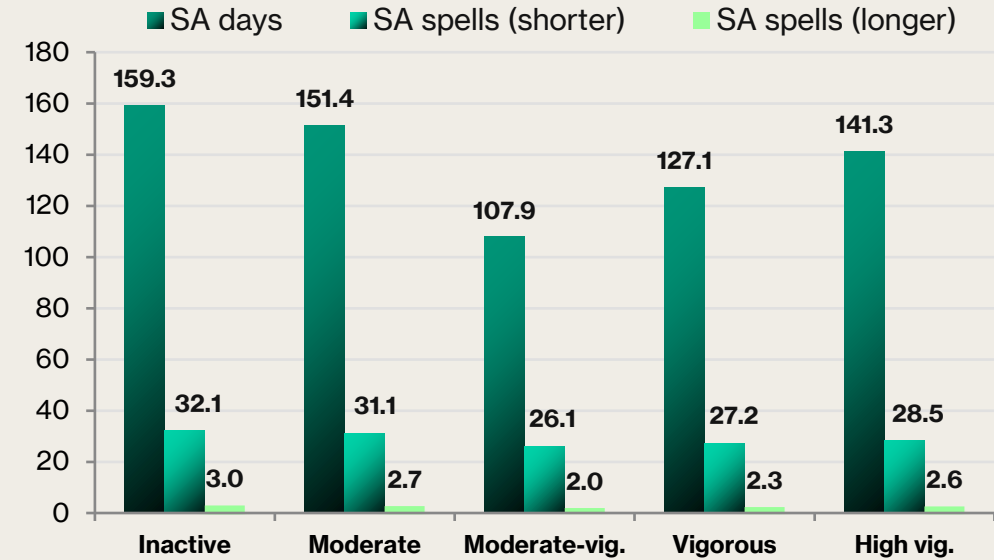


Higher activity categories reflect increasing activity volume, while the higher groups also include a vigorous-intensity component

SA days and spells by LTPA and AC category among women and men (model-based crude estimates)

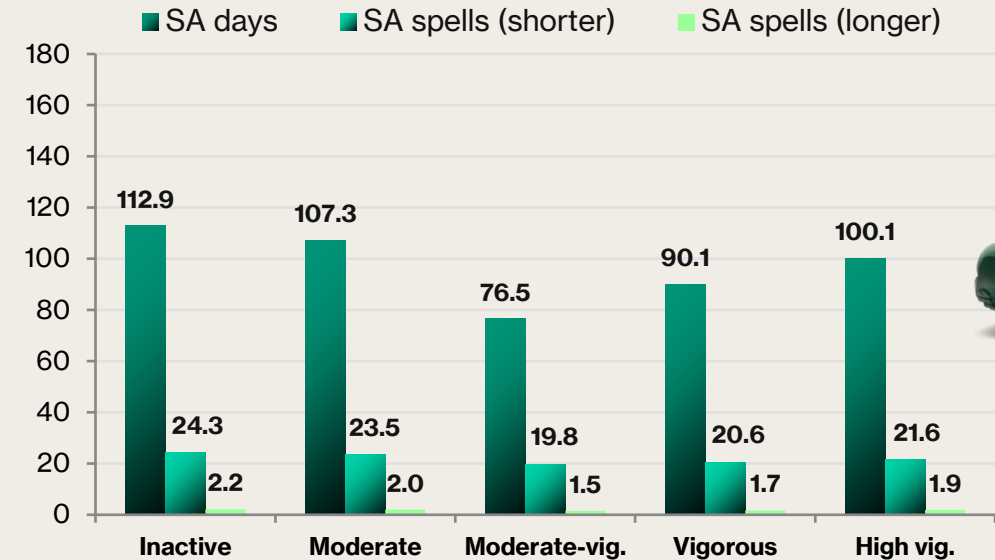
Women (n=2,850)

Mean / 10 person-years



Men (n=768)

Mean / 10 person-years

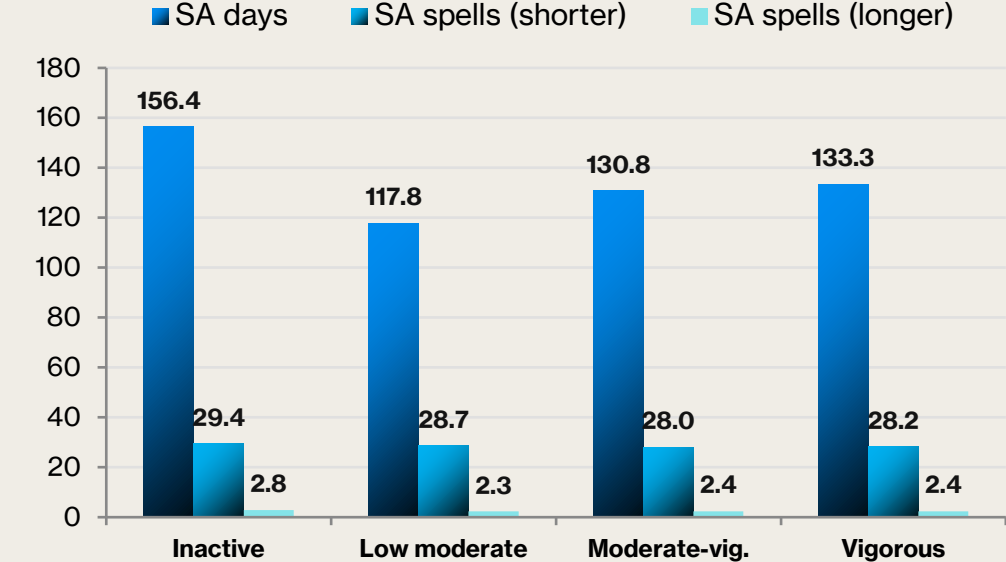


LTPA



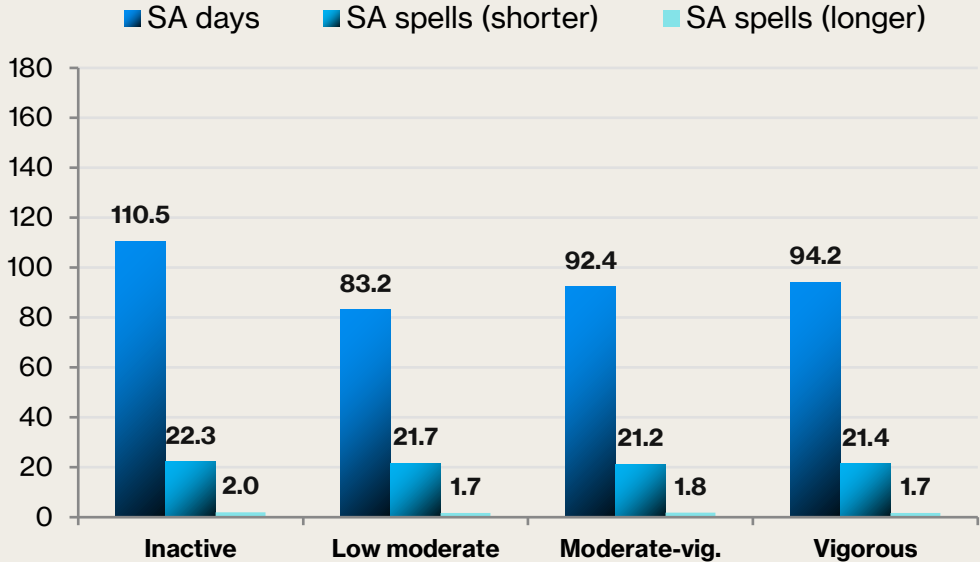
Women (n=2,773)

Mean / 10 person-years



Men (n=740)

Mean / 10 person-years



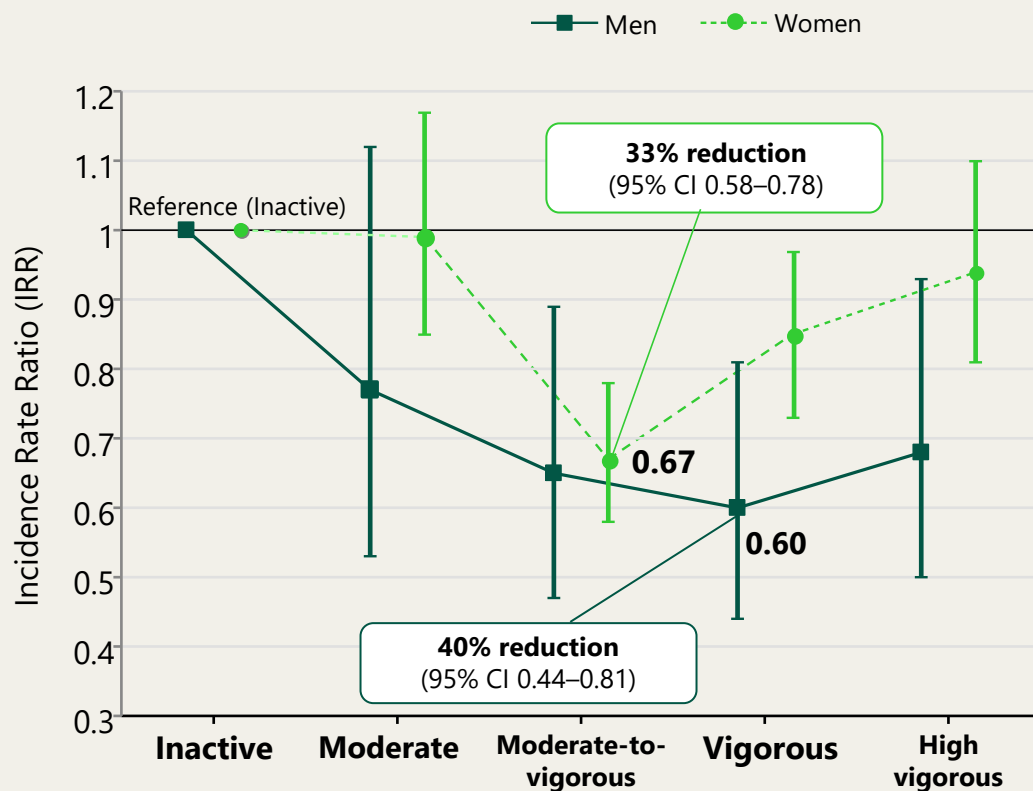
AC



LTPA



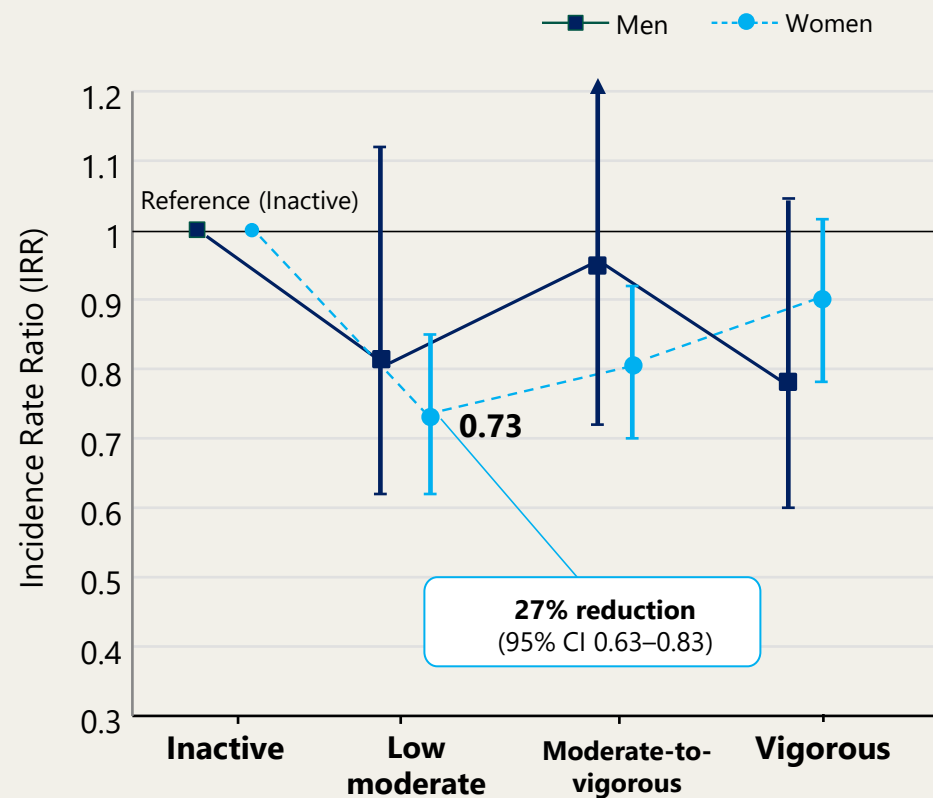
IRR for Total SA Days by LTPA Intensity
(Age-adjusted)



AC



IRR for Total SA Days by AC Intensity
(Age-adjusted)



Among women with **vigorous LTPA**, active commuting was associated with lower SA than among inactive commuters

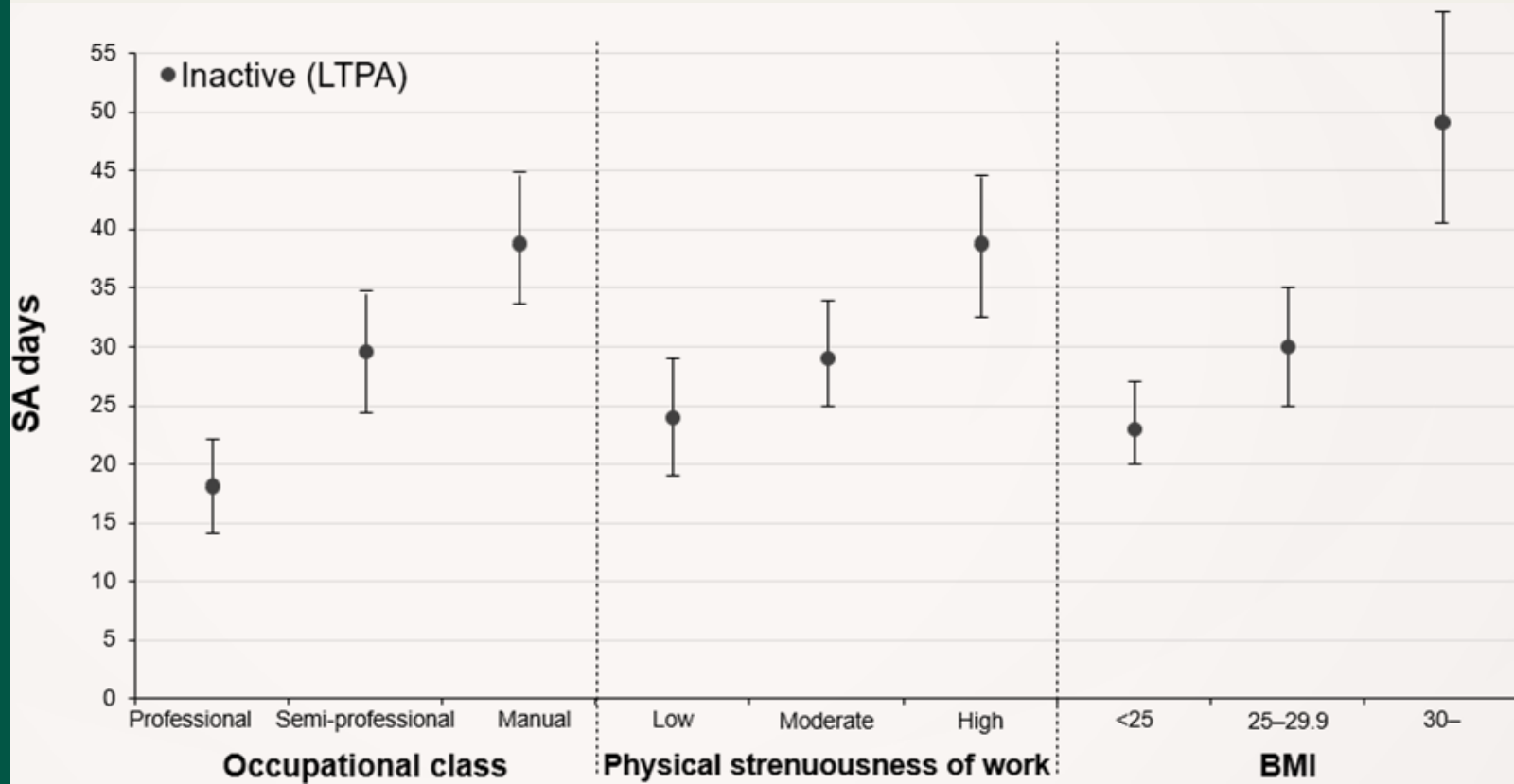
Among women, vigorous LTPA was associated with a lower rate of sickness absence spells (short & long)

Moderate-to-vigorous LTPA

- Short spells (≤ 7 d): IRR **0.81** (0.73–0.90)
- Long spells (> 7 d): IRR **0.63** (0.39–0.99)

Vigorous LTPA

- Short spells (≤ 7 d): IRR **0.86** (0.78–0.95)
- Long spells (> 7 d): IRR **0.79** (0.64–0.96)

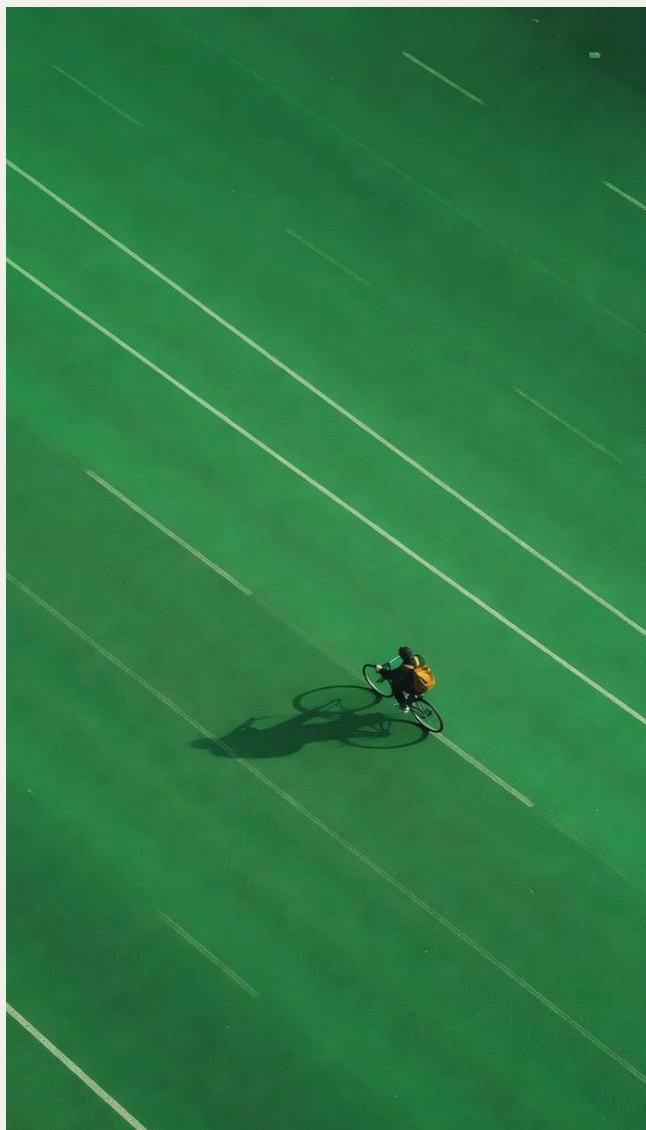


Among inactive women, SA varied by occupational class, physical strenuousness of work, and BMI

Overall

LTPA with **vigorous intensity** was associated with **lower SA** in both women and men, although the pattern differed by sex.

AC was associated with **lower SA** among **women**, while estimates among men were less precise.



Supporting physical activity early may promote healthier working lives

Promote physical activity early

Supporting physical activity early may contribute to lower SA and healthier working lives.

Promote multiple ways to be active

Enable both LTPA and AC, with options that fit everyday life.

Make active choices easier

Flexible work practices and walking and cycling infrastructure can support everyday activity.

Strengthen the evidence

Longer follow-up and intervention studies are needed to test causality and sustained effects on SA.



Supporting both LTPA and AC may contribute to healthier working lives.

HELSINKI HEALTH STUDY

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YOUR ATTENTION**