

# Increased leisure-time physical activity associated with lower onset of diabetes in 44 828 adults with impaired fasting glucose

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Supplementary Table 14. Associations between volume of leisure-time physical activity and incident diabetes.

| Coefficient between volume of leisure time physical activity (MET-hours/week) and incident type 2 diabetes) |                          |                       |
|---|--------------------------|-----------------------|
| Model 1   | Model 2                  | Model 3               |
| -0.88 (-1.18 to -0.58) §  | -0.66 (-1.04 to -0.28) ‡ | -0.04 (-0.45 to 0.37) |

Model 1: adjusted for age, sex;

Model 2: Model 1 + sex, marital status, education, physical labour at work, smoking, alcohol drinking, sleep duration, vegetable intake, systolic blood pressure, heart rate and total cholesterol;

Model 3: Model 2 + body mass index, waist circumference, fasting plasma glucose, triglycerides and white blood cell count.

‡ $P < 0.01$ ; § $P < 0.001$ .

Supplementary Table 2. Hazard ratios (95% CI) for incident diabetes by volume of leisure-time physical activity

|                | <u>Volume of leisure-time physical activity</u> |                           |                           |                           | <u>Trend P</u>    |
|----------------|---|---------------------------|---------------------------|---------------------------|-------------------|
|                | <u>Inactive</u>                                 | <u>Low</u>                | <u>Moderate</u>           | <u>High</u>               |                   |
| <u>Model 1</u> | <u>1.00</u>                                     | <u>0.90 (0.83-0.98) †</u> | <u>0.82 (0.74-0.90) §</u> | <u>0.74 (0.67-0.80) §</u> | <u>&lt; 0.001</u> |
| <u>Model 2</u> | <u>1.00</u>                                     | <u>0.89 (0.80-0.98) †</u> | <u>0.80 (0.71-0.90) §</u> | <u>0.75 (0.67-0.83) §</u> | <u>&lt; 0.001</u> |
| <u>Model 3</u> | <u>1.00</u>                                     | <u>0.96 (0.87-1.06)</u>   | <u>0.93 (0.82-1.05)</u>   | <u>0.89 (0.80-1.00)</u>   | <u>0.034</u>      |

Inactive (no LTPA or LTPA < 3.75 MET-hours/week; reference category), low (LTPA 3.75 to < 7.5 MET-hours/week), moderate (LTPA 7.5 to < 15.0 MET-hours/week) and high (LTPA ≥ 15.0 MET-hours/week).

Model 1: adjusted for age, sex;

Model 2: Model 1 + marital status, education, physical labour at work, smoking, alcohol drinking, sleep duration, vegetable intake;

Model 3: Model 2 + body mass index, waist circumference, fasting plasma glucose, triglycerides and white blood cell count.

†P < 0.05; ‡P < 0.01; §P < 0.001.

Supplementary Table 43. Hazard ratios (95% CI) ~~of~~ for incident diabetes by volume of leisure-time physical activity with exclusion of incident diabetes identified within first 2 years.

|                   | Volume of leisure-time physical activity |                    |                    |                    | Trend <i>P</i> |
|-------------------|--|--------------------|--------------------|--------------------|----------------|
|                   | Inactive                                 | Low                | Moderate           | High               |                |
| Case/Person-years | 1780/103815                              | 493/34424          | 364/21984          | 417/28841          |                |
| Model 1           | 1.00                                     | 0.88 (0.80-0.98) † | 0.80 (0.72-0.90) § | 0.72 (0.65-0.80) § | < 0.001        |
| Model 2           | 1.00                                     | 0.87 (0.77-0.98) † | 0.77 (0.67-0.90) ‡ | 0.72 (0.63-0.82) § | < 0.001        |
| Model 3           | 1.00                                     | 0.94 (0.83-1.07)   | 0.89 (0.76-1.03)   | 0.86 (0.75-0.98)   | 0.013          |

Inactive (no LTPA or LTPA < 3.75 MET-hours/week; reference category), low (LTPA 3.75 to < 7.5 MET-hours/week), moderate (LTPA 7.5 to < 15.0 MET-hours/week) and high (LTPA ≥ 15.0 MET-hours/week).

Model 1: adjusted for age, sex;

Model 2: Model 1 + marital status, education, physical labour at work, smoking, alcohol drinking, sleep duration, vegetable intake, systolic blood pressure, heart rate and total cholesterol;

Model 3: Model 2 + body mass index, waist circumference, fasting plasma glucose, triglycerides and white blood cell count.

†*P* < 0.05; ‡*P* < 0.01; §*P* < 0.001.

Supplementary Table 24. Population attributable fractions (95% CI) ~~of~~ for incident diabetes by volume of leisure-time physical activity with exclusion of incident diabetes identified within first 2 years.

|                                      | Volume of leisure-time physical activity |                    |                     |                    |
|--------------------------------------|--|--------------------|---------------------|--------------------|
|                                      | Inactive                                 | Inactive → Low     | Inactive → Moderate | Inactive → High    |
| No. participants                     | 15439                                    | 5276               | 3303                | 4331               |
| Case/Person-years                    | 1780/103815                              | 493/34424          | 364/21984           | 417/28841          |
| Population attributable fraction (%) | ----                                     | 10.56 (2.11-18.28) | 18.62 (8.63-27.51)  | 15.36 (4.90-24.67) |

Inactive (no LTPA or LTPA < 3.75 MET-hours/week; reference category), low (LTPA 3.75 to < 7.5 MET-hours/week), moderate (LTPA 7.5 to < 15.0 MET-hours/week) and high (LTPA ≥ 15.0 MET-hours/week). Population attributable fractions (PAFs) were calculated from hazard ratios that were adjusted for age, sex, marital status, education, physical labour at work, smoking, alcohol drinking, sleep duration, vegetable intake, systolic blood pressure, heart rate and total cholesterol.

Supplementary Table 35. Adjusted population attributable fractions (95% CI) ~~of~~ [for incident](#) diabetes by combinations of intensity and duration of leisure-time physical activity with exclusion of incident diabetes identified within first 2 years.

| <b>Intensity</b>                 | <b>Duration</b>               |                                  |                           |
|----------------------------------|-------------------------------|----------------------------------|---------------------------|
|                                  | Inactive → 0.5-2.4 hours/week | Inactive → 2.5 to 6.9 hours/week | Inactive → ≥ 7 hours/week |
| Inactive → Light (2.5 METs)      | 10.29 (-0.11-19.61)           | 13.24 (0.75-24.16)               | 17.05 (-7.02-35.70)       |
| Inactive → Moderate (4.5 METs)   | 15.58 (-2.29-30.33)           | 19.41 (3.40-32.76)               | 50.6 (24.69-67.56)        |
| Inactive → Vigorous (≥ 6.5 METs) | 39.00 (19.65-53.68)           | 27.82 (11.26-41.29)              | 35.58 (7.75-55.01)        |

[Inactive \(no LTPA or LTPA < 3.75 MET-hours/week\)](#). Population attributable fractions (PAFs) were calculated from hazard ratios that were adjusted for age, sex, marital status, education, physical labour at work, smoking, alcohol drinking, sleep duration, vegetable intake, systolic blood pressure, heart rate and total cholesterol. The MET values for each intensity category were assigned by investigators according to the Ainsworth's compendium of physical activities [9].

Supplementary Figure 1. [Enrolment Selection](#) of [the](#) participants

