

## **Additional files**

# **CAN WE WALK AWAY FROM CARDIOVASCULAR DISEASE RISK OR DO WE HAVE TO ‘HUFF AND PUFF’? A COMPOSITIONAL ACCELEROMETER DATA ANALYSIS AMONG ADULTS AND OLDER ADULTS IN THE COPENHAGEN CITY HEART STUDY**

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# 1 Overview of questions and responses from questionnaire

| <b>Table A1.</b> Overview of questions and responses used in the present study from the questionnaire in the fifth examination of the Copenhagen City Heart Study (Denmark) |                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Question</b>                                                                                                                                                             | <b>Possible responses</b>                                                                                                                                                                                  |
| Number of years of education                                                                                                                                                |                                                                                                                                                                                                            |
| How many years have you gone to school? (primary or secondary school, high school or similar) (max. 14 years)                                                               | Participants filled out the number of years in free text.                                                                                                                                                  |
| Level of education                                                                                                                                                          |                                                                                                                                                                                                            |
| What education have you completed since you left municipal primary and lower secondary school?                                                                              | No education<br>Short education ( $\leq 3$ years with books)<br>Vocational or similar education (1-3 years)<br>Higher education ( $\geq 3$ years, e.g., teacher, nurse or similar)<br>University education |
| Household income                                                                                                                                                            |                                                                                                                                                                                                            |
| What was your total household income before tax last year?                                                                                                                  | <100 000 DKK<br>100 000 – 200 000 DKK<br>200 000 – 400 000 DKK<br>400 000 – 600 000 DKK<br>600 000 – 800 000 DKK<br>>800 000 DKK                                                                           |
| Smoking status                                                                                                                                                              |                                                                                                                                                                                                            |
| Do you smoke?<br>If no, have you previously smoked?                                                                                                                         | Yes<br>No                                                                                                                                                                                                  |
| Self-rated fitness compared to peers                                                                                                                                        |                                                                                                                                                                                                            |
| How do you rate your fitness compared to your peers?                                                                                                                        | Same<br>Better<br>Worse                                                                                                                                                                                    |
| Self-reported general health                                                                                                                                                |                                                                                                                                                                                                            |
| How do you think your health is all in all?                                                                                                                                 | Excellent<br>Very good<br>Good<br>Less good<br>Poor                                                                                                                                                        |
| All questions have been freely translated from Danish to English for the purpose of this overview only.<br>DKK, Danish krone                                                |                                                                                                                                                                                                            |

## 2 Overview of derived variables

| <b>Table A2.</b> Overview of derived variables used in the present study, based on data from the questionnaire and physical examination in the fifth examination of the Copenhagen City Heart Study (Denmark)                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Variable and question</b>                                                                                                                                                                                                           | <b>Possible responses and definition</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Covariates</b>                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Sex                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                                                                                                                                                                                                        | Women<br>Men<br>Derived from civil registration number<br>Number of missing values: 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Age                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                                                                                                                                                                                                        | Age at date of physical examination, derived from date of birth.<br>Number of missing values: 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Number of years of education                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <i>"How many years have you gone to school? (primary or secondary school, high school or similar) (max. 14 years)"</i>                                                                                                                 | Participants filled out the number of years in free text.<br>Number of missing values: 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Average number of alcohol units per week                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Participants were asked about the average number of beer(s) (33 cl), white wine (12.5 cl), red wine (12.5 cl), liqueur (8 cl) or spirits (4 cl) per week.                                                                              | Participants filled out the number of units in free text.<br>The average number of units was calculated by taking the sum of the reported alcohol consumption.<br>In case of all values missing, the participant was assigned a missing value.<br>Number of missing values: 79 among adults, 38 among older adults                                                                                                                                                                                                                                                                                                  |
| Smoking status                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Study participants were categorised as smokers, previous smokers and non-smokers based on the questions <i>"Do you smoke?"</i> and <i>"If no, have you previously smoked?"</i> with response categories <i>"Yes"</i> and <i>"No"</i> . | Those answering <i>"Yes"</i> to <i>"Do you smoke?"</i> were categorised as smokers.<br>Those answering <i>"No"</i> to <i>"Do you smoke?"</i> , and <i>"If no, have you previously smoked?"</i> were categorised as non-smokers.<br>Those answering <i>"Yes"</i> to <i>"If no, have you previously smoked?"</i> were categorised as previous smokers.<br>Number of missing values: 15 among adults, 6 among older adults                                                                                                                                                                                             |
| Self-reported use of prescribed medication                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <i>"Do you daily or almost daily take:"</i>                                                                                                                                                                                            | Participants indicated their answer ( <i>"Yes"</i> or <i>"No"</i> ) for each listed class of medication.<br>Those answering <i>"Yes"</i> to anticoagulants, antihypertensives, other heart medicine, diuretics, cholesterol lowering drugs, antidepressants or sedatives, or insulin or other medication for diabetes were considered to use prescribed medicine.<br>Those answering <i>"No"</i> to the abovementioned items (or leaving items blank) were classified as not taking prescribed medicine.<br>If all items were missing, the participant was assigned a missing value.<br>Number of missing values: 0 |

| <b>Table A2. (Continued)</b>                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b><i>Variables for descriptive purposes</i></b>                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                              |
| BMI                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                              |
| BMI was derived from measured height and weight<br>(weight [kg] / (height [m]) <sup>2</sup> = BMI [kg/m <sup>2</sup> ]) | BMI was categorised into (according to WHO classification):<br><i>Underweight</i> (<18.5 kg/m <sup>2</sup> )<br><i>Normal weight</i> (18.5-<25.0 kg/m <sup>2</sup> )<br><i>Overweight</i> (25.0-<30.0 kg/m <sup>2</sup> )<br><i>Obese</i> (≥30 kg/m <sup>2</sup> )<br>Number of missing values: 0                                                                                                                            |
| Blood pressure classification                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Blood pressure was measured as part of the physical examination.                                                        | Blood pressure was categorised into:<br><i>Normal</i> (systolic: <140 mm Hg and diastolic: <90 mm Hg; i.e., including high normal)<br><i>Grade 1 hypertension</i> (systolic: 140-≤159 mm Hg or diastolic: 90-≤99 mm Hg)<br><i>Grade 2 hypertension</i> (systolic: 160-≤179 mm Hg or diastolic: 100-≤109 mm Hg)<br><i>Grade 3 hypertension</i> (systolic: ≥180 mm Hg or diastolic: ≥110 mm Hg)<br>Number of missing values: 0 |
| Waist circumference (categorised)                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Waist circumference was measured as part of the physical examination.                                                   | WC was categorised into:<br>>88 cm for women<br>>94 cm for men.<br>Number of missing values: 0                                                                                                                                                                                                                                                                                                                               |
| Household income                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                              |
| "What was your total household income before tax last year?"                                                            | Response categories:<br><100 000 DKK<br>100 000 to 200 000 DKK<br>200 000 to 400 000 DKK<br>400 000 to 600 000 DKK<br>600 000 to 800 000 DKK<br>>800 000 DKK<br>Response categories grouped into:<br>Low (<200 000 DKK),<br>Moderate (200 000 to 600 000 DKK)<br>High (>600 000 DKK)<br>Number of missing values: 8 among adults, 11 among older adults                                                                      |
| Self-rated fitness compared to peers                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                              |
| "How do you rate your fitness compared to your peers?"                                                                  | Response categories:<br>Same<br>Better<br>Worse<br>Number of missing values: 2 among adults, 1 among older adults                                                                                                                                                                                                                                                                                                            |

| Table A2. (Continued)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Self-rated general health                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                       |
| <i>"How do you think your health is all in all?"</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <p>Response categories:</p> <p>Excellent</p> <p>Very good</p> <p>Good</p> <p>Less good</p> <p>Poor</p> <p>Response categories grouped into:</p> <p>Excellent and very good</p> <p>Good</p> <p>Less good and poor</p> <p>Number of missing values:</p> |
| <p>All questions have been freely translated from Danish to English for the purpose of this overview only.</p> <p>BMI, body mass index; WHO's classification: underweight, &lt;18.5 kg/m<sup>2</sup>; normal, 18.5-&lt;25.0 kg/m<sup>2</sup>; overweight, 25.0-&lt;30.0 kg/m<sup>2</sup>; obese, ≥30 kg/m<sup>2</sup>. The underweight category was merged with the normal weight category because of low number of underweight individuals.</p> <p>WC, waist circumference</p> <p>DKK, Danish krone</p> |                                                                                                                                                                                                                                                       |

### 3 Variation matrix

| <b>Table A3.</b> Variation matrix of parts in physical behaviour composition among 773 adults and 280 older adults participating in the fifth examination of the Copenhagen City Heart Study (Denmark)                                                                                                                                                                                                                                                                                                                          |                  |                 |               |                |             |                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-----------------|---------------|----------------|-------------|--------------------|
| <b>Older adults</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Adults</b>    |                 |               |                |             |                    |
| <i>Physical behaviour</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <i>Sedentary</i> | <i>Standing</i> | <i>Moving</i> | <i>Walking</i> | <i>HIPA</i> | <i>Time in bed</i> |
| <i>Sedentary</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0                | 0.260           | 0.244         | 0.213          | 1.094       | 0.066              |
| <i>Standing</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0.306            | 0               | 0.110         | 0.170          | 1.002       | 0.145              |
| <i>Moving</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.305            | 0.126           | 0             | 0.108          | 0.984       | 0.163              |
| <i>Walking</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0.309            | 0.262           | 0.213         | 0              | 1.019       | 0.153              |
| <i>HIPA</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1.646            | 1.449           | 1.358         | 1.233          | 0           | 0.974              |
| <i>Time in bed</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.070            | 0.215           | 0.220         | 0.256          | 1.570       | 0                  |
| Values in the upper right diagonal corresponds to adults (<65 yrs.) and values in the lower left diagonal are older adults (≥65 yrs.).<br>Small values indicate a high co-dependency between two parts of the physical behaviour composition, and vice versa for large values.<br>HIPA, high-intensity physical activity which consists of climbing stairs (up/down), running, cycling and rowing<br>Green indicate values in the range >0 to ≤0.5; orange indicate values in the range >0.5 to ≤1.0; red indicate values >1.0. |                  |                 |               |                |             |                    |

## 4 Investigation of potential selection bias

| <b>Table A4.</b> Comparison of characteristics of 966 non-eligible and 1053 eligible participants from the fifth examination of the Copenhagen City Heart Study (Denmark) |                                           |                                            |                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------------------------|------------------|
| <b>N = 2019</b>                                                                                                                                                           | <b>Non-eligible<br/>n = 966</b>           | <b>Final study population<br/>n = 1053</b> | <b>P</b>         |
| <b>Characteristics</b>                                                                                                                                                    | <b>n (%) [95% CI]<br/>Median [95% CI]</b> | <b>n (%) [95% CI]<br/>Median [95% CI]</b>  |                  |
| Accelerometer wear time<br>Median minutes/day                                                                                                                             | 1435.191 [1432.5-1437.858]                | 1427.5 [1425-1430]                         | <b>&lt;0.001</b> |
| Number of valid days of measurement<br>Median number of days                                                                                                              | 6 [6-6]                                   | 6 [6-6]                                    | <b>&lt;0.001</b> |
| Sex distribution                                                                                                                                                          |                                           |                                            | 0.99             |
| Women                                                                                                                                                                     | 559 (57.9%) [54.7-60.9]                   | 608 (57.7%) [54.7-60.7]                    |                  |
| Men                                                                                                                                                                       | 407 (42.1%) [39.1-45.3]                   | 445 (42.3%) [39.3-45.3]                    |                  |
| Age<br>Median years                                                                                                                                                       | 65.749 [64.715-66.872]                    | 54.886 [54.141-55.729]                     | <b>&lt;0.001</b> |
| Years of education<br>Median years                                                                                                                                        | 11 [11-11]                                | 12 [12-12]                                 | <b>&lt;0.001</b> |
| Level of education                                                                                                                                                        |                                           |                                            | <b>&lt;0.001</b> |
| No [further] education                                                                                                                                                    | 121 (12.6%) [10.6-14.8]                   | 102 (9.7%) [8.1-11.7]                      |                  |
| Short education (up to 3 years)                                                                                                                                           | 106 (11%) [9.2-13.1]                      | 94 (9%) [7.4-10.8]                         |                  |
| Vocational or comparable education (1-3 years)                                                                                                                            | 290 (30.1%) [27.3-33.1]                   | 210 (20%) [17.7-22.5]                      |                  |
| Higher education (≥3 years)                                                                                                                                               | 231 (24%) [21.4-26.8]                     | 280 (26.7%) [24.1-29.5]                    |                  |
| University education                                                                                                                                                      | 216 (22.4%) [19.9-25.1]                   | 363 (34.6%) [31.8-37.5]                    |                  |
| Household income                                                                                                                                                          |                                           |                                            | <b>&lt;0.001</b> |
| Low (<200 000 DKK)                                                                                                                                                        | 244 (25.8%) [23.1-28.7]                   | 190 (18.4%) [16.1-20.9]                    |                  |
| Middle (200 000-600 000 DKK)                                                                                                                                              | 460 (48.6%) [45.5-51.8]                   | 439 (42.5%) [39.5-45.5]                    |                  |
| High (≥600 000 DKK)                                                                                                                                                       | 242 (25.6%) [22.9-28.5]                   | 405 (39.2%) [36.2-42.2]                    |                  |
| Smoking status                                                                                                                                                            |                                           |                                            | 0.482            |
| Non-smoker                                                                                                                                                                | 367 (38.5%) [35.5-41.6]                   | 424 (41.1%) [38.1-44.1]                    |                  |
| Previous smoker                                                                                                                                                           | 419 (44%) [40.8-47.1]                     | 430 (41.7%) [38.7-44.7]                    |                  |
| Current smoker                                                                                                                                                            | 167 (17.5%) [15.2-20.1]                   | 178 (17.2%) [15.1-19.7]                    |                  |
| Average weekly number of units of alcohol per week<br>Median units/week                                                                                                   | 7 [7-8]                                   | 7 [6-7]                                    | <b>0.047</b>     |
| Use of prescribed medication                                                                                                                                              |                                           |                                            | <b>&lt;0.001</b> |
| No                                                                                                                                                                        | 273 (28.5%) [25.7-31.4]                   | 928 (88.1%) [86-89.9]                      |                  |
| Yes                                                                                                                                                                       | 685 (71.5%) [68.6-74.3]                   | 125 (11.9%) [10.1-14]                      |                  |



| <b>Table A4. (Continued)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                         |                         |        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-------------------------|--------|
| Self-rated fitness compared to peers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                         |                         | 0.413  |
| Same                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 446 (46.4%) [43.3-49.6] | 507 (48.3%) [45.3-51.3] |        |
| Better                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 355 (36.9%) [33.9-40]   | 390 (37.1%) [34.3-40.1] |        |
| Worse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 160 (16.6%) [14.4-19.1] | 153 (14.6%) [12.6-16.8] |        |
| Self-rated general health                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                         |                         | <0.001 |
| Excellent or Very good                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 347 (36%) [33.1-39.1]   | 479 (45.8%) [42.8-48.9] |        |
| Good                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 415 (43.1%) [40-46.2]   | 434 (41.5%) [38.6-44.5] |        |
| Less good or Poor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 201 (20.9%) [18.4-23.6] | 132 (12.6%) [10.8-14.8] |        |
| Systolic blood pressure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                         |                         | <0.001 |
| Median (mm Hg)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 139 [138-140]           | 130.5 [129-131]         |        |
| Diastolic blood pressure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                         |                         | 0.621  |
| Median (mm Hg)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 77.5 [77-78]            | 77 [76.5-78]            |        |
| Blood pressure classification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                         |                         | <0.001 |
| Normal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 480 (50.5%) [47.4-53.7] | 705 (67%) [64.1-69.7]   |        |
| Grade 1 hypertension                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 371 (39.1%) [36-42.2]   | 289 (27.4%) [24.8-30.2] |        |
| Grade 2 or 3 hypertension                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 99 (10.4%) [8.6-12.5]   | 59 (5.6%) [4.4-7.2]     |        |
| Waist circumference                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                         |                         | <0.001 |
| Median (cm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 90 [90-91]              | 85 [84-86]              |        |
| WC (women >80 cm, men >94 cm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                         |                         | <0.001 |
| Under cut-point                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 374 (39%) [36-42.2]     | 611 (58%) [55-61]       |        |
| Above cut-point                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 584 (61%) [57.8-64]     | 442 (42%) [39-45]       |        |
| BMI, WHO classification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                         |                         | <0.001 |
| Normal (incl. underweight)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 386 (40.1%) [37-43.2]   | 603 (57.3%) [54.3-60.2] |        |
| Overweight                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 405 (42.1%) [39-45.2]   | 345 (32.8%) [30-35.7]   |        |
| Obese                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 172 (17.9%) [15.6-20.4] | 105 (10%) [8.3-11.9]    |        |
| Low-density lipoprotein cholesterol                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                         |                         | <0.001 |
| Median (mmol/L)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2.84 [2.76-2.89]        | 3.11 [3.04-3.16]        |        |
| <p>The non-eligible includes 191 individuals with missing information on whether they agreed to wear accelerometers or not.</p> <p><i>N/n</i>, number of observations</p> <p><i>P</i>, p-value from Mann-Whitney U test and Pearson's Chi-squared test</p> <p>CI, confidence interval, CIs were calculated using the Wilson score method for proportions and the normal approximation method for medians.</p> <p>DKK, Danish krone</p> <p>Blood pressure classification is based on the 2013 European Society of Hypertension/European Society of Cardiology guidelines for the management of arterial hypertension (the normal category includes high normal).</p> <p>WC, waist circumference</p> <p>BMI, body mass index; WHO's classification: underweight, &lt;18.5 kg/m<sup>2</sup>; normal, 18.5-&lt;25.0 kg/m<sup>2</sup>; overweight, 25.0-&lt;30.0 kg/m<sup>2</sup>; obese, ≥30 kg/m<sup>2</sup>. The underweight category was merged with the normal weight category because of low number of underweight individuals. The normal BMI-category includes 9 and 11 underweight individuals in the non-eligible and eligible participants, respectively.</p> |                         |                         |        |

## 5 Linear regression models

### 5.1 Interpretation of the first iso-metric log-ratio coordinate

The model estimates of the iso-metric log-ratio (ilr) coordinates are not directly interpretable due to the ilr-transformation. The first coordinate (ilr1) represent sedentary behaviour relative to the geometric mean of the remaining behaviours in the daily physical behaviour composition. The direction of the association between sedentary behaviour relative to the remaining physical behaviours and the outcome is therefore reflected by the sign of the model estimate of the ilr1-coordinate. For example, in Table A5.1.1.1., the estimate of ilr1 is positive (i.e., 9.57) and the 95% confidence interval does not include 0. This means that a one-unit increase in time spent in sedentary behaviour, with a corresponding decrease in the remaining physical behaviours, is associated with a higher systolic blood pressure. Importantly, the unit of ilr1 is not interpretable, and it is unclear whether a decrease in one of the remaining physical behaviours are driving this association more than other behaviours. Therefore, the measure of association was quantified by reallocating time between the physical behaviours of interest (see section 6 Time reallocations).

### 5.2 Systolic blood pressure

#### 5.2.1 Crude model

##### 5.2.1.1 Adults

| Table A5.1.1.1. Model output from crude systolic blood pressure model among 773 adults                                                                                                                                                                                          |          |                |          |          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------|----------|----------|
| Variable                                                                                                                                                                                                                                                                        | Estimate | Standard error | 95% CI   |          |
|                                                                                                                                                                                                                                                                                 |          |                | Lower    | Upper    |
| Intercept                                                                                                                                                                                                                                                                       | 119.8632 | 3.558893       | 112.8768 | 126.8495 |
| ilr1                                                                                                                                                                                                                                                                            | 9.576964 | 2.67568        | 4.324438 | 14.82949 |
| ilr2                                                                                                                                                                                                                                                                            | -0.25579 | 2.578211       | -5.31698 | 4.805395 |
| ilr3                                                                                                                                                                                                                                                                            | 3.174703 | 2.54205        | -1.8155  | 8.164903 |
| ilr4                                                                                                                                                                                                                                                                            | 3.988626 | 2.263486       | -0.45474 | 8.431987 |
| ilr5                                                                                                                                                                                                                                                                            | 2.272421 | 2.440449       | -2.51833 | 7.063174 |
| CI, confidence interval<br>ilr1-ilr5, iso-metric log-ratio coordinates representing the transformed physical behaviour composition<br>ilr1 represent sedentary behaviour relative to the geometric mean of the remaining behaviours in the daily physical behaviour composition |          |                |          |          |

##### 5.2.1.2 Older adults

| Table A5.1.1.2. Model output from crude systolic blood pressure-model among 280 older adults                                                                                                                                                                                    |          |                |          |          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------|----------|----------|
| Variable                                                                                                                                                                                                                                                                        | Estimate | Standard error | 95% CI   |          |
|                                                                                                                                                                                                                                                                                 |          |                | Lower    | Upper    |
| Intercept                                                                                                                                                                                                                                                                       | 122.6674 | 6.166479       | 110.5277 | 134.8071 |
| ilr1                                                                                                                                                                                                                                                                            | 9.768649 | 5.075413       | -0.22311 | 19.76041 |
| ilr2                                                                                                                                                                                                                                                                            | 8.999392 | 4.382527       | 0.371688 | 17.6271  |
| ilr3                                                                                                                                                                                                                                                                            | 4.599849 | 4.35513        | -3.97392 | 13.17362 |
| ilr4                                                                                                                                                                                                                                                                            | -3.12228 | 3.729011       | -10.4634 | 4.218876 |
| ilr5                                                                                                                                                                                                                                                                            | 1.148204 | 4.002177       | -6.73072 | 9.027128 |
| CI, confidence interval<br>ilr1-ilr5, iso-metric log-ratio coordinates representing the transformed physical behaviour composition<br>ilr1 represent sedentary behaviour relative to the geometric mean of the remaining behaviours in the daily physical behaviour composition |          |                |          |          |

## 5.2.2 Adjusted model

### 5.2.2.1 Adults

| <b>Table A5.1.2.1. Model output from adjusted systolic blood pressure-model among 682 adults</b>                                                                                                                                                                                |          |                |          |          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------|----------|----------|
| Variable                                                                                                                                                                                                                                                                        | Estimate | Standard error | 95% CI   |          |
|                                                                                                                                                                                                                                                                                 |          |                | Lower    | Upper    |
| Intercept                                                                                                                                                                                                                                                                       | 86.16183 | 7.470494       | 71.4934  | 100.8303 |
| ilr1                                                                                                                                                                                                                                                                            | 4.567675 | 2.61704        | -0.57093 | 9.706275 |
| ilr2                                                                                                                                                                                                                                                                            | 0.159965 | 2.439412       | -4.62986 | 4.949789 |
| ilr3                                                                                                                                                                                                                                                                            | -5.17022 | 2.445392       | -9.97179 | -0.36865 |
| ilr4                                                                                                                                                                                                                                                                            | 2.17503  | 2.184782       | -2.11482 | 6.464885 |
| ilr5                                                                                                                                                                                                                                                                            | -1.00135 | 2.38596        | -5.68622 | 3.683517 |
| Age                                                                                                                                                                                                                                                                             | 0.504823 | 0.052673       | 0.401399 | 0.608247 |
| Sex                                                                                                                                                                                                                                                                             |          |                |          |          |
| Men vs. Women                                                                                                                                                                                                                                                                   | 9.288953 | 1.230714       | 6.872425 | 11.70548 |
| Level of education                                                                                                                                                                                                                                                              | 0.249837 | 0.40943        | -0.55409 | 1.053759 |
| Smoking status                                                                                                                                                                                                                                                                  |          |                |          |          |
| Previous smoker vs. Never smoker                                                                                                                                                                                                                                                | 1.382264 | 1.262018       | -1.09573 | 3.860257 |
| Smoking status                                                                                                                                                                                                                                                                  |          |                |          |          |
| Smoker vs. Never smoker                                                                                                                                                                                                                                                         | 4.01337  | 1.717305       | 0.641415 | 7.385326 |
| Average units of alcohol/week                                                                                                                                                                                                                                                   | 0.115185 | 0.068137       | -0.0186  | 0.248972 |
| Use of prescribed medicine                                                                                                                                                                                                                                                      |          |                |          |          |
| Yes vs. No                                                                                                                                                                                                                                                                      | -1.30652 | 1.950499       | -5.13635 | 2.523321 |
| CI, confidence interval<br>ilr1-ilr5, iso-metric log-ratio coordinates representing the transformed physical behaviour composition<br>ilr1 represent sedentary behaviour relative to the geometric mean of the remaining behaviours in the daily physical behaviour composition |          |                |          |          |

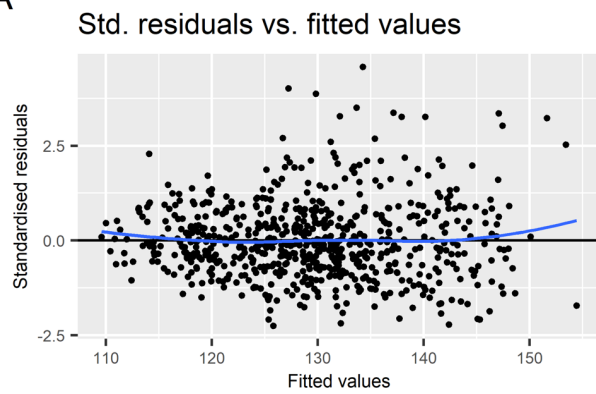
### 5.2.2.2 Older adults

| <b>Table A5.1.2.2. Model output from adjusted systolic blood pressure-model among 231 older adults</b>                                                                                                                                                                          |          |                |          |          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------|----------|----------|
| Variable                                                                                                                                                                                                                                                                        | Estimate | Standard error | 95% CI   |          |
|                                                                                                                                                                                                                                                                                 |          |                | Lower    | Upper    |
| Intercept                                                                                                                                                                                                                                                                       | 112.7153 | 19.05417       | 75.1613  | 150.2693 |
| ilr1                                                                                                                                                                                                                                                                            | 10.04899 | 5.709754       | -1.20439 | 21.30238 |
| ilr2                                                                                                                                                                                                                                                                            | 7.038248 | 4.831675       | -2.48453 | 16.56102 |
| ilr3                                                                                                                                                                                                                                                                            | 1.726912 | 5.087563       | -8.3002  | 11.75402 |
| ilr4                                                                                                                                                                                                                                                                            | -0.46666 | 4.234231       | -8.81193 | 7.878611 |
| ilr5                                                                                                                                                                                                                                                                            | 3.056655 | 4.875565       | -6.55262 | 12.66593 |
| Age                                                                                                                                                                                                                                                                             | 0.394619 | 0.25287        | -0.10376 | 0.893001 |
| Sex                                                                                                                                                                                                                                                                             |          |                |          |          |
| Men vs. Women                                                                                                                                                                                                                                                                   | 0.530119 | 2.796754       | -4.98202 | 6.042257 |
| Level of education                                                                                                                                                                                                                                                              | -1.15681 | 0.594629       | -2.32877 | 0.01515  |
| Smoking status                                                                                                                                                                                                                                                                  |          |                |          |          |
| Previous smoker vs. Never smoker                                                                                                                                                                                                                                                | -0.5132  | 3.020691       | -6.46669 | 5.440301 |
| Smoking status                                                                                                                                                                                                                                                                  |          |                |          |          |
| Smoker vs. Never smoker                                                                                                                                                                                                                                                         | 4.993801 | 4.183403       | -3.25129 | 13.23889 |
| Average units of alcohol/week                                                                                                                                                                                                                                                   | -0.02352 | 0.165186       | -0.34909 | 0.302045 |
| Use of prescribed medicine                                                                                                                                                                                                                                                      |          |                |          |          |
| Yes vs. No                                                                                                                                                                                                                                                                      | -2.94745 | 3.666266       | -10.1733 | 4.278414 |
| CI, confidence interval<br>ilr1-ilr5, iso-metric log-ratio coordinates representing the transformed physical behaviour composition<br>ilr1 represent sedentary behaviour relative to the geometric mean of the remaining behaviours in the daily physical behaviour composition |          |                |          |          |

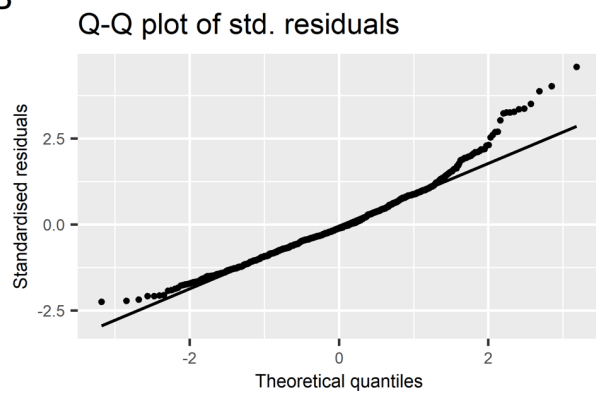
### 5.2.3 Model validation

#### 5.2.3.1 Adults

A



B



C

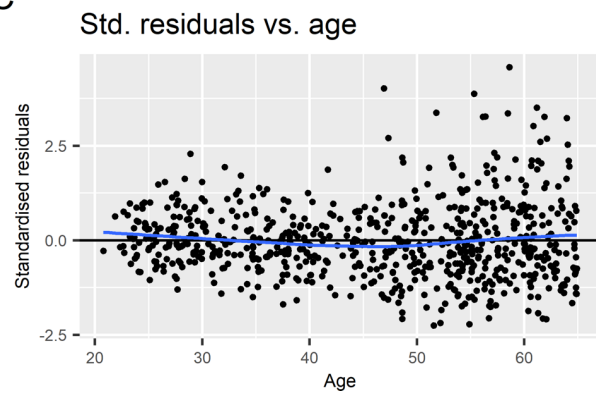
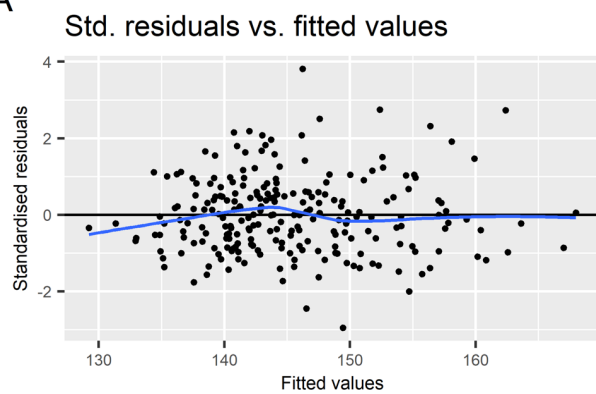


Figure 1.

#### 5.2.3.2 Older adults

A



B

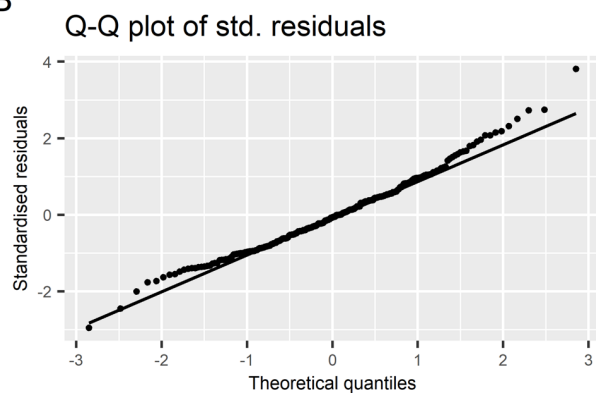


Figure 2.

## 5.3 Waist circumference

### 5.3.1 Crude model

#### 5.3.1.1 Adults

| <b>Table A5.2.1.1.</b> Model output from crude waist circumference-model among 773 adults                                                                                                                                                                                       |          |                |          |          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------|----------|----------|
| Variable                                                                                                                                                                                                                                                                        | Estimate | Standard error | 95% CI   |          |
|                                                                                                                                                                                                                                                                                 |          |                | Lower    | Upper    |
| Intercept                                                                                                                                                                                                                                                                       | 70.97886 | 2.438771       | 66.1914  | 75.76632 |
| ilr1                                                                                                                                                                                                                                                                            | 8.552516 | 1.83354        | 4.953164 | 12.15187 |
| ilr2                                                                                                                                                                                                                                                                            | 0.47755  | 1.766748       | -2.99068 | 3.945785 |
| ilr3                                                                                                                                                                                                                                                                            | 1.340201 | 1.741968       | -2.07939 | 4.759791 |
| ilr4                                                                                                                                                                                                                                                                            | 3.787097 | 1.551079       | 0.742234 | 6.831961 |
| ilr5                                                                                                                                                                                                                                                                            | 0.25696  | 1.672345       | -3.02596 | 3.539877 |
| CI, confidence interval<br>ilr1-ilr5, iso-metric log-ratio coordinates representing the transformed physical behaviour composition<br>ilr1 represent sedentary behaviour relative to the geometric mean of the remaining behaviours in the daily physical behaviour composition |          |                |          |          |

#### 5.3.1.2 Older adults

| <b>Table A5.2.1.2.</b> Model output from crude waist circumference-model among 280 adults                                                                                                                                                                                       |          |                |          |          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------|----------|----------|
| Variable                                                                                                                                                                                                                                                                        | Estimate | Standard error | 95% CI   |          |
|                                                                                                                                                                                                                                                                                 |          |                | Lower    | Upper    |
| Intercept                                                                                                                                                                                                                                                                       | 78.0157  | 3.352298       | 71.41617 | 84.61523 |
| ilr1                                                                                                                                                                                                                                                                            | 10.6192  | 2.759159       | 5.187358 | 16.05105 |
| ilr2                                                                                                                                                                                                                                                                            | -7.5002  | 2.382484       | -12.1905 | -2.8099  |
| ilr3                                                                                                                                                                                                                                                                            | 0.616125 | 2.36759        | -4.04485 | 5.277104 |
| ilr4                                                                                                                                                                                                                                                                            | -0.69648 | 2.027211       | -4.68737 | 3.294412 |
| ilr5                                                                                                                                                                                                                                                                            | 0.352333 | 2.175713       | -3.93091 | 4.635572 |
| CI, confidence interval<br>ilr1-ilr5, iso-metric log-ratio coordinates representing the transformed physical behaviour composition<br>ilr1 represent sedentary behaviour relative to the geometric mean of the remaining behaviours in the daily physical behaviour composition |          |                |          |          |

## 5.3.2 Adjusted model

### 5.3.2.1 Adults

| Table A5.2.2.1. Model output from adjusted waist circumference-model among 682 adults                                                                                                                                                                                           |          |                |          |          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------|----------|----------|
| Variable                                                                                                                                                                                                                                                                        | Estimate | Standard error | 95% CI   |          |
|                                                                                                                                                                                                                                                                                 |          |                | Lower    | Upper    |
| Intercept                                                                                                                                                                                                                                                                       | 68.31307 | 4.828905       | 58.83144 | 77.7947  |
| ilr1                                                                                                                                                                                                                                                                            | 2.185152 | 1.691646       | -1.13642 | 5.506727 |
| ilr2                                                                                                                                                                                                                                                                            | 0.382196 | 1.576828       | -2.71393 | 3.478323 |
| ilr3                                                                                                                                                                                                                                                                            | -4.23132 | 1.580694       | -7.33504 | -1.1276  |
| ilr4                                                                                                                                                                                                                                                                            | 1.973294 | 1.412236       | -0.79966 | 4.746242 |
| ilr5                                                                                                                                                                                                                                                                            | -3.08485 | 1.542277       | -6.11314 | -0.05657 |
| Age                                                                                                                                                                                                                                                                             | 0.200746 | 0.034048       | 0.133893 | 0.267599 |
| Sex                                                                                                                                                                                                                                                                             |          |                |          |          |
| Men vs. Women                                                                                                                                                                                                                                                                   | 8.902944 | 0.79553        | 7.340908 | 10.46498 |
| Level of education                                                                                                                                                                                                                                                              | -0.825   | 0.264654       | -1.34465 | -0.30535 |
| Smoking status                                                                                                                                                                                                                                                                  |          |                |          |          |
| Previous smoker vs. Never smoker                                                                                                                                                                                                                                                | 0.458599 | 0.815765       | -1.14317 | 2.060366 |
| Smoking status                                                                                                                                                                                                                                                                  |          |                |          |          |
| Smoker vs. Never smoker                                                                                                                                                                                                                                                         | -0.92343 | 1.11006        | -3.10306 | 1.256187 |
| Average units of alcohol/week                                                                                                                                                                                                                                                   | 0.06578  | 0.044043       | -0.0207  | 0.15226  |
| Use of prescribed medicine                                                                                                                                                                                                                                                      |          |                |          |          |
| Yes vs. No                                                                                                                                                                                                                                                                      | 3.023395 | 1.260796       | 0.5478   | 5.498989 |
| CI, confidence interval<br>ilr1-ilr5, iso-metric log-ratio coordinates representing the transformed physical behaviour composition<br>ilr1 represent sedentary behaviour relative to the geometric mean of the remaining behaviours in the daily physical behaviour composition |          |                |          |          |

### 5.3.2.2 Older adults

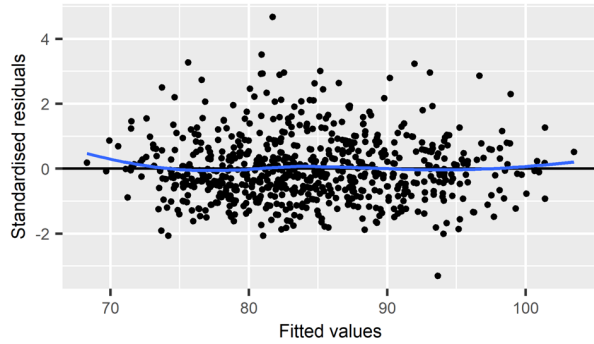
| Table A5.2.2.2. Model output from adjusted waist circumference-model among 231 adults                                                                                                                                                                                           |          |                |          |          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------|----------|----------|
| Variable                                                                                                                                                                                                                                                                        | Estimate | Standard error | 95% CI   |          |
|                                                                                                                                                                                                                                                                                 |          |                | Lower    | Upper    |
| Intercept                                                                                                                                                                                                                                                                       | 78.97129 | 9.487164       | 60.27298 | 97.66959 |
| ilr1                                                                                                                                                                                                                                                                            | 8.611267 | 2.842914       | 3.008151 | 14.21438 |
| ilr2                                                                                                                                                                                                                                                                            | -4.62434 | 2.405714       | -9.36577 | 0.117097 |
| ilr3                                                                                                                                                                                                                                                                            | -3.29601 | 2.533122       | -8.28855 | 1.696535 |
| ilr4                                                                                                                                                                                                                                                                            | 0.395618 | 2.108244       | -3.75953 | 4.550768 |
| ilr5                                                                                                                                                                                                                                                                            | -1.32218 | 2.427567       | -6.10668 | 3.462329 |
| Age                                                                                                                                                                                                                                                                             | -0.06823 | 0.125905       | -0.31637 | 0.179921 |
| Sex                                                                                                                                                                                                                                                                             |          |                |          |          |
| Men vs. Women                                                                                                                                                                                                                                                                   | 8.947359 | 1.392517       | 6.202839 | 11.69188 |
| Level of education                                                                                                                                                                                                                                                              | -0.47414 | 0.296069       | -1.05767 | 0.10938  |
| Smoking status                                                                                                                                                                                                                                                                  |          |                |          |          |
| Previous smoker vs. Never smoker                                                                                                                                                                                                                                                | 0.353006 | 1.504017       | -2.61127 | 3.317281 |
| Smoking status                                                                                                                                                                                                                                                                  |          |                |          |          |
| Smoker vs. Never smoker                                                                                                                                                                                                                                                         | 0.172134 | 2.082937       | -3.93314 | 4.277406 |
| Average units of alcohol/week                                                                                                                                                                                                                                                   | 0.077348 | 0.082247       | -0.08475 | 0.239448 |
| Use of prescribed medicine                                                                                                                                                                                                                                                      |          |                |          |          |
| Yes vs. No                                                                                                                                                                                                                                                                      | 2.89975  | 1.825451       | -0.69804 | 6.497543 |
| CI, confidence interval<br>ilr1-ilr5, iso-metric log-ratio coordinates representing the transformed physical behaviour composition<br>ilr1 represent sedentary behaviour relative to the geometric mean of the remaining behaviours in the daily physical behaviour composition |          |                |          |          |

### 5.3.3 Model validation

#### 5.3.3.1 Adults

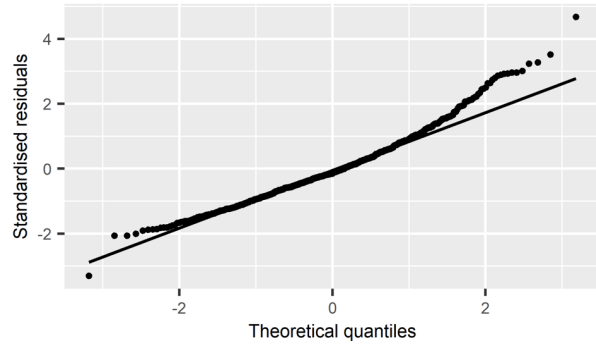
A

Std. residuals vs. fitted values



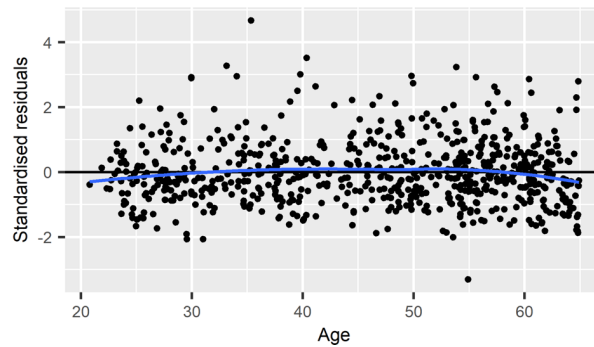
B

Q-Q plot of std. residuals



C

Std. residuals vs. age



C

Std. residuals vs. years of education

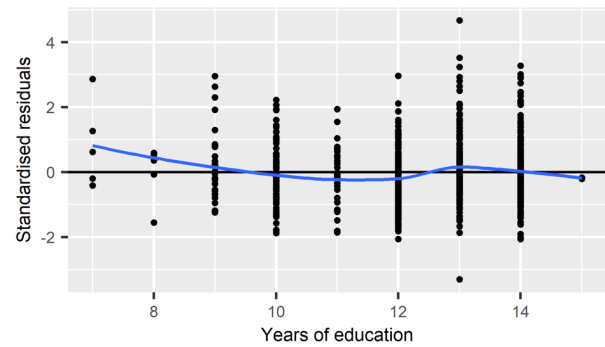
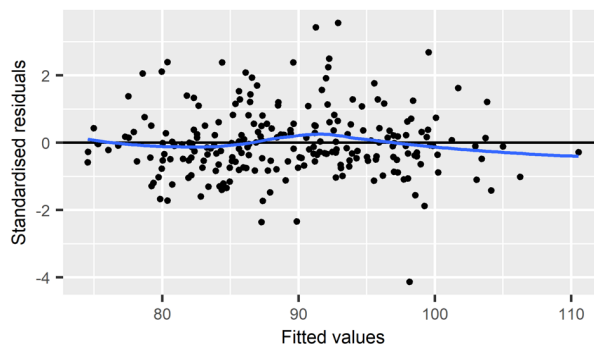


Figure 3.

#### 5.3.3.2 Older adults

A

Std. residuals vs. fitted values



B

Q-Q plot of std. residuals

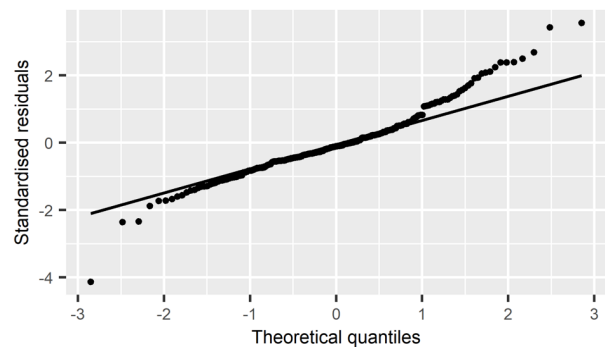


Figure 4.

## 5.4 Low-density lipoprotein cholesterol

### 5.4.1 Crude model

#### 5.4.1.1 Adults

| <b>Table A5.3.1.1.</b> Model output from crude low-density lipoprotein-model among 773 adults                                                                                                                                                                                   |          |                |          |          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------|----------|----------|
| Variable                                                                                                                                                                                                                                                                        | Estimate | Standard error | 95% CI   |          |
|                                                                                                                                                                                                                                                                                 |          |                | Lower    | Upper    |
| Intercept                                                                                                                                                                                                                                                                       | 2.346891 | 0.192929       | 1.968161 | 2.725622 |
| ilr1                                                                                                                                                                                                                                                                            | 0.222387 | 0.145049       | -0.06235 | 0.507128 |
| ilr2                                                                                                                                                                                                                                                                            | -0.12046 | 0.139766       | -0.39483 | 0.153908 |
| ilr3                                                                                                                                                                                                                                                                            | -0.07265 | 0.137805       | -0.34317 | 0.197866 |
| ilr4                                                                                                                                                                                                                                                                            | 0.225648 | 0.122704       | -0.01523 | 0.466524 |
| ilr5                                                                                                                                                                                                                                                                            | -0.18657 | 0.132297       | -0.44628 | 0.073136 |
| CI, confidence interval<br>ilr1-ilr5, iso-metric log-ratio coordinates representing the transformed physical behaviour composition<br>ilr1 represent sedentary behaviour relative to the geometric mean of the remaining behaviours in the daily physical behaviour composition |          |                |          |          |

#### 5.4.1.2 Older adults

| <b>Table A5.3.1.2.</b> Model output from crude low-density lipoprotein-model among 280 adults                                                                                                                                                                                   |          |                |          |          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------|----------|----------|
| Variable                                                                                                                                                                                                                                                                        | Estimate | Standard error | 95% CI   |          |
|                                                                                                                                                                                                                                                                                 |          |                | Lower    | Upper    |
| Intercept                                                                                                                                                                                                                                                                       | 2.740967 | 0.258306       | 2.232452 | 3.249483 |
| ilr1                                                                                                                                                                                                                                                                            | 0.012574 | 0.212602       | -0.40597 | 0.431116 |
| ilr2                                                                                                                                                                                                                                                                            | 0.010123 | 0.183578       | -0.35128 | 0.371526 |
| ilr3                                                                                                                                                                                                                                                                            | -0.21645 | 0.182431       | -0.5756  | 0.142691 |
| ilr4                                                                                                                                                                                                                                                                            | 0.163368 | 0.156203       | -0.14414 | 0.470879 |
| ilr5                                                                                                                                                                                                                                                                            | -0.19141 | 0.167646       | -0.52145 | 0.138629 |
| CI, confidence interval<br>ilr1-ilr5, iso-metric log-ratio coordinates representing the transformed physical behaviour composition<br>ilr1 represent sedentary behaviour relative to the geometric mean of the remaining behaviours in the daily physical behaviour composition |          |                |          |          |



## 5.4.2 Adjusted model

### 5.4.2.1 Adults

| Table A5.3.2.1. Model output from adjusted low-density lipoprotein-model among 682 adults                                                                                                                                                                                       |          |                |          |          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------|----------|----------|
| Variable                                                                                                                                                                                                                                                                        | Estimate | Standard error | 95% CI   |          |
|                                                                                                                                                                                                                                                                                 |          |                | Lower    | Upper    |
| Intercept                                                                                                                                                                                                                                                                       | 1.53611  | 0.436592       | 0.678854 | 2.393366 |
| ilr1                                                                                                                                                                                                                                                                            | 0.011707 | 0.152946       | -0.2886  | 0.312018 |
| ilr2                                                                                                                                                                                                                                                                            | -0.1687  | 0.142565       | -0.44863 | 0.11123  |
| ilr3                                                                                                                                                                                                                                                                            | -0.39549 | 0.142914       | -0.67611 | -0.11488 |
| ilr4                                                                                                                                                                                                                                                                            | 0.142686 | 0.127684       | -0.10802 | 0.393395 |
| ilr5                                                                                                                                                                                                                                                                            | -0.28467 | 0.139441       | -0.55847 | -0.01088 |
| Age                                                                                                                                                                                                                                                                             | 0.022461 | 0.003078       | 0.016416 | 0.028505 |
| Sex                                                                                                                                                                                                                                                                             |          |                |          |          |
| Men vs. Women                                                                                                                                                                                                                                                                   | 0.258485 | 0.071926       | 0.117257 | 0.399712 |
| Level of education                                                                                                                                                                                                                                                              | -0.02168 | 0.023928       | -0.06866 | 0.025303 |
| Smoking status                                                                                                                                                                                                                                                                  |          |                |          |          |
| Previous smoker vs. Never smoker                                                                                                                                                                                                                                                | 0.110571 | 0.073755       | -0.03425 | 0.255391 |
| Smoking status                                                                                                                                                                                                                                                                  |          |                |          |          |
| Smoker vs. Never smoker                                                                                                                                                                                                                                                         | 0.052485 | 0.100363       | -0.14458 | 0.249549 |
| Average units of alcohol/week                                                                                                                                                                                                                                                   | -0.00325 | 0.003982       | -0.01106 | 0.004573 |
| Use of prescribed medicine                                                                                                                                                                                                                                                      |          |                |          |          |
| Yes vs. No                                                                                                                                                                                                                                                                      | 0.091469 | 0.113992       | -0.13236 | 0.315293 |
| CI, confidence interval<br>ilr1-ilr5, iso-metric log-ratio coordinates representing the transformed physical behaviour composition<br>ilr1 represent sedentary behaviour relative to the geometric mean of the remaining behaviours in the daily physical behaviour composition |          |                |          |          |

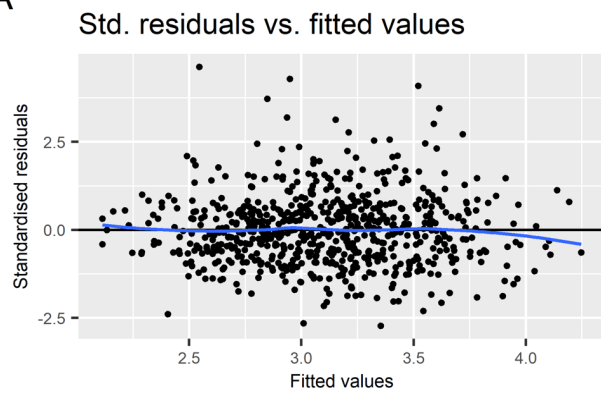
### 5.4.2.2 Older adults

| Table A5.3.2.2. Model output from adjusted low-density lipoprotein-model among 231 adults                                                                                                                                                                                       |          |                |          |           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------|----------|-----------|
| Variable                                                                                                                                                                                                                                                                        | Estimate | Standard error | 95% CI   |           |
|                                                                                                                                                                                                                                                                                 |          |                | Lower    | Upper     |
| Intercept                                                                                                                                                                                                                                                                       | 4.092403 | 0.824624       | 2.467148 | 5.717659  |
| ilr1                                                                                                                                                                                                                                                                            | 0.034954 | 0.247106       | -0.45207 | 0.521976  |
| ilr2                                                                                                                                                                                                                                                                            | -0.04828 | 0.209105       | -0.4604  | 0.363849  |
| ilr3                                                                                                                                                                                                                                                                            | -0.21266 | 0.220179       | -0.64661 | 0.221292  |
| ilr4                                                                                                                                                                                                                                                                            | 0.102948 | 0.183248       | -0.25822 | 0.464113  |
| ilr5                                                                                                                                                                                                                                                                            | -0.29359 | 0.211004       | -0.70946 | 0.122282  |
| Age                                                                                                                                                                                                                                                                             | -0.02237 | 0.010944       | -0.04394 | -8.02E-04 |
| Sex                                                                                                                                                                                                                                                                             |          |                |          |           |
| Men vs. Women                                                                                                                                                                                                                                                                   | -0.26924 | 0.121038       | -0.50779 | -0.03068  |
| Level of education                                                                                                                                                                                                                                                              | 0.01335  | 0.025734       | -0.03737 | 0.06407   |
| Smoking status                                                                                                                                                                                                                                                                  |          |                |          |           |
| Previous smoker vs. Never smoker                                                                                                                                                                                                                                                | -0.04127 | 0.130729       | -0.29893 | 0.216381  |
| Smoking status                                                                                                                                                                                                                                                                  |          |                |          |           |
| Smoker vs. Never smoker                                                                                                                                                                                                                                                         | 0.029367 | 0.181049       | -0.32746 | 0.386197  |
| Average units of alcohol/week                                                                                                                                                                                                                                                   | -0.00431 | 0.007149       | -0.0184  | 0.009785  |
| Use of prescribed medicine                                                                                                                                                                                                                                                      |          |                |          |           |
| Yes vs. No                                                                                                                                                                                                                                                                      | 0.251369 | 0.158668       | -0.06135 | 0.564089  |
| CI, confidence interval<br>ilr1-ilr5, iso-metric log-ratio coordinates representing the transformed physical behaviour composition<br>ilr1 represent sedentary behaviour relative to the geometric mean of the remaining behaviours in the daily physical behaviour composition |          |                |          |           |

### 5.4.3 Model validation

#### 5.4.3.1 Adults

A



B

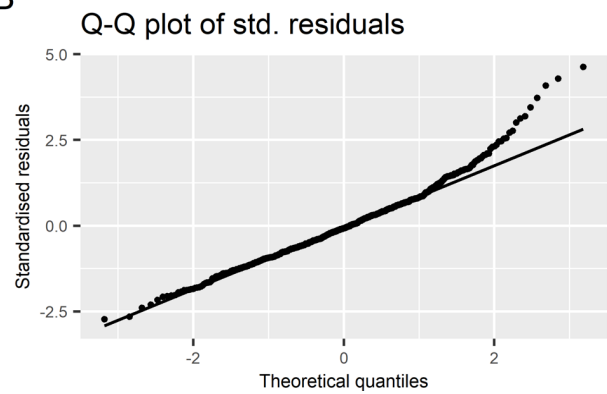
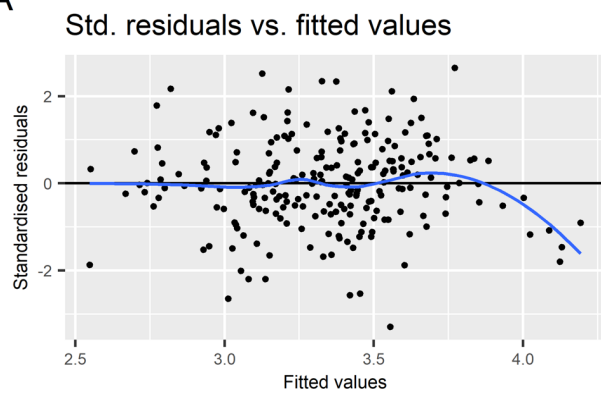


Figure 5.

#### 5.4.3.2 Older adults

A



B

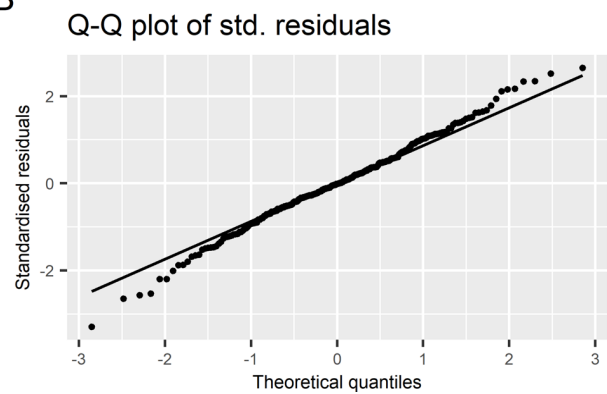


Figure 6.

## 6 Time reallocations

### 6.1 Systolic blood pressure

#### 6.1.1 Crude

**Table A6.1.1.** Estimated crude differences in systolic blood pressure given time reallocations between sedentary behaviour and walking and sedentary behaviour and high intensity physical activity among 773 adults and 280 older adults in the fifth examination of the Copenhagen City Heart Study (Denmark)

| Reallocation (min)                          | Adults<br><i>n</i> = 773<br>Estimated difference in mm Hg<br>w. 95% CI |               |               | Older adults<br><i>n</i> = 280<br>Estimated difference in mm Hg<br>w. 95% CI |               |               |
|---------------------------------------------|------------------------------------------------------------------------|---------------|---------------|------------------------------------------------------------------------------|---------------|---------------|
|                                             | Estimate                                                               | Lower         | Upper         | Estimate                                                                     | Lower         | Upper         |
| <b><i>Sedentary behaviour – walking</i></b> |                                                                        |               |               |                                                                              |               |               |
| -60 (sedentary behaviour → walking)         | -0.610                                                                 | -2.857        | 1.638         | <b>-5.473</b>                                                                | <b>-9.317</b> | <b>-1.629</b> |
| -50                                         | -0.490                                                                 | -2.429        | 1.450         | <b>-4.715</b>                                                                | <b>-8.040</b> | <b>-1.390</b> |
| -40                                         | -0.376                                                                 | -1.987        | 1.235         | <b>-3.911</b>                                                                | <b>-6.680</b> | <b>-1.141</b> |
| -30                                         | -0.269                                                                 | -1.527        | 0.989         | <b>-3.051</b>                                                                | <b>-5.222</b> | <b>-0.880</b> |
| -20                                         | -0.170                                                                 | -1.047        | 0.706         | <b>-2.124</b>                                                                | <b>-3.643</b> | <b>-0.605</b> |
| -10                                         | -0.080                                                                 | -0.540        | 0.379         | <b>-1.114</b>                                                                | <b>-1.915</b> | <b>-0.314</b> |
| 0 (reference composition)                   | 0.000                                                                  | 0.000         | 0.000         | 0.000                                                                        | 0.000         | 0.000         |
| 10                                          | 0.069                                                                  | -0.445        | 0.582         | <b>1.250</b>                                                                 | <b>0.342</b>  | <b>2.158</b>  |
| 20                                          | 0.124                                                                  | -0.973        | 1.220         | <b>2.681</b>                                                                 | <b>0.721</b>  | <b>4.642</b>  |
| 30                                          | 0.161                                                                  | -1.613        | 1.934         | <b>4.370</b>                                                                 | <b>1.153</b>  | <b>7.586</b>  |
| 40                                          | 0.174                                                                  | -2.407        | 2.754         | <b>6.446</b>                                                                 | <b>1.665</b>  | <b>11.226</b> |
| 50                                          | 0.153                                                                  | -3.432        | 3.737         | <b>9.177</b>                                                                 | <b>2.312</b>  | <b>16.042</b> |
| 60 (walking → sedentary behaviour)          | 0.075                                                                  | -4.843        | 4.994         | <b>13.256</b>                                                                | <b>3.235</b>  | <b>23.277</b> |
| <b><i>Sedentary behaviour – HIPA</i></b>    |                                                                        |               |               |                                                                              |               |               |
| -12 (sedentary behaviour → HIPA)            | <b>-1.797</b>                                                          | <b>-2.540</b> | <b>-1.054</b> | -                                                                            | -             | -             |
| -10                                         | <b>-1.557</b>                                                          | <b>-2.204</b> | <b>-0.910</b> | -                                                                            | -             | -             |
| -8                                          | <b>-1.299</b>                                                          | <b>-1.841</b> | <b>-0.757</b> | -                                                                            | -             | -             |
| -6                                          | <b>-1.020</b>                                                          | <b>-1.447</b> | <b>-0.592</b> | <b>-1.983</b>                                                                | <b>-3.346</b> | <b>-0.620</b> |
| -4                                          | <b>-0.715</b>                                                          | <b>-1.016</b> | <b>-0.414</b> | <b>-1.443</b>                                                                | <b>-2.438</b> | <b>-0.447</b> |
| -2                                          | <b>-0.378</b>                                                          | <b>-0.537</b> | <b>-0.218</b> | <b>-0.799</b>                                                                | <b>-1.353</b> | <b>-0.246</b> |
| 0 (reference composition)                   | 0.000                                                                  | 0.000         | 0.000         | 0.000                                                                        | 0.000         | 0.000         |
| 2                                           | <b>0.431</b>                                                           | <b>0.246</b>  | <b>0.615</b>  | <b>1.062</b>                                                                 | <b>0.319</b>  | <b>1.805</b>  |
| 4                                           | <b>0.933</b>                                                           | <b>0.532</b>  | <b>1.335</b>  | <b>2.667</b>                                                                 | <b>0.791</b>  | <b>4.543</b>  |
| 6                                           | <b>1.540</b>                                                           | <b>0.873</b>  | <b>2.206</b>  | <b>6.153</b>                                                                 | <b>1.789</b>  | <b>10.517</b> |
| 8                                           | <b>2.309</b>                                                           | <b>1.302</b>  | <b>3.316</b>  | -                                                                            | -             | -             |
| 10                                          | <b>3.371</b>                                                           | <b>1.889</b>  | <b>4.854</b>  | -                                                                            | -             | -             |
| 12 (HIPA → sedentary behaviour)             | <b>5.126</b>                                                           | <b>2.848</b>  | <b>7.403</b>  | -                                                                            | -             | -             |

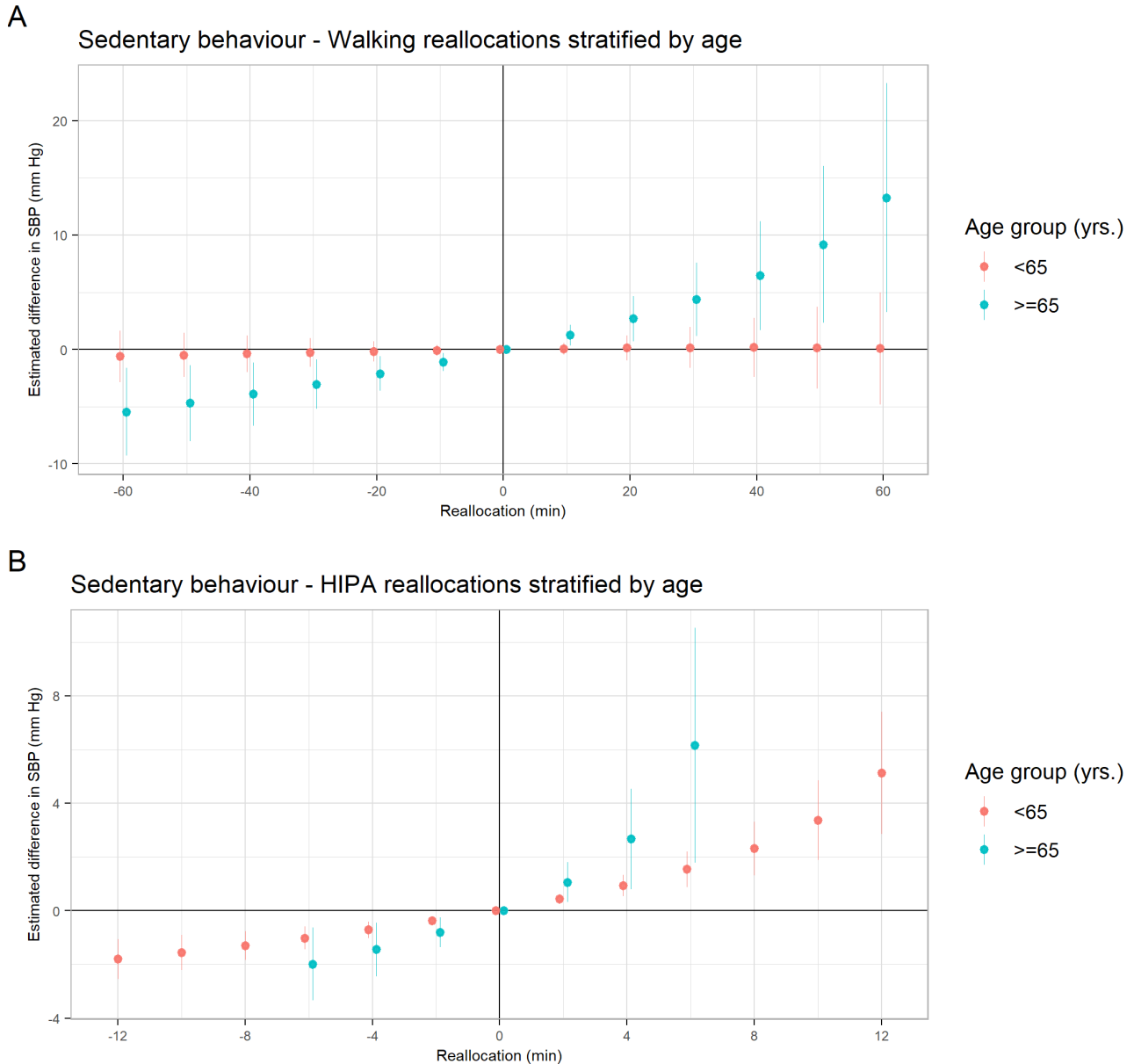
*n*, number of observations included in model

mm Hg, mm of mercury

CI, confidence interval

Reference composition corresponds to A) 579.8 min sedentary behaviour, 193.4 min standing, 71.1 min moving, 85.5 min walking, 14.2 min HIPA, and 496.1 min in bed among adults, and B) 589.1 min sedentary behaviour, 186.5 min standing, 72.9 min moving, 74.9 min walking, 6.9 min HIPA, and 509.7 min in bed among older adults (i.e., geometric mean).

HIPA, high-intensity physical activity which consists of climbing stairs (up/down), running, cycling and rowing



**Figure 7.** Illustration of estimated crude differences in systolic blood pressure (mm Hg) given the reallocation of time between **A)** sedentary behaviour and walking, and **B)** sedentary behaviour and high intensity physical activity (HIPA) among 773 adults and 280 older adults. A negative reallocated value reflect the pairwise reallocation of time from sedentary behaviour to walking or HIPA, while a positive value reflect the increase in sedentary behaviour at the cost of walking or HIPA. The origin represent the group-specific geometric mean composition. Vertical lines corresponds to the 95% confidence intervals. HIPA is high-intensity physical activity (i.e., sum of climbing stairs, running, cycling and rowing).

### 6.1.2 Adjusted

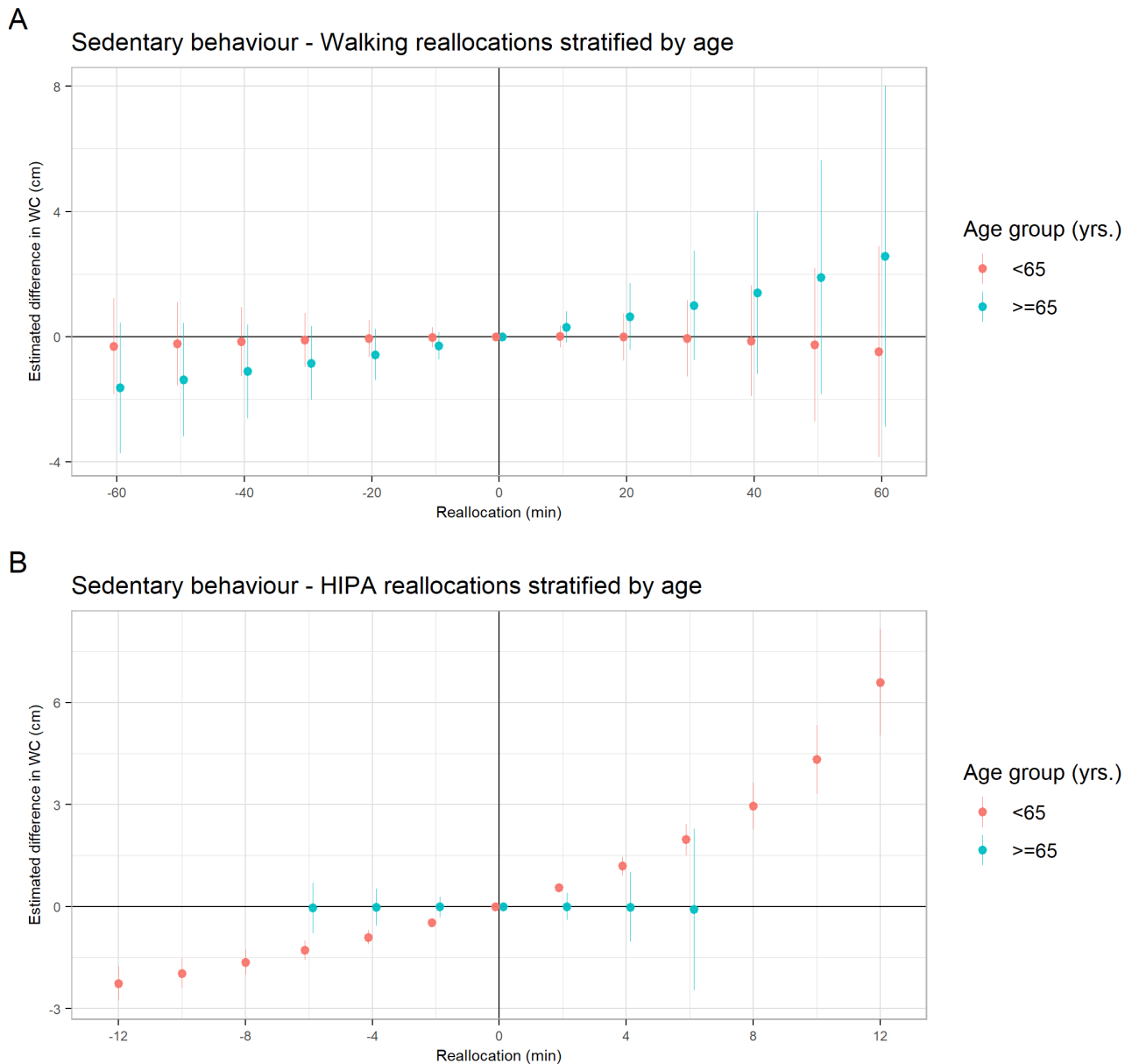
**Table A6.1.2.** Estimated adjusted differences in systolic blood pressure given time reallocations between sedentary behaviour and walking and sedentary behaviour and high intensity physical activity among 773 adults and 280 older adults in the fifth examination of the Copenhagen City Heart Study (Denmark)

| Reallocation (min)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Adults<br><i>n</i> = 682<br>Estimated difference in mm Hg<br>w. 95% CI |        |       | Older adults<br><i>n</i> = 231<br>Estimated difference in mm Hg<br>w. 95% CI |        |        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|--------|-------|------------------------------------------------------------------------------|--------|--------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Estimate                                                               | Lower  | Upper | Estimate                                                                     | Lower  | Upper  |
| <b><i>Sedentary behaviour – walking</i></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                        |        |       |                                                                              |        |        |
| -60 (sedentary behaviour → walking)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.820                                                                  | -1.261 | 2.901 | -3.509                                                                       | -7.956 | 0.939  |
| -50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.729                                                                  | -1.067 | 2.524 | -3.006                                                                       | -6.852 | 0.839  |
| -40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.623                                                                  | -0.869 | 2.114 | -2.480                                                                       | -5.682 | 0.722  |
| -30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.500                                                                  | -0.665 | 1.665 | -1.924                                                                       | -4.432 | 0.584  |
| -20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.358                                                                  | -0.453 | 1.169 | -1.332                                                                       | -3.085 | 0.422  |
| -10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.193                                                                  | -0.233 | 0.618 | -0.694                                                                       | -1.618 | 0.230  |
| 0 (reference composition)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0.000                                                                  | 0.000  | 0.000 | 0.000                                                                        | 0.000  | 0.000  |
| 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -0.227                                                                 | -0.702 | 0.248 | 0.769                                                                        | -0.278 | 1.816  |
| 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -0.498                                                                 | -1.513 | 0.517 | 1.638                                                                        | -0.620 | 3.896  |
| 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -0.826                                                                 | -2.468 | 0.815 | 2.650                                                                        | -1.052 | 6.352  |
| 40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -1.235                                                                 | -3.624 | 1.153 | 3.877                                                                        | -1.620 | 9.375  |
| 50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -1.764                                                                 | -5.083 | 1.554 | 5.470                                                                        | -2.418 | 13.358 |
| 60 (walking → sedentary behaviour)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -2.493                                                                 | -7.046 | 2.061 | 7.815                                                                        | -3.687 | 19.317 |
| <b><i>Sedentary behaviour – HIPA</i></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                        |        |       |                                                                              |        |        |
| -12 (sedentary behaviour → HIPA)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | -0.685                                                                 | -1.432 | 0.062 | -                                                                            | -      | -      |
| -10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | -0.593                                                                 | -1.242 | 0.057 | -                                                                            | -      | -      |
| -8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -0.494                                                                 | -1.038 | 0.051 | -                                                                            | -      | -      |
| -6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -0.387                                                                 | -0.817 | 0.042 | -1.062                                                                       | -2.612 | 0.487  |
| -4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -0.271                                                                 | -0.573 | 0.031 | -0.770                                                                       | -1.902 | 0.362  |
| -2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -0.143                                                                 | -0.303 | 0.017 | -0.425                                                                       | -1.054 | 0.205  |
| 0 (reference composition)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0.000                                                                  | 0.000  | 0.000 | 0.000                                                                        | 0.000  | 0.000  |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0.163                                                                  | -0.022 | 0.347 | 0.559                                                                        | -0.285 | 1.404  |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0.352                                                                  | -0.051 | 0.755 | 1.397                                                                        | -0.736 | 3.530  |
| 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0.579                                                                  | -0.089 | 1.248 | 3.197                                                                        | -1.764 | 8.158  |
| 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0.867                                                                  | -0.142 | 1.877 | -                                                                            | -      | -      |
| 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1.264                                                                  | -0.221 | 2.749 | -                                                                            | -      | -      |
| 12 (HIPA → sedentary behaviour)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1.916                                                                  | -0.364 | 4.197 | -                                                                            | -      | -      |
| <i>n</i> , number of observations included in adjusted model<br>mm Hg, mm of mercury<br>CI, confidence interval<br>Reference composition corresponds to A) 579.8 min sedentary behaviour, 193.4 min standing, 71.1 min moving, 85.5 min walking, 14.2 min HIPA, and 496.1 min in bed among adults, and B) 589.1 min sedentary behaviour, 186.5 min standing, 72.9 min moving, 74.9 min walking, 6.9 min HIPA, and 509.7 min in bed among older adults (i.e., geometric mean).<br>HIPA, high-intensity physical activity which consists of climbing stairs (up/down), running, cycling and rowing |                                                                        |        |       |                                                                              |        |        |

## 6.2 Waist circumference

### 6.2.1 Crude

| <b>Table A6.2.1.</b> Estimated crude differences in waist circumference given time reallocations between sedentary behaviour and walking and sedentary behaviour and high intensity physical activity among 773 adults and 280 older adults in the fifth examination of the Copenhagen City Heart Study (Denmark)                                                                                                                                                                                                                                                                       |                                                                     |               |               |                                                                           |        |       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|---------------|---------------|---------------------------------------------------------------------------|--------|-------|
| Reallocation (min)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Adults<br><i>n</i> = 773<br>Estimated difference in cm<br>w. 95% CI |               |               | Older adults<br><i>n</i> = 280<br>Estimated difference in cm<br>w. 95% CI |        |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Estimate                                                            | Lower         | Upper         | Estimate                                                                  | Lower  | Upper |
| <b><i>Sedentary behaviour – walking</i></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                     |               |               |                                                                           |        |       |
| -60 (sedentary behaviour → walking)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | -0.301                                                              | -1.842        | 1.239         | -1.635                                                                    | -3.724 | 0.455 |
| -50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | -0.226                                                              | -1.555        | 1.103         | -1.375                                                                    | -3.183 | 0.432 |
| -40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | -0.160                                                              | -1.264        | 0.944         | -1.113                                                                    | -2.619 | 0.393 |
| -30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | -0.103                                                              | -0.965        | 0.759         | -0.846                                                                    | -2.026 | 0.334 |
| -20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | -0.056                                                              | -0.656        | 0.544         | -0.573                                                                    | -1.399 | 0.252 |
| -10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | -0.021                                                              | -0.336        | 0.294         | -0.292                                                                    | -0.728 | 0.143 |
| 0 (reference composition)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.000                                                               | 0.000         | 0.000         | 0.000                                                                     | 0.000  | 0.000 |
| 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.004                                                               | -0.347        | 0.356         | 0.308                                                                     | -0.186 | 0.801 |
| 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | -0.012                                                              | -0.763        | 0.740         | 0.637                                                                     | -0.429 | 1.703 |
| 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | -0.054                                                              | -1.269        | 1.161         | 0.997                                                                     | -0.751 | 2.746 |
| 40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | -0.134                                                              | -1.902        | 1.635         | 1.407                                                                     | -1.192 | 4.006 |
| 50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | -0.266                                                              | -2.722        | 2.190         | 1.900                                                                     | -1.832 | 5.632 |
| 60 (walking → sedentary behaviour)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | -0.486                                                              | -3.857        | 2.884         | 2.568                                                                     | -2.879 | 8.016 |
| <b><i>Sedentary behaviour – HIPA</i></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                     |               |               |                                                                           |        |       |
| -12 (sedentary behaviour → HIPA)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>-2.263</b>                                                       | <b>-2.772</b> | <b>-1.753</b> | -                                                                         | -      | -     |
| -10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>-1.963</b>                                                       | <b>-2.406</b> | <b>-1.520</b> | -                                                                         | -      | -     |
| -8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>-1.640</b>                                                       | <b>-2.012</b> | <b>-1.269</b> | -                                                                         | -      | -     |
| -6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>-1.289</b>                                                       | <b>-1.582</b> | <b>-0.996</b> | -0.041                                                                    | -0.782 | 0.700 |
| -4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>-0.905</b>                                                       | <b>-1.111</b> | <b>-0.699</b> | -0.023                                                                    | -0.564 | 0.518 |
| -2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>-0.479</b>                                                       | <b>-0.588</b> | <b>-0.369</b> | -0.009                                                                    | -0.310 | 0.292 |
| 0 (reference composition)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.000                                                               | 0.000         | 0.000         | 0.000                                                                     | 0.000  | 0.000 |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>0.548</b>                                                        | <b>0.421</b>  | <b>0.674</b>  | 0.001                                                                     | -0.403 | 0.405 |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>1.189</b>                                                        | <b>0.914</b>  | <b>1.464</b>  | -0.015                                                                    | -1.035 | 1.005 |
| 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>1.966</b>                                                        | <b>1.509</b>  | <b>2.423</b>  | -0.089                                                                    | -2.462 | 2.283 |
| 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>2.954</b>                                                        | <b>2.264</b>  | <b>3.644</b>  | -                                                                         | -      | -     |
| 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>4.324</b>                                                        | <b>3.308</b>  | <b>5.340</b>  | -                                                                         | -      | -     |
| 12 (HIPA → sedentary behaviour)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>6.593</b>                                                        | <b>5.033</b>  | <b>8.154</b>  | -                                                                         | -      | -     |
| <i>n</i> , number of observations included in model<br>mm Hg, mm of mercury<br>CI, confidence interval<br>Reference composition corresponds to A) 579.8 min sedentary behaviour, 193.4 min standing, 71.1 min moving, 85.5 min walking, 14.2 min HIPA, and 496.1 min in bed among adults, and B) 589.1 min sedentary behaviour, 186.5 min standing, 72.9 min moving, 74.9 min walking, 6.9 min HIPA, and 509.7 min in bed among older adults (i.e., geometric mean).<br>HIPA, high-intensity physical activity which consists of climbing stairs (up/down), running, cycling and rowing |                                                                     |               |               |                                                                           |        |       |



**Figure 8.** Illustration of estimated crude differences in waist circumference (cm) given the reallocation of time between **A)** sedentary behaviour and walking, and **B)** sedentary behaviour and high intensity physical activity (HIPA) among 773 adults and 280 older adults. A negative reallocated value reflect the pairwise reallocation of time from sedentary behaviour to walking or HIPA, while a positive value reflect the increase in sedentary behaviour at the cost of walking or HIPA. The origin represent the group-specific geometric mean composition. Vertical lines corresponds to the 95% confidence intervals. HIPA is high-intensity physical activity (i.e., sum of climbing stairs, running, cycling and rowing).

## 6.2.2 Adjusted

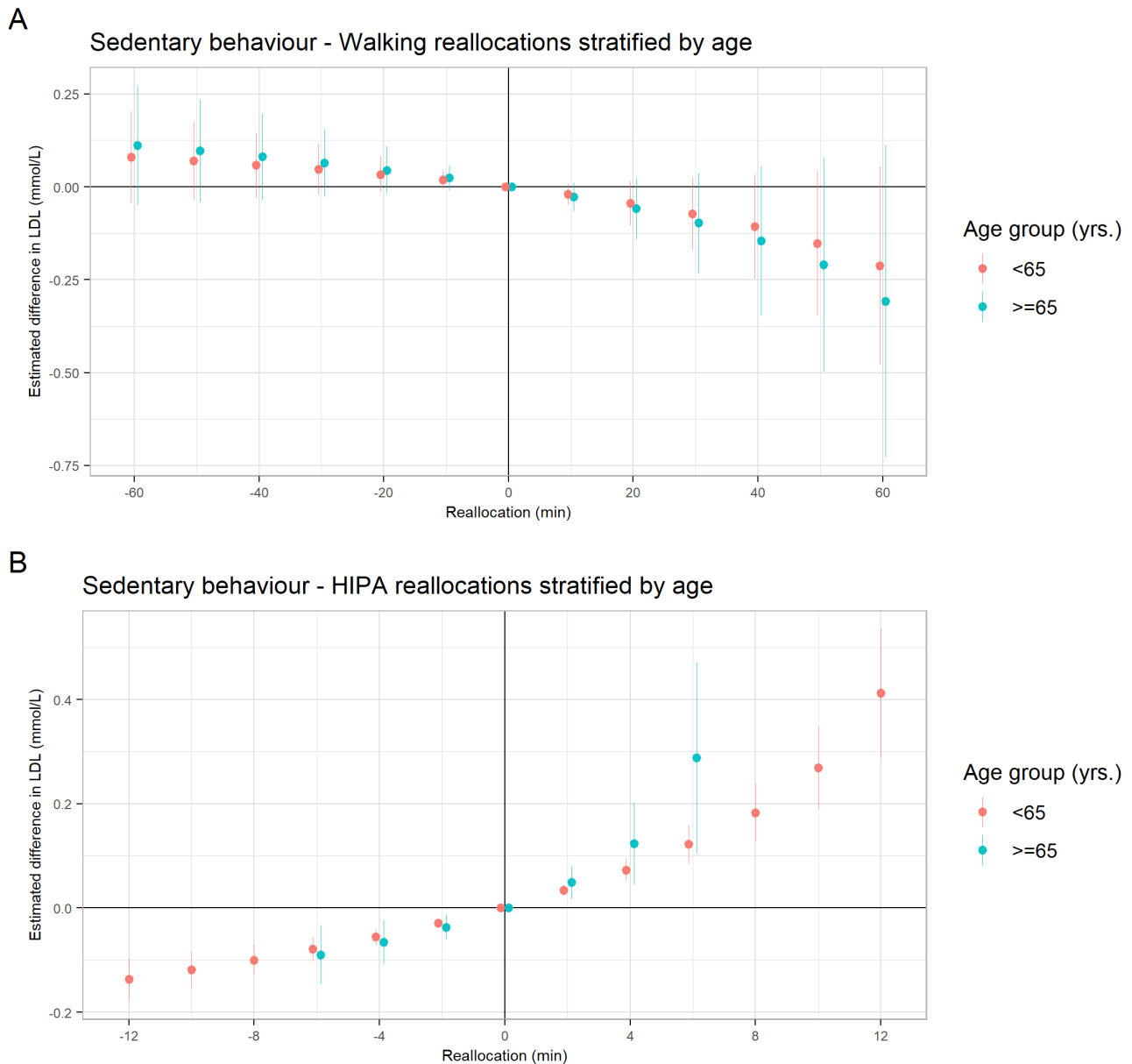
| <b>Table A6.2.2.</b> Estimated adjusted differences in waist circumference given time reallocations between sedentary behaviour and walking and sedentary behaviour and high intensity physical activity among 773 adults and 280 older adults in the fifth examination of the Copenhagen City Heart Study (Denmark)                                                                                                                                                                                                                                                                             |                                                                                                 |               |               |                                                                                                       |              |              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|---------------|---------------|-------------------------------------------------------------------------------------------------------|--------------|--------------|
| Reallocation (min)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Adults</b><br><b><i>n</i> = 682</b><br><b>Estimated difference in cm</b><br><b>w. 95% CI</b> |               |               | <b>Older adults</b><br><b><i>n</i> = 231</b><br><b>Estimated difference in cm</b><br><b>w. 95% CI</b> |              |              |
| <i><b>Sedentary behaviour – walking</b></i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Estimate</b>                                                                                 | <b>Lower</b>  | <b>Upper</b>  | <b>Estimate</b>                                                                                       | <b>Lower</b> | <b>Upper</b> |
| -60 (sedentary behaviour → walking)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1.031                                                                                           | -0.315        | 2.376         | -0.411                                                                                                | -2.626       | 1.803        |
| -50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.902                                                                                           | -0.259        | 2.062         | -0.321                                                                                                | -2.235       | 1.594        |
| -40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.759                                                                                           | -0.205        | 1.723         | -0.238                                                                                                | -1.832       | 1.356        |
| -30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.600                                                                                           | -0.152        | 1.353         | -0.163                                                                                                | -1.412       | 1.086        |
| -20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.424                                                                                           | -0.101        | 0.948         | -0.097                                                                                                | -0.970       | 0.776        |
| -10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.225                                                                                           | -0.050        | 0.500         | -0.042                                                                                                | -0.502       | 0.418        |
| 0 (reference composition)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0.000                                                                                           | 0.000         | 0.000         | 0.000                                                                                                 | 0.000        | 0.000        |
| 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -0.258                                                                                          | -0.565        | 0.049         | 0.027                                                                                                 | -0.494       | 0.548        |
| 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -0.558                                                                                          | -1.214        | 0.098         | 0.034                                                                                                 | -1.091       | 1.158        |
| 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -0.914                                                                                          | -1.975        | 0.146         | 0.014                                                                                                 | -1.830       | 1.857        |
| 40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -1.349                                                                                          | -2.893        | 0.195         | -0.046                                                                                                | -2.783       | 2.691        |
| 50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -1.900                                                                                          | -4.045        | 0.245         | -0.171                                                                                                | -4.098       | 3.757        |
| 60 (walking → sedentary behaviour)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -2.646                                                                                          | -5.589        | 0.298         | -0.427                                                                                                | -6.154       | 5.300        |
| <i><b>Sedentary behaviour – HIPA</b></i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                 |               |               |                                                                                                       |              |              |
| -12 (sedentary behaviour → HIPA)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>-1.423</b>                                                                                   | <b>-1.906</b> | <b>-0.940</b> | -                                                                                                     | -            | -            |
| -10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>-1.237</b>                                                                                   | <b>-1.657</b> | <b>-0.817</b> | -                                                                                                     | -            | -            |
| -8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>-1.036</b>                                                                                   | <b>-1.387</b> | <b>-0.684</b> | -                                                                                                     | -            | -            |
| -6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>-0.816</b>                                                                                   | <b>-1.093</b> | <b>-0.538</b> | -0.506                                                                                                | -1.277       | 0.266        |
| -4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>-0.574</b>                                                                                   | <b>-0.769</b> | <b>-0.378</b> | -0.364                                                                                                | -0.928       | 0.199        |
| -2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>-0.304</b>                                                                                   | <b>-0.408</b> | <b>-0.201</b> | -0.200                                                                                                | -0.513       | 0.114        |
| 0 (reference composition)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0.000                                                                                           | 0.000         | 0.000         | 0.000                                                                                                 | 0.000        | 0.000        |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>0.350</b>                                                                                    | <b>0.230</b>  | <b>0.469</b>  | 0.259                                                                                                 | -0.162       | 0.679        |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>0.761</b>                                                                                    | <b>0.500</b>  | <b>1.021</b>  | 0.639                                                                                                 | -0.423       | 1.702        |
| 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>1.261</b>                                                                                    | <b>0.829</b>  | <b>1.693</b>  | 1.443                                                                                                 | -1.027       | 3.913        |
| 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>1.901</b>                                                                                    | <b>1.248</b>  | <b>2.553</b>  | -                                                                                                     | -            | -            |
| 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>2.791</b>                                                                                    | <b>1.831</b>  | <b>3.751</b>  | -                                                                                                     | -            | -            |
| 12 (HIPA → sedentary behaviour)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>4.274</b>                                                                                    | <b>2.800</b>  | <b>5.748</b>  | -                                                                                                     | -            | -            |
| <i>n</i> , number of observations included in adjusted model<br>mm Hg, mm of mercury<br>CI, confidence interval<br>Reference composition corresponds to A) 579.8 min sedentary behaviour, 193.4 min standing, 71.1 min moving, 85.5 min walking, 14.2 min HIPA, and 496.1 min in bed among adults, and B) 589.1 min sedentary behaviour, 186.5 min standing, 72.9 min moving, 74.9 min walking, 6.9 min HIPA, and 509.7 min in bed among older adults (i.e., geometric mean).<br>HIPA, high-intensity physical activity which consists of climbing stairs (up/down), running, cycling and rowing |                                                                                                 |               |               |                                                                                                       |              |              |



## 6.3 Low-density lipoprotein cholesterol

### 6.3.1 Crude

| <b>Table A6.3.1.</b> Estimated crude differences in low-density lipoprotein cholesterol given time reallocations between sedentary behaviour and walking and sedentary behaviour and high intensity physical activity among 773 adults and 280 older adults in the fifth examination of the Copenhagen City Heart Study (Denmark)                                                                                                                                                                                                                                                       |                                                                         |               |               |                                                                               |               |               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|---------------|---------------|-------------------------------------------------------------------------------|---------------|---------------|
| Reallocation (min)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Adults<br><i>n</i> = 773<br>Estimated difference in mmol/L<br>w. 95% CI |               |               | Older adults<br><i>n</i> = 280<br>Estimated difference in mmol/L<br>w. 95% CI |               |               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Estimate                                                                | Lower         | Upper         | Estimate                                                                      | Lower         | Upper         |
| <b><i>Sedentary behaviour – walking</i></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                         |               |               |                                                                               |               |               |
| -60 (sedentary behaviour → walking)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.080                                                                   | -0.042        | 0.202         | 0.111                                                                         | -0.050        | 0.272         |
| -50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.070                                                                   | -0.035        | 0.175         | 0.097                                                                         | -0.042        | 0.236         |
| -40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.059                                                                   | -0.028        | 0.146         | 0.081                                                                         | -0.035        | 0.197         |
| -30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.047                                                                   | -0.021        | 0.115         | 0.064                                                                         | -0.027        | 0.155         |
| -20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.033                                                                   | -0.014        | 0.081         | 0.045                                                                         | -0.019        | 0.108         |
| -10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.018                                                                   | -0.007        | 0.043         | 0.024                                                                         | -0.010        | 0.057         |
| 0 (reference composition)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.000                                                                   | 0.000         | 0.000         | 0.000                                                                         | 0.000         | 0.000         |
| 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | -0.020                                                                  | -0.048        | 0.007         | -0.027                                                                        | -0.065        | 0.011         |
| 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | -0.044                                                                  | -0.104        | 0.015         | -0.059                                                                        | -0.141        | 0.023         |
| 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | -0.073                                                                  | -0.169        | 0.024         | -0.097                                                                        | -0.232        | 0.037         |
| 40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | -0.107                                                                  | -0.247        | 0.033         | -0.145                                                                        | -0.346        | 0.055         |
| 50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | -0.152                                                                  | -0.346        | 0.043         | -0.210                                                                        | -0.497        | 0.078         |
| 60 (walking → sedentary behaviour)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | -0.212                                                                  | -0.478        | 0.055         | -0.308                                                                        | -0.728        | 0.112         |
| <b><i>Sedentary behaviour – HIPA</i></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                         |               |               |                                                                               |               |               |
| -12 (sedentary behaviour → HIPA)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>-0.137</b>                                                           | <b>-0.178</b> | <b>-0.097</b> | -                                                                             | -             | -             |
| -10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>-0.119</b>                                                           | <b>-0.154</b> | <b>-0.084</b> | -                                                                             | -             | -             |
| -8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>-0.100</b>                                                           | <b>-0.129</b> | <b>-0.071</b> | -                                                                             | -             | -             |
| -6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>-0.079</b>                                                           | <b>-0.102</b> | <b>-0.056</b> | <b>-0.090</b>                                                                 | <b>-0.147</b> | <b>-0.033</b> |
| -4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>-0.055</b>                                                           | <b>-0.072</b> | <b>-0.039</b> | <b>-0.066</b>                                                                 | <b>-0.107</b> | <b>-0.024</b> |
| -2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>-0.029</b>                                                           | <b>-0.038</b> | <b>-0.021</b> | <b>-0.037</b>                                                                 | <b>-0.060</b> | <b>-0.013</b> |
| 0 (reference composition)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.000                                                                   | 0.000         | 0.000         | 0.000                                                                         | 0.000         | 0.000         |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>0.034</b>                                                            | <b>0.024</b>  | <b>0.044</b>  | <b>0.049</b>                                                                  | <b>0.018</b>  | <b>0.080</b>  |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>0.073</b>                                                            | <b>0.052</b>  | <b>0.095</b>  | <b>0.124</b>                                                                  | <b>0.045</b>  | <b>0.202</b>  |
| 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>0.122</b>                                                            | <b>0.085</b>  | <b>0.158</b>  | <b>0.288</b>                                                                  | <b>0.105</b>  | <b>0.471</b>  |
| 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>0.183</b>                                                            | <b>0.129</b>  | <b>0.238</b>  | -                                                                             | -             | -             |
| 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>0.269</b>                                                            | <b>0.189</b>  | <b>0.349</b>  | -                                                                             | -             | -             |
| 12 (HIPA → sedentary behaviour)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>0.412</b>                                                            | <b>0.288</b>  | <b>0.535</b>  | -                                                                             | -             | -             |
| <i>n</i> , number of observations included in model<br>mm Hg, mm of mercury<br>CI, confidence interval<br>Reference composition corresponds to A) 579.8 min sedentary behaviour, 193.4 min standing, 71.1 min moving, 85.5 min walking, 14.2 min HIPA, and 496.1 min in bed among adults, and B) 589.1 min sedentary behaviour, 186.5 min standing, 72.9 min moving, 74.9 min walking, 6.9 min HIPA, and 509.7 min in bed among older adults (i.e., geometric mean).<br>HIPA, high-intensity physical activity which consists of climbing stairs (up/down), running, cycling and rowing |                                                                         |               |               |                                                                               |               |               |



**Figure 9.** Illustration of estimated crude differences in low-density lipoprotein cholesterol (mmol/L) given the reallocation of time between **A)** sedentary behaviour and walking, and **B)** sedentary behaviour and high intensity physical activity (HIPA) among 773 adults and 280 older adults. A negative reallocated value reflect the pairwise reallocation of time from sedentary behaviour to walking or HIPA, while a positive value reflect the increase in sedentary behaviour at the cost of walking or HIPA. The origin represent the group-specific geometric mean composition. Vertical lines corresponds to the 95% confidence intervals. HIPA is high-intensity physical activity (i.e., sum of climbing stairs, running, cycling and rowing).

### 6.3.2 Adjusted

| <b>Table A6.3.2.</b> Estimated adjusted differences in low-density lipoprotein cholesterol given time reallocations between sedentary behaviour and walking and sedentary behaviour and high intensity physical activity among 773 adults and 280 older adults in the fifth examination of the Copenhagen City Heart Study (Denmark)                                                                                                                                                                                                                                                             |                                                                                                     |               |               |                                                                                                           |               |               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|---------------|---------------|-----------------------------------------------------------------------------------------------------------|---------------|---------------|
| Reallocation (min)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Adults</b><br><b><i>n</i> = 682</b><br><b>Estimated difference in mmol/L</b><br><b>w. 95% CI</b> |               |               | <b>Older adults</b><br><b><i>n</i> = 231</b><br><b>Estimated difference in mmol/L</b><br><b>w. 95% CI</b> |               |               |
| <i><b>Sedentary behaviour – walking</b></i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Estimate</b>                                                                                     | <b>Lower</b>  | <b>Upper</b>  | <b>Estimate</b>                                                                                           | <b>Lower</b>  | <b>Upper</b>  |
| -60 (sedentary behaviour → walking)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>0.140</b>                                                                                        | <b>0.019</b>  | <b>0.262</b>  | 0.085                                                                                                     | -0.108        | 0.277         |
| -50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>0.122</b>                                                                                        | <b>0.017</b>  | <b>0.227</b>  | 0.074                                                                                                     | -0.093        | 0.240         |
| -40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>0.101</b>                                                                                        | <b>0.014</b>  | <b>0.189</b>  | 0.062                                                                                                     | -0.077        | 0.200         |
| -30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>0.080</b>                                                                                        | <b>0.011</b>  | <b>0.148</b>  | 0.049                                                                                                     | -0.060        | 0.157         |
| -20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>0.056</b>                                                                                        | <b>0.008</b>  | <b>0.103</b>  | 0.034                                                                                                     | -0.042        | 0.110         |
| -10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>0.029</b>                                                                                        | <b>0.004</b>  | <b>0.054</b>  | 0.018                                                                                                     | -0.022        | 0.058         |
| 0 (reference composition)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0.000                                                                                               | 0.000         | 0.000         | 0.000                                                                                                     | 0.000         | 0.000         |
| 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>-0.033</b>                                                                                       | <b>-0.061</b> | <b>-0.005</b> | -0.021                                                                                                    | -0.066        | 0.024         |
| 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>-0.071</b>                                                                                       | <b>-0.130</b> | <b>-0.011</b> | -0.045                                                                                                    | -0.143        | 0.052         |
| 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>-0.115</b>                                                                                       | <b>-0.210</b> | <b>-0.019</b> | -0.075                                                                                                    | -0.235        | 0.085         |
| 40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>-0.167</b>                                                                                       | <b>-0.307</b> | <b>-0.028</b> | -0.112                                                                                                    | -0.350        | 0.126         |
| 50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>-0.233</b>                                                                                       | <b>-0.427</b> | <b>-0.039</b> | -0.162                                                                                                    | -0.504        | 0.179         |
| 60 (walking → sedentary behaviour)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>-0.321</b>                                                                                       | <b>-0.587</b> | <b>-0.055</b> | -0.239                                                                                                    | -0.737        | 0.259         |
| <i><b>Sedentary behaviour – HIPA</b></i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                     |               |               |                                                                                                           |               |               |
| -12 (sedentary behaviour → HIPA)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>-0.068</b>                                                                                       | <b>-0.111</b> | <b>-0.024</b> | -                                                                                                         | -             | -             |
| -10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>-0.059</b>                                                                                       | <b>-0.097</b> | <b>-0.021</b> | -                                                                                                         | -             | -             |
| -8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>-0.049</b>                                                                                       | <b>-0.081</b> | <b>-0.018</b> | -                                                                                                         | -             | -             |
| -6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>-0.039</b>                                                                                       | <b>-0.064</b> | <b>-0.014</b> | <b>-0.115</b>                                                                                             | <b>-0.182</b> | <b>-0.048</b> |
| -4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>-0.027</b>                                                                                       | <b>-0.045</b> | <b>-0.010</b> | <b>-0.084</b>                                                                                             | <b>-0.133</b> | <b>-0.035</b> |
| -2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>-0.015</b>                                                                                       | <b>-0.024</b> | <b>-0.005</b> | <b>-0.047</b>                                                                                             | <b>-0.074</b> | <b>-0.019</b> |
| 0 (reference composition)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0.000                                                                                               | 0.000         | 0.000         | 0.000                                                                                                     | 0.000         | 0.000         |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>0.017</b>                                                                                        | <b>0.006</b>  | <b>0.028</b>  | <b>0.063</b>                                                                                              | <b>0.026</b>  | <b>0.099</b>  |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>0.037</b>                                                                                        | <b>0.013</b>  | <b>0.060</b>  | <b>0.158</b>                                                                                              | <b>0.066</b>  | <b>0.250</b>  |
| 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>0.061</b>                                                                                        | <b>0.022</b>  | <b>0.100</b>  | <b>0.367</b>                                                                                              | <b>0.153</b>  | <b>0.582</b>  |
| 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>0.092</b>                                                                                        | <b>0.033</b>  | <b>0.151</b>  | -                                                                                                         | -             | -             |
| 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>0.135</b>                                                                                        | <b>0.048</b>  | <b>0.222</b>  | -                                                                                                         | -             | -             |
| 12 (HIPA → sedentary behaviour)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>0.207</b>                                                                                        | <b>0.074</b>  | <b>0.340</b>  | -                                                                                                         | -             | -             |
| <i>n</i> , number of observations included in adjusted model<br>mm Hg, mm of mercury<br>CI, confidence interval<br>Reference composition corresponds to A) 579.8 min sedentary behaviour, 193.4 min standing, 71.1 min moving, 85.5 min walking, 14.2 min HIPA, and 496.1 min in bed among adults, and B) 589.1 min sedentary behaviour, 186.5 min standing, 72.9 min moving, 74.9 min walking, 6.9 min HIPA, and 509.7 min in bed among older adults (i.e., geometric mean).<br>HIPA, high-intensity physical activity which consists of climbing stairs (up/down), running, cycling and rowing |                                                                                                     |               |               |                                                                                                           |               |               |