Supplemental Figure 1. Flow chart



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| --- | --- | --- | --- | --- | --- | --- |
| Supplemental Table 1. Questions on leisure-time physical activity: |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| How often do participate in physical activity/ exercise during your leisure-time? |
|  |
|  | once a month or less often  | 2-3 times a month | once a week | 2-3 times a week | 4-6 times a week | daily |  |
|  |
| a) Light physical activity (no sweating or breathlessness) | 1 | 2 | 3 | 4 | 5 | 6 |  |
| b) Brisk physical activity (at least some sweating and breathlessness) | 1 | 2 | 3 | 4 | 5 | 6 |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| How long do you participate in physical activity/ exercise at a time? |  |
|  |
|  | not at all | less than 20 minutes | 20-39 minutes | 40-59 minutes | 1-1.5 hours | more than 1.5 hours |  |
|  |
| a) Light physical activity (no sweating or breathlessness) | 1 | 2 | 3 | 4 | 5 | 6 |  |
| b) Brisk physical activity (at least some sweating and breathlessness) | 1 | 2 | 3 | 4 | 5 | 6 |  |

Supplemental Table 2. The individual level productivity costs in Euros based longitudinal self-reported leisure-time MVPA between ages 31 and 46.

|  |  |  |
| --- | --- | --- |
|  | HCA with poor perceived health in 1997 and 2012, years 2012–2020 | HCA with low level of education, years 2012–2020 |
|  | N | PC | N | PC |
| **Panel A: Pooled**  |  |  |  |
| Stable active  | 29 | 18600 | 425 | 6100 |
| Stable inactive  | 757 | 16400 | 2259 | 10700 |
| Increasingly active | 90 | 19000 | 662 | 7600 |
| Decreasingly active  | 81 | 7000 | 476 | 7300 |
| **Panel B: Males**  |  |  |  |  |
| Stable active  | 18 | 21100 | 214 | 4600 |
| Stable inactive  | 344 | 17100 | 1003 | 10900 |
| Increasingly active  | 33 | 12800 | 261 | 6700 |
| Decreasingly active | 47 | 4300 | 242 | 5500 |
| **Panel C: Females**  |  |  |  |
| Stable active  | 11 | 14600 | 211 | 7700 |
| Stable inactive  | 413 | 15800 | 1256 | 10600 |
| Increasingly active | 57 | 22700 | 401 | 8200 |
| Decreasingly active  | 34 | 10800 | 234 | 9100 |

*Notes:* Physical activity groups between ages 31 and 46 years were formulated accordingly: 1) *stable inactive* if MVPA<150 min/week at both ages; 2) *decreasingly active* if MVPA≥150 min/week at age 31 but <150 min/week at age 46; 3) *increasingly active* if MVPA≤150 min/week at age 31 but >150 min at age 46; and 4) *stable active* if MVPA ≥150 min/week at both ages.

Supplemental Table 3. The individual level productivity costs in Euros based on accelerometer-measured overall MVPA at age 46.

|  |  |  |
| --- | --- | --- |
|  | HCA with poor perceived health, years 2012–2020 | HCA with low level of education, years 2012–2020 |
|  | N | PC | N | PC |
| **Panel A: Pooled**  |  |  |  |
| Low level of MVPA  | 584 | 17600 | 1008 | 11800 |
| Medium level of MVPA | 409 | 13700 | 925 | 8700 |
| High level of MVPA | 319 | 12600 | 949 | 6400 |
| **Panel B: Males**  |  |  |  |  |
| Low level of MVPA  | 226 | 21300 | 347 | 13700 |
| Medium level of MVPA | 186 | 15700 | 401 | 10000 |
| High level of MVPA | 166 | 7100 | 491 | 5200 |
| **Panel C: Females**  |  |  |  |
| Low level of MVPA  | 358 | 15300 | 661 | 10800 |
| Medium level of MVPA | 223 | 12000 | 524 | 7700 |
| High level of MVPA | 153 | 18600 | 458 | 7600 |

*Notes:* Participants were divided into tertiles according to their accelerometer-measured overall MVPA-time: *Low level of MVPA, Medium level of MVPA, and High level of MVP*