APPENDICES to manuscript:

**Alcohol consumption in later life and reaching longevity: the Netherlands Cohort Study**

**Appendix Figure 1.** Flow diagram on analyses of alcohol intake and longevity in birth cohorts 1916-17, Netherlands Cohort Study (1986-2007).

**Appendix Methods**: Question text and response format, and categorization of question on stability of alcohol drinking.

**Appendix Table 1**. Baseline characteristics of the cohort members by survival (90+ years) status in birth cohorts 1916-17; Netherlands Cohort Study (1986-2007).

**Appendix Table 2**. Baseline characteristics (means or percent) according to alcohol consumption level in men and women with complete dietary and covariable data, NLCS 1916-1917 birth cohorts.

**Appendix Table 3.** Baseline characteristics (means or percent) and survival for excluded subjects due to missings on alcohol or covariables in men and women, NLCS 1916-1917 birth cohort.

**Appendix Table 4**. Age- and multivariable-adjusted RRs for reaching longevity according to alcohol drinking characteristics in drinkers, birth cohorts 1916-17; Netherlands Cohort Study (1986-2007)

**Appendix Table 5.** Multivariable-adjusteda RRs for reaching longevity according to alcohol intake in men and women, by strata of smoking and other factors, NLCS

**Appendix Figure 1.** Flow diagram on analyses of alcohol intake and longevity in birth cohorts 1916-17, Netherlands Cohort Study (1986-2007).

Netherlands Cohort Study on diet and cancer (n=120,852)

Born in 1916 or 1917  
(n=7,814)

Women (n=4,161)

Persons lost to follow-up

n=7

Men (n=3,646)

Survived to 90 years (n=565)

Died before 90 years (n= 3,081)

Survived to 90 years (n=1,394)

Died before 90 years (n=2,767)

Exclusion of participants with missing data on alcohol intake (n=664)

Survived to 90 years (n=547)

Died before 90 years (n= 2,936)

Survived to 90 years (n=1,253)

Died before 90 years (n=2,407)

Exclusion of participants with missing data on confounding variables (n=1,664)

Survived to 90 years (n=433)

Died before 90 years (n=2,158)

Survived to 90 years (n=994)

Died before 90 years (n=1,894)

**Appendix Methods**: Question text and response format, and categorization of question on stability of alcohol drinking.

Five years ago, did you use more, less or the same amount of the following products as you do nowadays?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 5 years ago **more** than today | 5 years ago **less** than today | 5 years ago **as much** as today | I **never** use this |
| Beer | O | O | O | O |
| Other alcoholic beverages | O | O | O | O |

Categorization:

Stable: participants who reported drinking the same amount of alcoholic beverages at baseline and five years before baseline, including those who reported to be abstainers on both occasions.

Moderated: participants who reported drinking less alcoholic beverages at baseline than five years before baseline

Increased: participants who reported drinking more alcoholic beverages at baseline than five years before baseline

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Appendix Table 1**. Baseline characteristics of the cohort members by survival (90+ years) status in birth cohorts 1916-17; Netherlands Cohort Study (1986-2007). | | | | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  | Men |  |  |  |  |  | Women |  |  |  |  |
|  | Died before 90 | |  | Survived to age 90 | |  | Died before 90 | |  | Survived to age 90 | |
|  | N | % |  | N | % |  | N | % |  | N | % |
|  |  |  |  |  |  |  |  |  |  |  |  |
| N | 2158 |  |  | 433 |  |  | 1894 |  |  | 994 |  |
| **ALL (including non-drinkers)** |  |  |  |  |  |  |  |  |  |  |  |
| Alcohol intake categories |  |  |  |  |  |  |  |  |  |  |  |
| Ex, 0 g/d | 34 | 1.6 |  | 6 | 1.4 |  | 27 | 1.4 |  | 5 | 0.5 |
| 0 g/day (abstainer) | 337 | 15.6 |  | 46 | 10.6 |  | 709 | 37.4 |  | 299 | 30.1 |
| 0.1-<5 | 512 | 23.7 |  | 106 | 24.5 |  | 691 | 36.5 |  | 401 | 40.3 |
| 5-<10 | 260 | 12.0 |  | 75 | 17.3 |  | 156 | 8.2 |  | 106 | 10.7 |
| 10-<15 | 280 | 13.0 |  | 52 | 12.0 |  | 109 | 5.8 |  | 79 | 7.9 |
| 15-<30 | 443 | 20.5 |  | 84 | 19.4 |  | 133 | 7.0 |  | 82 | 8.2 |
| 30+ | 292 | 13.5 |  | 64 | 14.8 |  | 69 | 3.6 |  | 22 | 2.2 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **Alcohol consumers** | Mean (SD) |  |  | Mean (SD) |  |  | Mean (SD) |  |  | Mean (SD) |  |
| Alcohol (g/day); mean (SD) | 16.5 (15.8) |  |  | 15.9 (14.9) |  |  | 8.0 (10.5) |  |  | 7.2 (9.0) |  |
| Beer (glasses/week); mean (SD) | 2.2 (4.6) |  |  | 2.0 (4.3) |  |  | 0.1 (0.8) |  |  | 0.1 (0.8) |  |
| Wine incl sherry, liqueur (glasses/week); mean (SD) | 2.9 (5.6) |  |  | 3.3 (5.4) |  |  | 4.0 (5.6) |  |  | 4.2 (5.1) |  |
| Liquor (glasses/week); mean (SD) | 5.2 (6.7) |  |  | 4.7 (6.2) |  |  | 1.0 (3.0) |  |  | 0.5 (2.0) |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  | N | % |  | N | % |  | N | % |  | N | % |
| Change in alcohol consumption in last 5 years |  |  |  |  |  |  |  |  |  |  |  |
| Stable | 1060 | 68.4 |  | 260 | 76.9 |  | 636 | 77.1 |  | 393 | 76.2 |
| Moderated | 302 | 19.5 |  | 48 | 14.2 |  | 115 | 13.9 |  | 66 | 12.8 |
| Increased | 187 | 12.1 |  | 30 | 8.9 |  | 74 | 9.0 |  | 57 | 11.0 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Type of alcoholic beverage |  |  |  |  |  |  |  |  |  |  |  |
| Only beer | 90 | 5.1 |  | 14 | 3.7 |  | 13 | 1.1 |  | 5 | 0.7 |
| Only wine | 269 | 15.1 |  | 58 | 15.3 |  | 851 | 73.9 |  | 536 | 78.1 |
| Only liquor | 288 | 16.2 |  | 54 | 14.2 |  | 47 | 4.1 |  | 15 | 2.2 |
| Beer and wine | 156 | 8.8 |  | 37 | 9.8 |  | 63 | 5.5 |  | 45 | 6.6 |
| Wine and liquor | 272 | 15.3 |  | 63 | 16.6 |  | 134 | 11.6 |  | 66 | 9.6 |
| Beer and liquor | 274 | 15.4 |  | 44 | 11.6 |  | 9 | 0.8 |  | 2 | 0.3 |
| Beer, wine and liquor | 433 | 24.3 |  | 109 | 28.8 |  | 34 | 3.0 |  | 17 | 2.5 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Pattern of alcohol drinking |  |  |  |  |  |  |  |  |  |  |  |
| Only at parties | 301 | 18.4 |  | 64 | 18.2 |  | 320 | 32.8 |  | 179 | 30.3 |
| Weekend and parties | 501 | 30.6 |  | 124 | 35.2 |  | 334 | 34.2 |  | 224 | 37.9 |
| Throughout the week | 836 | 51.0 |  | 164 | 46.6 |  | 322 | 33.0 |  | 188 | 31.8 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Frequency of 7+ drinks/occasion in last 6 months |  |  |  |  |  |  |  |  |  |  |  |
| 0 times/ last 6 months | 1127 | 81.5 |  | 260 | 85.8 |  | 749 | 93.9 |  | 437 | 96.0 |
| 1-<2 times | 52 | 3.8 |  | 13 | 4.3 |  | 19 | 2.4 |  | 7 | 1.5 |
| 2-<3 times | 45 | 3.3 |  | 8 | 2.6 |  | 10 | 1.3 |  | 2 | 0.4 |
| 3-<5 times | 59 | 4.3 |  | 6 | 2.0 |  | 8 | 1.0 |  | 4 | 0.9 |
| 5 times or more | 100 | 7.2 |  | 16 | 5.3 |  | 12 | 1.5 |  | 5 | 1.1 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Binge drinking (7+ drinks/occasion) in last 6 months | |  |  |  |  |  |  |  |  |  |  |
| No | 1127 | 81.5 |  | 260 | 85.8 |  | 749 | 93.9 |  | 437 | 96.0 |
| Yes | 256 | 18.5 |  | 43 | 14.2 |  | 49 | 6.1 |  | 18 | 4.0 |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Appendix Table 2**. Baseline characteristics (means or percent) according to alcohol consumption level in men and women with complete dietary and covariable data, NLCS 1916-1917 birth cohorts. | | | | | | | | |
|  |  |  |  |  |  |  |  |  |
| Characteristic | Alcohol consumption (g/day) | |  |  |  |  |  |  |
|  | 0 | 0.1-<5 | 5-<10 | 10-<15 | 15-<30 | 30+ | *Ex, 0 g/d* |  |
| **Men** |  |  |  |  |  |  |  |  |
| N | 383 | 618 | 335 | 332 | 527 | 356 | *40* |  |
| Median alcohol intake(g/day) | 0 | 2.1 | 7.4 | 12.1 | 22.4 | 40.6 | *0* |  |
| BMI (kg/m2); mean | 24.4 | 24.8 | 24.7 | 25.1 | 25.0 | 25.2 | *24.4* |  |
| Height (cm), mean | 174.7 | 174.9 | 175.0 | 174.9 | 175.0 | 175.6 | *175.1* |  |
| Physical activity, nonocc. (min/day); mean | 73.0 | 77.5 | 71.2 | 74.9 | 75.6 | 71.5 | *74.0* |  |
| Energy intake (kcal/day); mean | 1969 | 1968 | 2013 | 2095 | 2083 | 2180 | *1985* |  |
| Never smoker (%) | 20.9 | 13.1 | 11.0 | 6.9 | 4.7 | 2.0 | *7.5* |  |
| University or higher vocational education (%) | 13.1 | 14.6 | 17.3 | 17.5 | 18.2 | 29.8 | *7.5* |  |
| History of (selected) diseasesa (% yes) | 47.8 | 41.6 | 42.1 | 49.4 | 45.0 | 38.5 | *57.5* |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| **Women** |  |  |  |  |  |  |  |  |
| N | 1008 | 1092 | 262 | 188 | 215 | 91 | *32* |  |
| Median alcohol intake(g/day) | 0 | 1.4 | 7.2 | 12.1 | 20.7 | 35.6 | *0* |  |
| BMI (kg/m2); mean | 25.2 | 25.2 | 25.0 | 24.4 | 24.6 | 24.1 | *25.5* |  |
| Height (cm), mean | 164.0 | 164.1 | 164.4 | 164.3 | 164.4 | 163.1 | *165.1* |  |
| Physical activity, nonocc. (min/day); mean | 52.1 | 57.4 | 57.0 | 58.6 | 57.8 | 59.8 | *56.3* |  |
| Energy intake (kcal/day); mean | 1615 | 1643 | 1700 | 1723 | 1693 | 1722 | *1672* |  |
| Never smoker (%) | 82.1 | 74.9 | 64.1 | 51.1 | 41.9 | 23.1 | *59.4* |  |
| University or higher vocational education (%) | 5.6 | 7.2 | 13.4 | 12.2 | 13.5 | 12.1 | *15.6* |  |
| History of (selected) diseasesa (% yes) | 52.7 | 47.1 | 45.4 | 39.9 | 40.5 | 44.0 | *56.3* |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| a Physician-diagnosed myocardial infarction, angina pectoris, stroke, cancer (excluding skin cancer), diabetes or hypertension. | | | | | |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Appendix Table 3**. Baseline characteristics (means or percent) and survival for excluded subjects due to missings on alcohol or covariables in men and women, NLCS 1916-1917 birth cohort. | | | | | |
|  |  |  |  |  |  |
| Characteristic | Excluded: Missing alcohol intake | Excluded: Missing covariables | Included: No missings |  |  |
|  |  |  |  |  |  |
| **Men** |  |  |  |  |  |
| N | 163 | 892 | 2591 |  |  |
| Median alcohol intake(g/day) | - | 12.2 | 13.7 |  |  |
| BMI (kg/m2); mean | 24.9 | - | 24.8 |  |  |
| Height (cm), mean | 172.9 | - | 175.0 |  |  |
| Physical activity, nonocc. (min/day); mean | 69.3 | - | 74.4 |  |  |
| Energy intake (kcal/day); mean | 1828 | - | 2042 |  |  |
| Never smoker (%) | 15.3 | - | 9.9 |  |  |
| University or higher vocational education (%) | 6.1 | - | 17.8 |  |  |
| History of (selected) diseasesa (% yes) | 40.5 | - | 44.1 |  |  |
| Survived to age 90 (%) | 11.0 | 12.8 | 16.7 |  |  |
|  |  |  |  |  |  |
| **Women** |  |  |  |  |  |
| N | 501 | 772 | 2888 |  |  |
| Median alcohol intake(g/day) | - | 4.5 | 4.9 |  |  |
| BMI (kg/m2); mean | 25.3 | - | 25.1 |  |  |
| Height (cm), mean | 163.9 | - | 164.1 |  |  |
| Physical activity, nonocc. (min/day); mean | 44.0 | - | 55.7 |  |  |
| Energy intake (kcal/day); mean | 1549 | - | 1650 |  |  |
| Never smoker (%) | 83.7 | - | 70.6 |  |  |
| University or higher vocational education (%) | 0.2 | - | 8.2 |  |  |
| History of (selected) diseasesa (% yes) | 52.7 | - | 47.9 |  |  |
| Survived to age 90 (%) | 28.1 | 33.6 | 34.4 |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| a Physician-diagnosed myocardial infarction, angina pectoris, stroke, cancer (excluding skin cancer), diabetes or hypertension. | | | | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Appendix Table 4.** Age- and multivariable-adjusted RRs for reaching longevity according to alcohol drinking characteristics in drinkers, birth cohorts 1916-17; Netherlands Cohort Study (1986-2007) | | | | | | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Drinking characteristic | Men |  |  |  |  |  |  |  | Women |  |  |  |  | |  |  |
|  | Median | N | 90+ | RRa | (95% CI) | RRb | (95% CI) |  | Median | N | 90+ | RRa | (95% CI) | | RRb | (95% CI) |
|  | (gl/wk) |  |  |  |  |  |  |  | (gl/wk) |  |  |  |  | |  |  |
| Pattern of alcohol drinking |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Only at parties | 1.4 | 365 | 64 | 1 | (reference) | 1 | (reference) |  | 0.9 | 499 | 179 | 1 | (reference) | | 1 | (reference) |
| Weekend and parties | 4.5 | 625 | 124 | 1.14 | (0.87 - 1.50) | 1.18 | (0.90 - 1.55) |  | 2.2 | 558 | 224 | 1.12 | (0.96 - 1.30) | | 1.10 | (0.95 - 1.28) |
| Throughout the week | 14.0 | 1000 | 164 | 0.94 | (0.73 - 1.23) | 0.97 | (0.71 - 1.32) |  | 10.7 | 510 | 188 | 1.03 | (0.87 - 1.21) | | 1.10 | (0.89 - 1.36) |
| P for trend |  |  |  | 0.360 |  | 0.736 |  |  |  |  |  | 0.759 |  | | 0.277 |  |
| P for interaction with alcohol |  |  |  |  |  | 0.979 |  |  |  |  |  |  |  | | 0.105 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Binge drinking in last 6 months |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| No | 6.5 | 1387 | 260 | 1 | (reference) | 1 | (reference) |  | 2.4 | 1186 | 437 | 1 | (reference) | | 1 | (reference) |
| Yes | 14.2 | 299 | 43 | 0.76 | (0.57 - 1.03) | 0.91 | (0.66 - 1.26) |  | 7.5 | 67 | 18 | 0.74 | (0.49 - 1.10) | | 0.80 | (0.53 - 1.20) |
| P for interaction with alcohol |  |  |  |  |  | 0.080 |  |  |  |  |  |  |  | | 0.404 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| How often 7+ drinks/occasion in last 6 months | |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| 0 times/ last 6 months | 6.5 | 1387 | 260 | 1 | (reference) | 1 | (reference) |  | 2.4 | 1186 | 437 | 1 | (reference) | | 1 | (reference) |
| 1-<2 times | 11.9 | 65 | 13 | 1.06 | (0.65 - 1.75) | 1.22 | (0.76 - 1.96) |  | 2.2 | 26 | 7 | 0.73 | (0.39 - 1.39) | | 0.69 | (0.37 - 1.31) |
| 2-<3 times | 13.0 | 53 | 8 | 0.80 | (0.42 - 1.53) | 0.97 | (0.51 - 1.84) |  | 8.2 | 12 | 2 | 0.46 | (0.13 - 1.64) | | 0.61 | (0.19 - 1.96) |
| 3-<5 times | 13.5 | 65 | 6 | 0.49 | (0.23 - 1.06) | 0.58 | (0.27 - 1.24) |  | 8.8 | 12 | 4 | 0.92 | (0.41 - 2.06) | | 1.04 | (0.45 - 2.38) |
| 5 times or more | 21.0 | 116 | 16 | 0.73 | (0.46 - 1.17) | 0.88 | (0.51 - 1.49) |  | 26.7 | 17 | 5 | 0.81 | (0.39 - 1.68) | | 0.98 | (0.45 - 2.12) |
| P for trend |  |  |  | 0.044 |  | 0.345 |  |  |  |  |  | 0.266 |  | | 0.605 |  |
| P for interaction with alcohol |  |  |  |  |  | 0.510 |  |  |  |  |  |  |  | | 0.147 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| a Age-adjusted analyses. |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| b Multivariable analyses were adjusted for: age at baseline (continuous, in years), tobacco smoking status (coded as never, former, current smoker), number of cigarettes smoked per day, and years of smoking (both continuous, centered)), body height (continuous, m), BMI (<18.5, 18.5-<25, 25-<30, ≥30 kg/m2), non-occupational physical activity (<30, 30-60, 61-90, ≥90 min/day), history of selected diseases at baseline (physician-diagnosed myocardial infarction, angina pectoris, stroke, cancer (excluding skin cancer), diabetes and hypertension; categorized as 0,1,2,3+ diseases), highest level of education (primary school or lower vocational, secondary or medium vocational, and higher vocational or university), alcohol intake (continuous, glasses/week), energy intake (continuous, kcal/day). | | | | | | | | | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Appendix Table 5**. Multivariable-adjusteda RRs for reaching longevity according to alcohol intake in men and women, by strata of smoking and other factors, NLCS | | | | | | | | |
|  |  |  |  |  |  |  |  |  |
|  | Alcohol intake (g/day) | |  |  |  |  |  |  |
|  | Abstainers | >0-<5 | 5-<15 | 15-<30 | 30+ | P for | Continuous, | P for |
|  |  |  |  |  |  | trend | per 10 g/d | interaction |
| Overall |  |  |  |  |  |  |  |  |
| 90+ / N | 345/1391 | 507/1710 | 312/1117 | 166/742 | 86/447 |  | 1416/5407 |  |
| RR | 1 (Ref.) | 1.19 | 1.36 | 1.30 | 1.32 | 0.009 | 1.05 |  |
| (95 %CI) |  | (1.07 - 1.34) | (1.20 - 1.55) | (1.10 - 1.53) | (1.06 - 1.64) |  | (1.01 - 1.09) |  |
| Smoking status |  |  |  |  |  |  |  |  |
| Never smokers |  |  |  |  |  |  |  |  |
| 90+ / N | 276/908 | 336/899 | 134/324 | 48/115 | 8/28 |  | 802/2274 |  |
| RR | 1 (Ref.) | 1.19 | 1.31 | 1.31 | 0.98 | 0.053 | 1.06 | 0.662 |
| (95 %CI) |  | (1.05 - 1.35) | (1.11 - 1.55) | (1.03 - 1.66) | (0.56 - 1.71) |  | (0.99 - 1.15) |  |
| Former smokers |  |  |  |  |  |  |  |  |
| 90+ / N | 48/260 | 112/467 | 119/476 | 66/338 | 45/207 |  | 390/1748 |  |
| RR | 1 (Ref.) | 1.21 | 1.43 | 1.18 | 1.31 | 0.450 | 1.02 |  |
| (95 %CI) |  | (0.90 - 1.63) | (1.06 - 1.91) | (0.85 - 1.64) | (0.91 - 1.87) |  | (0.95 - 1.08) |  |
| Current smokers |  |  |  |  |  |  |  |  |
| 90+ / N | 21/223 | 59/344 | 59/317 | 52/289 | 33/212 |  | 224/1385 |  |
| RR | 1 (Ref.) | 1.56 | 1.88 | 2.04 | 1.87 | 0.040 | 1.08 |  |
| (95 %CI) |  | (0.99 - 2.47) | (1.19 - 2.98) | (1.28 - 3.25) | (1.10 - 3.18) |  | (1.01 - 1.16) |  |
| BMI (kg/m2) |  |  |  |  |  |  |  |  |
| 18.5-<25 |  |  |  |  |  |  |  |  |
| 90+ / N | 199/734 | 269/912 | 184/613 | 99/394 | 57/240 |  | 808/2893 |  |
| RR | 1 (Ref.) | 1.11 | 1.36 | 1.33 | 1.50 | <0.001 | 1.08 | 0.110 |
| (95 %CI) |  | (0.95 - 1.29) | (1.15 - 1.61) | (1.08 - 1.63) | (1.15 - 1.96) |  | (1.03 - 1.14) |  |
| 25+ |  |  |  |  |  |  |  |  |
| 90+ / N | 142/634 | 233/779 | 126/495 | 66/341 | 29/202 |  | 596/2451 |  |
| RR | 1 (Ref.) | 1.35 | 1.42 | 1.32 | 1.10 | 0.793 | 1.00 |  |
| (95 %CI) |  | (1.14 - 1.61) | (1.15 - 1.76) | (1.01 - 1.72) | (0.75 - 1.59) |  | (0.94 - 1.07) |  |
| Physical activity (min/day) |  |  |  |  |  |  |  |  |
| =<30 |  |  |  |  |  |  |  |  |
| 90+ / N | 122/476 | 129/481 | 65/263 | 33/184 | 16/116 |  | 365/1520 |  |
| RR | 1 (Ref.) | 1.06 | 1.19 | 1.05 | 1.02 | 0.847 | 1.00 | 0.256 |
| (95 %CI) |  | (0.87 - 1.31) | (0.92 - 1.55) | (0.73 - 1.50) | (0.61 - 1.70) |  | (0.92 - 1.10) |  |
| >30 |  |  |  |  |  |  |  |  |
| 90+ / N | 223/915 | 378/1229 | 247/854 | 133/558 | 70/331 |  | 1051/3887 |  |
| RR | 1 (Ref.) | 1.29 | 1.47 | 1.44 | 1.48 | 0.002 | 1.06 |  |
| (95 %CI) |  | (1.13 - 1.48) | (1.26 - 1.72) | (1.20 - 1.74) | (1.16 - 1.88) |  | (1.02 - 1.11) |  |
| Level of education |  |  |  |  |  |  |  |  |
| Primary school, lower vocational |  |  |  |  |  |  |  |  |
| 90+ / N | 216/890 | 277/960 | 143/506 | 52/324 | 24/143 |  | 712/2823 |  |
| RR | 1 (Ref.) | 1.20 | 1.52 | 1.08 | 1.18 | 0.357 | 1.02 | 0.172 |
| (95 %CI) |  | (1.04 - 1.40) | (1.27 - 1.82) | (0.82 - 1.43) | (0.79 - 1.76) |  | (0.95 - 1.10) |  |
| Secondary, medium vocational |  |  |  |  |  |  |  |  |
| 90+ / N | 103/395 | 174/581 | 121/437 | 77/293 | 34/187 |  | 509/1893 |  |
| RR | 1 (Ref.) | 1.14 | 1.29 | 1.45 | 1.27 | 0.025 | 1.08 |  |
| (95 %CI) |  | (0.93 - 1.38) | (1.04 - 1.60) | (1.13 - 1.85) | (0.91 - 1.78) |  | (1.02 - 1.14) |  |
| Higher vocational, university |  |  |  |  |  |  |  |  |
| 90+ / N | 26/106 | 56/169 | 48/174 | 37/125 | 28/117 |  | 195/691 |  |
| RR | 1 (Ref.) | 1.48 | 1.33 | 1.68 | 1.68 | 0.110 | 1.04 |  |
| (95 %CI) |  | (1.00 - 2.20) | (0.88 - 2.01) | (1.08 - 2.63) | (1.01 - 2.78) |  | (0.96 - 1.13) |  |
| History of selected disease at baseline | |  |  |  |  |  |  |  |
| No |  |  |  |  |  |  |  |  |
| 90+ / N | 205/677 | 334/939 | 206/618 | 106/418 | 63/270 |  | 914/2922 |  |
| RR | 1 (Ref.) | 1.24 | 1.38 | 1.23 | 1.38 | 0.056 | 1.03 | 0.534 |
| (95 %CI) |  | (1.08 - 1.42) | (1.18 - 1.61) | (1.01 - 1.50) | (1.07 - 1.78) |  | (0.99 - 1.09) |  |
| Yes |  |  |  |  |  |  |  |  |
| 90+ / N | 140/714 | 173/771 | 106/499 | 60/324 | 23/177 |  | 502/2485 |  |
| RR | 1 (Ref.) | 1.15 | 1.41 | 1.55 | 1.23 | 0.032 | 1.09 |  |
| (95 %CI) |  | (0.95 - 1.40) | (1.12 - 1.77) | (1.17 - 2.06) | (0.81 - 1.87) |  | (1.01 - 1.17) |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| a Multivariable analyses were adjusted for: age at baseline (continuous, in years), sex, tobacco smoking status (coded as never, former, current smoker), number of cigarettes smoked per day, and years of smoking (both continuous, centered)), body height (continuous, m), BMI (<18.5, 18.5-<25, 25-<30, ≥30 kg/m2), non-occupational physical activity (<30, 30-60, 61-90, ≥90 min/day), history of selected diseases at baseline (physician-diagnosed myocardial infarction, angina pectoris, stroke, cancer (excluding skin cancer), diabetes and hypertension; categorized as 0,1,2,3+ diseases), highest level of education (primary school or lower vocational, secondary or medium vocational, and higher vocational or university), energy intake (continuous, kcal/day). | | | | | | | | |