

## Supplementary Online Content

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**eTable 1.** Multivariate relative risks and 95% CIs for cardiovascular disease (CVD) deaths for categories of supplemental calcium intake among participants using individual calcium supplements only.

**eTable 2.** Multivariate relative risks and 95% CIs for total cardiovascular disease deaths for categories of supplemental calcium intake, stratified by total magnesium intake, alcohol consumption, and hypercholesterolemia.

**eTable 3.** Multivariate relative risks and 95% CIs for total cardiovascular disease deaths for categories of supplemental calcium intake, stratified by total magnesium intake, alcohol consumption, and hypercholesterolemia.

**eTable 4.** Relative risks and 95% CIs for cardiovascular disease (CVD) deaths for quintiles of total calcium intake in men and women.

This supplementary material has been provided by the authors to give readers additional information about their work.

**eTable 1.** Multivariate Relative Risks and 95% CIs for Cardiovascular Disease (CVD) Deaths for Categories of Supplemental Calcium Intake Among Participants Using Individual Calcium Supplements Only

|                                | Supplemental calcium intake, mg/d |                  |                  |                  | P Value for Trend |
|--------------------------------|-----------------------------------|------------------|------------------|------------------|-------------------|
|                                | 0                                 | >0-<400          | 400-<1000        | ≥1000            |                   |
| <b>MEN</b>                     |                                   |                  |                  |                  |                   |
| All CVD deaths                 |                                   |                  |                  |                  |                   |
| No. of cases                   | 3540                              | 246              | 108              | 69               |                   |
| Multivariate <sup>a</sup>      | Reference                         | 0.91 (0.80-1.04) | 0.96 (0.79-1.16) | 1.24 (0.97-1.57) | .35               |
| Heart disease deaths           |                                   |                  |                  |                  |                   |
| No. of cases                   | 2828                              | 186              | 88               | 60               |                   |
| Multivariate <sup>a</sup>      | Reference                         | 0.87 (0.75-1.01) | 0.98 (0.80-1.22) | 1.37 (1.06-1.77) | .13               |
| Cerebrovascular disease deaths |                                   |                  |                  |                  |                   |
| No. of cases                   | 498                               | 43               | 13               | 7                |                   |
| Multivariate <sup>a</sup>      | Reference                         | 1.12 (0.82-1.53) | 0.77 (0.44-1.34) | 0.82 (0.39-1.73) | .45               |
| <b>WOMEN</b>                   |                                   |                  |                  |                  |                   |
| All CVD deaths                 |                                   |                  |                  |                  |                   |
| No. of cases                   | 1126                              | 184              | 198              | 149              |                   |
| Multivariate <sup>a</sup>      | Reference                         | 0.88 (0.76-1.03) | 1.05 (0.90-1.22) | 0.95 (0.80-1.13) | .77               |
| Heart disease deaths           |                                   |                  |                  |                  |                   |
| No. of cases                   | 835                               | 135              | 134              | 97               |                   |
| Multivariate <sup>a</sup>      | Reference                         | 0.88 (0.73-1.06) | 0.98 (0.81-1.18) | 0.85 (0.69-1.06) | .17               |
| Cerebrovascular disease deaths |                                   |                  |                  |                  |                   |
| No. of cases                   | 229                               | 38               | 51               | 40               |                   |
| Multivariate <sup>a</sup>      | Reference                         | 0.86 (0.61-1.22) | 1.22 (0.90-1.66) | 1.15 (0.81-1.62) | .24               |

<sup>a</sup>Adjusted for age at baseline (continuous); race/ethnicity (non-Hispanic white, non-Hispanic black, or other); educational level (less than high school, high school graduate, some college, or college graduate/postgraduate); marital status (married or not married); health status (excellent, very good, good, fair, or poor); body mass index (<18.5, 18.5-<25, 25-<30, 30-<35, or ≥35); smoking status (never, former, or current); smoking dose (0, 1-10, 11-20, 21-30, 31-40, 41-50, 51-60, or >60 cigarettes per day); time since quitting (never quit, ≥10, 5-9, 1-4, or <1 year), vigorous physical activity (never/rarely, ≤3 times per month, or 1-2, 3-4, or ≥5 times per week); alcohol (0, <5, 5-<15, 15-<30, or ≥30 g/d); dietary calcium intake (quintiles); fruit and vegetable intake (continuous); red meat intake (continuous); whole grain intake (continuous); total fat intake (continuous); and total caloric intake (continuous). The use of menopausal hormone therapy (never, past, or current) was adjusted in women.

**eTable 2.** Multivariate Relative Risks and 95% CIs for Total Cardiovascular Disease Deaths for Categories of Supplemental Calcium Intake, Stratified by Total Magnesium Intake, Alcohol Consumption, and Hypercholesterolemia

|   | Supplemental Calcium Intake, mg/d |                  |                  |                  | P Value for Trend |
|---|-----------------------------------|------------------|------------------|------------------|-------------------|
|   | 0                                 | 0-400            | 400-1000         | >1000            |                   |
| <b>MEN</b>                                      |                                   |                  |                  |                  |                   |
| <b>Total magnesium intake, mg/d<sup>a</sup></b> |                                   |                  |                  |                  |                   |
| 0-217 <sup>b</sup>                              | Reference                         | 0.97 (0.89-1.05) | 1.13 (0.96-1.34) | 1.26 (0.98-1.61) | .05               |
| >217 <sup>b</sup>                               | Reference                         | 0.92 (0.85-1.00) | 1.01 (0.91-1.12) | 1.09 (0.93-1.28) | .07               |
| P value for interaction                         | .74                               |                  |                  |                  |                   |
| <b>Alcohol consumption, g/d<sup>a</sup></b>     |                                   |                  |                  |                  |                   |
| 0   | Reference                         | 1.01 (0.91-1.12) | 1.05 (0.90-1.23) | 1.07 (0.82-1.41) | .48               |
| >0-25   | Reference                         | 1.11 (1.00-1.24) | 1.13 (0.94-1.36) | 1.30 (0.97-1.73) | .03               |
| >25   | Reference                         | 0.94 (0.89-1.00) | 1.09 (0.99-1.21) | 1.22 (1.03-1.44) | .01               |
| P value for interaction                         | .75                               |                  |                  |                  |                   |
| <b>WOMEN</b>                                    |                                   |                  |                  |                  |                   |
| <b>Total magnesium intake, mg/d<sup>a</sup></b> |                                   |                  |                  |                  |                   |
| 0-245 <sup>b</sup>                              | Reference                         | 1.01 (0.90-1.13) | 1.12 (0.98-1.28) | 1.08 (0.92-1.27) | .15               |
| >245 <sup>b</sup>                               | Reference                         | 0.90 (0.77-1.05) | 0.91 (0.78-1.07) | 0.94 (0.79-1.11) | .96               |
| P value for interaction                         | .40                               |                  |                  |                  |                   |
| <b>Alcohol consumption, g/d<sup>a</sup></b>     |                                   |                  |                  |                  |                   |
| 0   | Reference                         | 0.99 (0.87-1.14) | 0.98 (0.84-1.14) | 0.98 (0.82-1.18) | .81               |
| >0-25   | Reference                         | 1.04 (0.91-1.19) | 1.16 (1.00-1.34) | 1.07 (0.90-1.28) | .28               |
| >25   | Reference                         | 0.97 (0.83-1.12) | 1.03 (0.87-1.20) | 1.16 (0.97-1.38) | .07               |
| P value for interaction                         | .80                               |                  |                  |                  |                   |

<sup>a</sup>Adjusted for age at baseline (continuous); race/ethnicity (non-Hispanic white, non-Hispanic black, and others); education (less than high school, high school graduate, some college, or college graduate/postgraduate); marital status (married or not married), health status (excellent, very good, good, fair, and poor); BMI (<18.5, 18.5-<25, 25-<30, 30-<35, or ≥35), smoking status (never, former, and current); smoking dose (0, 1-10, 11-20, 21-30, 31-40, 41-50, 51-60, and >60 cigarettes per day); time since quitting (never quit, ≥10, 5-9, 1-4, or <1 year); vigorous physical activity (never/rarely, ≤3 times per month; 1-2, 3-4, and ≥5 times per week); alcohol (0, <5, 5-<15, 15-<30, and ≥30 g/d); dietary calcium intake (quintiles); fruit and vegetable intake (continuous); red meat intake (continuous); whole grain intake (continuous); total fat intake (continuous); and total caloric intake (continuous). The use of menopausal hormone therapy (never, past, or current) was adjusted in women.

<sup>b</sup>Sex-specific median intake of total magnesium.

**eTable 3.** Multivariate Relative Risks and 95% Confidence Intervals for Total Cardiovascular Disease Deaths for Categories of Supplemental Calcium Intake, Stratified by Total Magnesium Intake, Alcohol Consumption, and Hypercholesterolemia

|   | Supplemental Calcium Intake, mg/d |              |              |             |
|---|-----------------------------------|--------------|--------------|-------------|
|   | 0                                 | 0-400        | 400-1000     | >1000       |
| <b>MEN (No. of deaths/person-years)</b>   |                                   |              |              |             |
| <b>Age</b>                                |                                   |              |              |             |
| <60                                       | 755/500 359                       | 549/387 681  | 135/81 771   | 45/23 807   |
| ≥60                                       | 3192/736 692                      | 2361/573 188 | 659/152 438  | 208/48 732  |
| <b>Smoking status</b>                     |                                   |              |              |             |
| Never                                     | 898/394 698                       | 604/302 053  | 189/76 145   | 57/24 482   |
| Former                                    | 2009/654 335                      | 1520/526 163 | 425/129 773  | 145/41 533  |
| Current                                   | 838/136 588                       | 649/96 146   | 132/18 800   | 33/3992     |
| <b>Body mass index</b>                    |                                   |              |              |             |
| < 25                                      | 1106/355 200                      | 849/298 888  | 256/78 749   | 76/27 438   |
| ≥25 and <30                               | 1850/633 507                      | 1343/493 033 | 379/116 822  | 131/347 32  |
| ≥30                                       | 991/248 345                       | 718/168 948  | 159/38 639   | 46/10 370   |
| <b>Hypertension</b>                       |                                   |              |              |             |
| Yes                                       | 1089/262 328                      | 846/204 309  | 219/51 656   | 88/15 939   |
| No  | 930/406 734                       | 731/323 518  | 198/77 563   | 64/25 863   |
| <b>Total magnesium intake, mg/d</b>       |                                   |              |              |             |
| 0-217 <sup>a</sup>                        | 3150/987 719                      | 657/211 702  | 146/40 055   | 64/17 694   |
| >217 <sup>a</sup>                         | 797/249 332                       | 2253/749 167 | 648/194 154  | 189/54 846  |
| <b>Alcohol consumption, g/d</b>           |                                   |              |              |             |
| 0   | 864/229 038                       | 609/168 001  | 188/47 483   | 57/15 131   |
| >0-25                                     | 731/238 370                       | 596/179 219  | 144/43 210   | 50/13 898   |
| >25                                       | 2352/769 644                      | 1705/613 649 | 462/143 517  | 146/43 510  |
| <b>Hypercholesterolemia</b>               |                                   |              |              |             |
| Yes                                       | 1227/353 535                      | 783/274 353  | 220/64 923   | 71/22 256   |
| No  | 289/152 277                       | 310/171 618  | 230/132 ,012 | 188/100 925 |
| <b>WOMEN (No. of deaths/person-years)</b> |                                   |              |              |             |
| <b>Age</b>                                |                                   |              |              |             |
| <60                                       | 208/231 841                       | 197/253 990  | 123/172 862  | 71/126 961  |
| ≥60                                       | 1056/350 025                      | 974/350 742  | 740/280 242  | 505/201 040 |
| <b>Smoking status</b>                     |                                   |              |              |             |
| Never                                     | 391/260 139                       | 358/273 992  | 281/209 930  | 199/146 287 |
| Former                                    | 378/200 826                       | 407/219 813  | 335/175 183  | 248/141 967 |
| Current                                   | 412/98 778                        | 349/89 498   | 206/52 100   | 108/29 330  |
| <b>Body mass index</b>                    |                                   |              |              |             |

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|                                     |              |             |             |             |
|-------------------------------------|--------------|-------------|-------------|-------------|
| <25                                 | 442/232 872  | 461/259 952 | 398/223 606 | 283/180 635 |
| ≥25 and <30                         | 467/210 854  | 404/216 598 | 271/153 033 | 171/101 488 |
| ≥30                                 | 355/138 124  | 306/128 182 | 194/76 466  | 122/45 880  |
| <b>Hypertension</b>                 |              |             |             |             |
| Yes                                 | 428/127 035  | 369/126 466 | 285/93 101  | 201/67 727  |
| No                                  | 278/215 148  | 303/235 819 | 206/185 704 | 192/147 950 |
| <b>Total magnesium intake, mg/d</b> |              |             |             |             |
| 0-245 <sup>a</sup>                  | 1050/486 660 | 480/251 111 | 288/129 956 | 181/102 505 |
| >245 <sup>a</sup>                   | 214/95 189   | 691/353 621 | 575/313 149 | 395/225 497 |
| <b>Alcohol consumption, g/d</b>     |              |             |             |             |
| 0                                   | 479/171 575  | 397/155 062 | 269/114 434 | 177/79 638  |
| >0-25                               | 414/220 629  | 420/237 341 | 321/169 489 | 194/120 666 |
| >25                                 | 371/189 645  | 354/212 330 | 273/169 182 | 205/127 699 |
| <b>Hypercholesterolemia</b>         |              |             |             |             |
| Yes                                 | 338/182 464  | 315/188 641 | 229/146 933 | 188/117 482 |
| No                                  | 289/152 277  | 310/171 618 | 230/132 012 | 188/100 925 |

<sup>a</sup> Sex-specific median intake of total magnesium.

**eTable 4.** Relative Risks and 95% CI for Cardiovascular Disease (CVD) Deaths for Quintiles of Total Calcium Intake in Men and Women

|                                | Total Calcium Intake Quintile |                  |                  |                  |                  | P Value for Trend |
|--------------------------------|-------------------------------|------------------|------------------|------------------|------------------|-------------------|
|                                | Q1                            | Q2               | Q3               | Q4               | Q5               |                   |
| <b>MEN</b>                     |                               |                  |                  |                  |                  |                   |
| Median intake, mg/d            | 526                           | 698              | 856              | 1073             | 1530             |                   |
| All CVD deaths                 |                               |                  |                  |                  |                  |                   |
| No. of cases                   | 1786                          | 1535             | 1507             | 1447             | 1692             |                   |
| Age adjusted                   | Reference                     | 0.85 (0.79-0.91) | 0.83 (0.78-0.89) | 0.81 (0.75-0.86) | 0.90 (0.84-0.96) | .04               |
| Multivariate <sup>a</sup>      | Reference                     | 0.96 (0.89-1.03) | 0.99 (0.92-1.06) | 0.98 (0.92-1.06) | 1.12 (1.04-1.20) | <.001             |
| Heart disease deaths           |                               |                  |                  |                  |                  |                   |
| No. of cases                   | 1421                          | 1229             | 1179             | 1163             | 1290             |                   |
| Age adjusted                   | Reference                     | 0.86 (0.79-0.92) | 0.82 (0.76-0.89) | 0.82 (0.76-0.88) | 0.90 (0.84-0.97) | .08               |
| Multivariate <sup>a</sup>      | Reference                     | 0.97 (0.89-1.04) | 0.98 (0.90-1.06) | 1.00 (0.92-1.08) | 1.12 (1.04-1.21) | <.001             |
| Cerebrovascular disease deaths |                               |                  |                  |                  |                  |                   |
| No. of cases                   | 257                           | 203              | 230              | 202              | 254              |                   |
| Age adjusted                   | Reference                     | 0.77 (0.64-0.93) | 0.86 (0.72-1.03) | 0.77 (0.64-0.92) | 0.95 (0.80-1.13) | .92               |
| Multivariate <sup>a</sup>      | Reference                     | 0.86 (0.71-1.03) | 1.00 (0.83-1.20) | 0.91 (0.75-1.10) | 1.14 (0.95-1.37) | .05               |
| <b>WOMEN</b>                   |                               |                  |                  |                  |                  |                   |
| Median intake, mg/d            | 494                           | 717              | 969              | 1296             | 1881             |                   |
| All CVD deaths                 |                               |                  |                  |                  |                  |                   |
| No. of cases                   | 876                           | 760              | 770              | 775              | 693              |                   |
| Age adjusted                   | Reference                     | 0.84 (0.76-0.92) | 0.82 (0.74-0.90) | 0.80 (0.72-0.88) | 0.69 (0.62-0.76) | <.001             |
| Multivariate <sup>a</sup>      | Reference                     | 1.00 (0.91-1.10) | 1.05 (0.95-1.16) | 1.10 (1.00-1.22) | 1.02 (0.92-1.14) | .38               |
| Heart disease deaths           |                               |                  |                  |                  |                  |                   |
| No. of cases                   | 657                           | 548              | 538              | 554              | 480              |                   |
| Age adjusted                   | Reference                     | 0.80 (0.72-0.90) | 0.76 (0.68-0.85) | 0.76 (0.68-0.85) | 0.63 (0.56-0.71) | <.001             |
| Multivariate <sup>a</sup>      | Reference                     | 0.97 (0.87-1.09) | 1.00 (0.89-1.12) | 1.09 (0.96-1.22) | 0.99 (0.87-1.12) | .69               |
| Cerebrovascular disease deaths |                               |                  |                  |                  |                  |                   |
| No. of cases                   | 168                           | 166              | 188              | 171              | 167              |                   |
| Age adjusted                   | Reference                     | 0.95 (0.77-1.17) | 1.04 (0.84-1.28) | 0.91 (0.74-1.13) | 0.86 (0.69-1.06) | .12               |
| Multivariate <sup>a</sup>      | Reference                     | 1.08 (0.87-1.34) | 1.23 (0.99-1.52) | 1.13 (0.90-1.41) | 1.09 (0.87-1.38) | .61               |

<sup>a</sup> Adjusted for age at baseline (continuous); race/ethnicity (non-Hispanic white, non-Hispanic black, or other); education (less than high school, high school graduate, some college, or college graduate/postgraduate); marital status (married or not married); health status (excellent, very good, good,

fair, and poor); BMI (<18.5, 18.5-<25, 25-<30, 30-<35, or  $\geq$ 35); smoking status (never, former, and current), smoking dose (0, 1-10, 11-20, 21-30, 31-40, 41-50, 51-60, and >60 cigarettes per day); time since quitting (never quit,  $\geq$ 10, 5-9, 1-4, <1 year); vigorous physical activity (never/rarely,  $\leq$ 3 times per month, or 1-2, 3-4, and  $\geq$ 5 times per week); alcohol (0, <5, 5-<15, 15-<30, and  $\geq$ 30 g/d); fruit and vegetable intake (continuous); red meat intake (continuous), whole grain intake (continuous); total fat intake (continuous); and total caloric intake (continuous). The use of menopausal hormone therapy (never, past, or current) was adjusted in women.