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| --- | --- | --- | --- | --- | --- |
| **eAppendix. Distribution of mean telomere length and self-reported age at menopause in the Cardiovascular Health Study stratified by covariates** | | | | | |
|  |  | *Telomere length* | | *Age at menopause* | |
|  | **No.**a | **mean** | **SD** | **mean** | **SD** |
|  |  |  |  |  |  |
| **Total** | 776 | 6.38 | 0.62 | 47.10 | 6.86 |
| **Age (years)** |  |  |  |  |  |
| 64-69 | 300 | 6.47 | 0.63 | 47.13 | 0.63 |
| 70-74 | 276 | 6.40 | 0.58 | 47.00 | 0.58 |
| 75-79 | 141 | 6.27 | 0.60 | 47.28 | 0.60 |
| >80 | 59 | 6.09 | 0.62 | 46.95 | 0.62 |
| **Study site**b |  |  |  |  |  |
| Forsyth County, NC | 176 | 6.45 | 0.60 | 47.45 | 0.60 |
| Sacramento County, CA | 202 | 6.41 | 0.63 | 47.07 | 0.63 |
| Washington County, MD | 201 | 6.27 | 0.61 | 46.45 | 0.61 |
| Pittsburgh, PA | 197 | 6.40 | 0.61 | 47.46 | 0.61 |
| **Marital status** |  |  |  |  |  |
| Married | 455 | 6.42 | 0.63 | 47.03 | 0.63 |
| Widowed | 243 | 6.34 | 0.59 | 47.65 | 0.59 |
| Divorced | 31 | 6.33 | 0.66 | 45.84 | 0.66 |
| Separated | 2 | 5.98 | 0.27 | 43.00 | 0.27 |
| Never married | 43 | 6.30 | 0.59 | 46.30 | 0.59 |
| **Education**c |  |  |  |  |  |
| Less than high school | 182 | 6.34 | 0.66 | 45.31 | 0.66 |
| High school or GED | 244 | 6.43 | 0.62 | 47.48 | 0.62 |
| Some college or vocational school | 200 | 6.35 | 0.58 | 47.26 | 0.58 |
| Graduated college or any graduate school | 150 | 6.39 | 0.60 | 48.43 | 0.60 |
| **Income**c |  |  |  |  |  |
| <$8,000 | 92 | 6.31 | 0.57 | 46.85 | 0.57 |
| $8,000-15,999 | 203 | 6.33 | 0.62 | 46.44 | 0.62 |
| $16,000-34,999 | 278 | 6.45 | 0.63 | 47.13 | 0.63 |
| ≥$35,000 | 156 | 6.36 | 0.60 | 48.19 | 0.60 |
| **Body mass index (BMI)** |  |  |  |  |  |
| Underweight or normal | 302 | 6.38 | 0.62 | 47.21 | 0.62 |
| Overweight | 294 | 6.38 | 0.66 | 46.98 | 0.66 |
| Obese | 180 | 6.38 | 0.54 | 47.09 | 0.54 |
| **Pack years of smoking**c |  |  |  |  |  |
| 0 | 393 | 6.36 | 0.62 | 47.60 | 0.62 |
| >0 and <10 | 82 | 6.41 | 0.50 | 48.09 | 0.50 |
| ≥10 and <20 | 52 | 6.47 | 0.52 | 46.12 | 0.52 |
| ≥20 | 5 | 6.42 | 0.94 | 43.80 | 0.94 |
| **Alcoholic beverages per week**c |  |  |  |  |  |
| 0 | 436 | 6.36 | 0.63 | 46.58 | 0.63 |
| >0 and <7 | 266 | 6.41 | 0.60 | 47.62 | 0.60 |
| ≥7 and <14 | 34 | 6.35 | 0.56 | 47.94 | 0.56 |
| ≥14 | 40 | 6.41 | 0.65 | 48.48 | 0.65 |
| **eAppendix, cont.** | | | | | |
|  |  | *Telomere length* | | *Age at menopause* | |
|  | **No.**a | **mean** | **SD** | **mean** | **SD** |
|  |  |  |  |  |  |
| **Activity level before age 65 compared with peers** |  |  |  |  |  |
| Less active | 60 | 6.43 | 0.62 | 47.05 | 0.62 |
| Same | 218 | 6.44 | 0.62 | 47.52 | 0.62 |
| More active | 498 | 6.35 | 0.61 | 46.92 | 0.61 |
| **Activity level after age 65 compared with peers** |  |  |  |  |  |
| Less active | 499 | 6.35 | 0.62 | 47.00 | 0.62 |
| Same | 217 | 6.45 | 0.61 | 47.46 | 0.61 |
| More active | 58 | 6.40 | 0.57 | 46.40 | 0.57 |
| **Self-reported health status**c |  |  |  |  |  |
| Excellent | 105 | 6.47 | 0.58 | 48.05 | 0.58 |
| Very good | 209 | 6.35 | 0.56 | 47.29 | 0.56 |
| Good | 300 | 6.38 | 0.65 | 47.61 | 0.65 |
| Fair | 142 | 6.36 | 0.66 | 45.25 | 0.66 |
| Poor | 20 | 6.51 | 0.56 | 45.40 | 0.56 |
| **Parity**b,c |  |  |  |  |  |
| 0 | 15 | 6.49 | 0.80 | 47.33 | 0.80 |
| 1 | 135 | 6.25 | 0.62 | 45.62 | 0.62 |
| ≥2 | 518 | 6.42 | 0.62 | 47.79 | 0.62 |
| **Ever use of estrogens** |  |  |  |  |  |
| No | 421 | 6.38 | 0.62 | 47.44 | 0.62 |
| Yes | 318 | 6.40 | 0.59 | 46.68 | 0.59 |
| **Age at menopause (years)** |  |  |  |  |  |
| <30 | 17 | 6.39 | 0.55 | 25.94 | 0.55 |
| 30-39 | 84 | 6.36 | 0.58 | 35.93 | 0.58 |
| 40-49 | 317 | 6.34 | 0.63 | 44.98 | 0.63 |
| 50-59 | 347 | 6.43 | 0.61 | 52.31 | 0.61 |
| >60 | 11 | 6.41 | 0.52 | 61.36 | 0.52 |
| **Diabetes status** |  |  |  |  |  |
| No | 600 | 6.40 | 0.62 | 47.03 | 0.62 |
| Impaired glucose | 85 | 6.28 | 0.55 | 47.88 | 0.55 |
| Yes | 88 | 6.35 | 0.66 | 46.53 | 0.66 |
| **Blood pressure**b |  |  |  |  |  |
| Normal | 317 | 6.34 | 0.59 | 47.12 | 0.59 |
| Borderline hypertensive | 117 | 6.49 | 0.60 | 48.35 | 0.60 |
| Hypertensive | 341 | 6.38 | 0.63 | 46.63 | 0.63 |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| **eAppendix, cont.** | | | | | |
|  |  | *Telomere length* | | *Age at menopause* | |
|  | **No.**a | **mean** | **SD** | **mean** | **SD** |
|  |  |  |  |  |  |
| **Major health events by year 5** |  |  |  |  |  |
| *Death* |  |  |  |  |  |
| No | 776 | 6.38 | 0.62 | 47.10 | 0.62 |
| Yes | 0 |  |  |  |  |
| Stroke |  |  |  |  |  |
| No | 751 | 6.39 | 0.62 | 47.08 | 0.62 |
| Yes | 25 | 6.14 | 0.59 | 47.68 | 0.59 |
| *Myocardial infarction* |  |  |  |  |  |
| No | 721 | 6.37 | 0.61 | 47.16 | 0.61 |
| Yes | 55 | 6.47 | 0.63 | 46.29 | 0.63 |
| *Transient ischemic attack* |  |  |  |  |  |
| No | 759 | 6.38 | 0.62 | 47.10 | 0.62 |
| Yes | 17 | 6.39 | 0.65 | 47.06 | 0.65 |
| *Atrial fibrillation* |  |  |  |  |  |
| No | 753 | 6.38 | 0.62 | 47.02 | 0.62 |
| Yes | 14 | 6.58 | 0.61 | 49.21 | 0.61 |
| *Angioplasty* |  |  |  |  |  |
| No | 768 | 6.38 | 0.62 | 47.12 | 0.62 |
| Yes | 8 | 6.48 | 0.49 | 45.00 | 0.49 |
| *Angina* |  |  |  |  |  |
| No | 649 | 6.37 | 0.62 | 47.20 | 0.62 |
| Yes | 127 | 6.44 | 0.60 | 46.58 | 0.60 |
| *Bypass surgery* |  |  |  |  |  |
| No | 759 | 6.38 | 0.61 | 47.06 | 0.61 |
| Yes | 17 | 6.50 | 0.68 | 48.88 | 0.68 |
| *Coronary heart disease* |  |  |  |  |  |
| No | 642 | 6.37 | 0.62 | 47.26 | 0.62 |
| Yes | 134 | 6.43 | 0.61 | 46.31 | 0.61 |
| *Congestive heart failure*b |  |  |  |  |  |
| No | 728 | 6.39 | 0.62 | 47.06 | 0.62 |
| Yes | 48 | 6.17 | 0.56 | 47.65 | 0.56 |
| *Claudication*c |  |  |  |  |  |
| No | 766 | 6.38 | 0.62 | 47.16 | 0.62 |
| Yes | 10 | 6.21 | 0.43 | 42.00 | 0.43 |
| **Dietary factors** |  |  |  |  |  |
| *Kilocalories consumed for the whole year*b |  |  |  |  |  |
| Quartile 1 | 176 | 6.43 | 0.61 | 46.54 | 0.61 |
| Quartile 2 | 170 | 6.44 | 0.66 | 46.69 | 0.66 |
| Quartile 3 | 194 | 6.35 | 0.63 | 47.85 | 0.63 |
| Quartile 4 | 167 | 6.31 | 0.58 | 46.79 | 0.58 |
|  |  |  |  |  |  |
| **eAppendix, cont.** | | | | | |
|  |  | *Telomere length* | | *Age at menopause* | |
|  | **No.**a | **mean** | **SD** | **mean** | **SD** |
|  |  |  |  |  |  |
| *Percent of kilocalories from fat* |  |  |  |  |  |
| Quartile 1 | 155 | 6.39 | 0.68 | 46.58 | 0.68 |
| Quartile 2 | 190 | 6.38 | 0.58 | 47.07 | 0.58 |
| Quartile 3 | 186 | 6.42 | 0.61 | 47.37 | 0.61 |
| Quartile 4 | 176 | 6.35 | 0.62 | 46.89 | 0.62 |
| *Percent of kilocalories from protein* |  |  |  |  |  |
| Quartile 1 | 168 | 6.35 | 0.63 | 46.67 | 0.63 |
| Quartile 2 | 177 | 6.42 | 0.64 | 46.84 | 0.64 |
| Quartile 3 | 184 | 6.40 | 0.64 | 47.55 | 0.64 |
| Quartile 4 | 178 | 6.37 | 0.58 | 46.89 | 0.58 |
| *Percent of kilocalories from carbohydrates* |  |  |  |  |  |
| Quartile 1 | 182 | 6.37 | 0.61 | 47.49 | 0.61 |
| Quartile 2 | 197 | 6.42 | 0.61 | 47.23 | 0.61 |
| Quartile 3 | 174 | 6.39 | 0.61 | 47.03 | 0.61 |
| Quartile 4 | 154 | 6.36 | 0.68 | 46.07 | 0.68 |
| *Percent of kilocalories from sweets* |  |  |  |  |  |
| Quartile 1 | 167 | 6.41 | 0.64 | 46.29 | 0.64 |
| Quartile 2 | 186 | 6.38 | 0.59 | 47.40 | 0.59 |
| Quartile 3 | 178 | 6.41 | 0.63 | 46.74 | 0.63 |
| Quartile 4 | 154 | 6.37 | 0.64 | 47.14 | 0.64 |
| *Percent of kilocalories from alcohol* |  |  |  |  |  |
| Quartile 1 | 96 | 6.54 | 0.61 | 47.18 | 0.61 |
| Quartile 2 | 68 | 6.41 | 0.64 | 48.96 | 0.64 |
| Quartile 3 | 69 | 6.33 | 0.61 | 47.59 | 0.61 |
| Quartile 4 | 74 | 6.40 | 0.57 | 47.47 | 0.57 |
| *Daily average intakes* |  |  |  |  |  |
| Protein |  |  |  |  |  |
| Quartile 1 | 165 | 6.40 | 0.64 | 46.45 | 0.64 |
| Quartile 2 | 180 | 6.40 | 0.66 | 46.78 | 0.66 |
| Quartile 3 | 178 | 6.42 | 0.64 | 47.26 | 0.64 |
| Quartile 4 | 184 | 6.32 | 0.56 | 47.42 | 0.56 |
| Fatb |  |  |  |  |  |
| Quartile 1 | 158 | 6.36 | 0.64 | 47.27 | 0.64 |
| Quartile 2 | 187 | 6.47 | 0.64 | 46.05 | 0.64 |
| Quartile 3 | 191 | 6.40 | 0.60 | 47.46 | 0.60 |
| Quartile 4 | 171 | 6.30 | 0.60 | 47.25 | 0.60 |
| Carbohydrates |  |  |  |  |  |
| Quartile 1 | 184 | 6.43 | 0.62 | 46.66 | 0.62 |
| Quartile 2 | 174 | 6.43 | 0.64 | 46.80 | 0.64 |
| Quartile 3 | 180 | 6.36 | 0.61 | 47.32 | 0.61 |
| Quartile 4 | 169 | 6.31 | 0.62 | 47.21 | 0.62 |
|  | | | | | |
| **eAppendix, cont.** | | | | | |
|  |  | *Telomere length* | | *Age at menopause* | |
|  | **No.**a | **mean** | **SD** | **mean** | **SD** |
|  |  |  |  |  |  |
| Dietary fiber |  |  |  |  |  |
| Quartile 1 | 189 | 6.44 | 0.63 | 46.78 | 0.63 |
| Quartile 2 | 177 | 6.34 | 0.60 | 46.31 | 0.60 |
| Quartile 3 | 163 | 6.40 | 0.64 | 47.46 | 0.64 |
| Quartile 4 | 178 | 6.36 | 0.63 | 47.48 | 0.63 |
| Calcium |  |  |  |  |  |
| Quartile 1 | 179 | 6.41 | 0.64 | 46.35 | 0.64 |
| Quartile 2 | 184 | 6.39 | 0.60 | 46.66 | 0.60 |
| Quartile 3 | 178 | 6.40 | 0.67 | 47.95 | 0.67 |
| Quartile 4 | 166 | 6.33 | 0.57 | 47.04 | 0.57 |
| Phosphorus |  |  |  |  |  |
| Quartile 1 | 176 | 6.43 | 0.64 | 46.23 | 0.64 |
| Quartile 2 | 175 | 6.41 | 0.62 | 46.62 | 0.62 |
| Quartile 3 | 179 | 6.36 | 0.63 | 47.97 | 0.63 |
| Quartile 4 | 177 | 6.35 | 0.60 | 47.14 | 0.60 |
| Iron |  |  |  |  |  |
| Quartile 1 | 178 | 6.42 | 0.61 | 46.88 | 0.61 |
| Quartile 2 | 176 | 6.38 | 0.65 | 46.56 | 0.65 |
| Quartile 3 | 186 | 6.40 | 0.63 | 47.18 | 0.63 |
| Quartile 4 | 167 | 6.34 | 0.60 | 47.37 | 0.60 |
| Sodium |  |  |  |  |  |
| Quartile 1 | 168 | 6.39 | 0.60 | 46.58 | 0.60 |
| Quartile 2 | 180 | 6.42 | 0.66 | 46.47 | 0.66 |
| Quartile 3 | 193 | 6.40 | 0.62 | 47.48 | 0.62 |
| Quartile 4 | 166 | 6.32 | 0.61 | 47.41 | 0.61 |
| Potassium |  |  |  |  |  |
| Quartile 1 | 183 | 6.46 | 0.59 | 46.01 | 0.59 |
| Quartile 2 | 171 | 6.37 | 0.68 | 47.21 | 0.68 |
| Quartile 3 | 169 | 6.39 | 0.67 | 47.30 | 0.67 |
| Quartile 4 | 184 | 6.33 | 0.54 | 47.49 | 0.54 |
| Vitamin A |  |  |  |  |  |
| Quartile 1 | 184 | 6.43 | 0.64 | 46.72 | 0.64 |
| Quartile 2 | 164 | 6.33 | 0.62 | 46.97 | 0.62 |
| Quartile 3 | 181 | 6.38 | 0.61 | 47.18 | 0.61 |
| Quartile 4 | 178 | 6.39 | 0.61 | 47.12 | 0.61 |
| Thiamin |  |  |  |  |  |
| Quartile 1 | 210 | 6.39 | 0.61 | 46.73 | 0.61 |
| Quartile 2 | 161 | 6.43 | 0.65 | 46.75 | 0.65 |
| Quartile 3 | 182 | 6.36 | 0.60 | 47.07 | 0.60 |
| Quartile 4 | 154 | 6.36 | 0.64 | 47.51 | 0.64 |
|  |  |  |  |  |  |
| **eAppendix, cont.** | | | | | |
|  |  | *Telomere length* | | *Age at menopause* | |
|  | **No.**a | **mean** | **SD** | **mean** | **SD** |
|  |  |  |  |  |  |
| Riboflavin |  |  |  |  |  |
| Quartile 1 | 203 | 6.39 | 0.63 | 46.49 | 0.63 |
| Quartile 2 | 167 | 6.40 | 0.63 | 46.57 | 0.63 |
| Quartile 3 | 187 | 6.37 | 0.63 | 47.80 | 0.63 |
| Quartile 4 | 150 | 6.38 | 0.61 | 47.15 | 0.61 |
| Niacin |  |  |  |  |  |
| Quartile 1 | 166 | 6.42 | 0.61 | 46.07 | 0.61 |
| Quartile 2 | 193 | 6.34 | 0.62 | 47.09 | 0.62 |
| Quartile 3 | 186 | 6.43 | 0.67 | 47.44 | 0.67 |
| Quartile 4 | 162 | 6.35 | 0.57 | 47.32 | 0.57 |
| Vitamin Cb |  |  |  |  |  |
| Quartile 1 | 195 | 6.41 | 0.65 | 46.06 | 0.65 |
| Quartile 2 | 184 | 6.45 | 0.65 | 48.01 | 0.65 |
| Quartile 3 | 153 | 6.42 | 0.58 | 46.69 | 0.58 |
| Quartile 4 | 175 | 6.26 | 0.59 | 47.24 | 0.59 |
| Saturated fatb |  |  |  |  |  |
| Quartile 1 | 163 | 6.40 | 0.66 | 47.37 | 0.66 |
| Quartile 2 | 200 | 6.43 | 0.61 | 45.99 | 0.61 |
| Quartile 3 | 193 | 6.43 | 0.62 | 47.64 | 0.62 |
| Quartile 4 | 151 | 6.25 | 0.59 | 47.09 | 0.59 |
| Oleic acid |  |  |  |  |  |
| Quartile 1 | 156 | 6.36 | 0.63 | 47.34 | 0.63 |
| Quartile 2 | 186 | 6.48 | 0.66 | 46.37 | 0.66 |
| Quartile 3 | 196 | 6.39 | 0.60 | 47.05 | 0.60 |
| Quartile 4 | 169 | 6.29 | 0.60 | 47.31 | 0.60 |
| Linoleic acid |  |  |  |  |  |
| Quartile 1 | 162 | 6.34 | 0.62 | 46.24 | 0.62 |
| Quartile 2 | 180 | 6.46 | 0.64 | 46.95 | 0.64 |
| Quartile 3 | 175 | 6.40 | 0.63 | 47.34 | 0.63 |
| Quartile 4 | 190 | 6.34 | 0.60 | 47.36 | 0.60 |
| Cholesterolb |  |  |  |  |  |
| Quartile 1 | 164 | 6.42 | 0.66 | 47.03 | 0.66 |
| Quartile 2 | 196 | 6.45 | 0.64 | 47.23 | 0.64 |
| Quartile 3 | 169 | 6.33 | 0.59 | 46.37 | 0.59 |
| Quartile 4 | 178 | 6.34 | 0.59 | 47.30 | 0.59 |
|  |  |  |  |  |  |
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|  |  |  |  |  |  |
| **eAppendix, cont.** | | | | | |
|  |  | *Telomere length* | | *Age at menopause* | |
|  | **No.**a | **mean** | **SD** | **mean** | **SD** |
|  |  |  |  |  |  |
| *Frequency of consumption* |  |  |  |  |  |
| Corn bread, corn muffins, corn tortillas |  |  |  |  |  |
| Almost every day | 17 | 6.41 | 0.60 | 44.94 | 0.60 |
| 1-4 times per week | 79 | 6.29 | 0.63 | 47.35 | 0.63 |
| 1-3 times per month | 235 | 6.42 | 0.62 | 47.28 | 0.62 |
| 5-10 times per year | 204 | 6.45 | 0.58 | 47.13 | 0.58 |
| Never | 233 | 6.31 | 0.64 | 46.96 | 0.64 |
| Dark bread |  |  |  |  |  |
| Almost every day | 291 | 6.38 | 0.63 | 47.05 | 0.63 |
| 1-4 times per week | 213 | 6.39 | 0.60 | 47.42 | 0.60 |
| 1-3 times per month | 117 | 6.35 | 0.62 | 46.61 | 0.62 |
| 5-10 times per year | 50 | 6.43 | 0.59 | 47.54 | 0.59 |
| Never | 100 | 6.38 | 0.63 | 47.00 | 0.63 |
| Cooked cereals |  |  |  |  |  |
| Almost every day | 123 | 6.42 | 0.67 | 47.67 | 0.67 |
| 1-4 times per week | 215 | 6.33 | 0.57 | 46.92 | 0.57 |
| 1-3 times per month | 176 | 6.38 | 0.61 | 46.71 | 0.61 |
| 5-10 times per year | 71 | 6.38 | 0.58 | 47.35 | 0.58 |
| Never | 179 | 6.40 | 0.65 | 47.16 | 0.65 |
| High fiber, bran or granola cereals |  |  |  |  |  |
| Almost every day | 216 | 6.41 | 0.65 | 47.42 | 0.65 |
| 1-4 times per week | 189 | 6.44 | 0.64 | 47.22 | 0.64 |
| 1-3 times per month | 99 | 6.31 | 0.56 | 46.61 | 0.56 |
| 5-10 times per year | 66 | 6.33 | 0.59 | 47.56 | 0.59 |
| Never | 199 | 6.34 | 0.59 | 46.86 | 0.59 |
| SD – standard deviation | | | | | |
| aWhite women from the original cohort with an available telomere measurement and age at menopause who did not have moderate or severe cognitive impairment; numbers may not add to total due to missing information | | | | | |
| bAssociated with telomere length at p<0.05, adjusted for age at blood draw | | | | | |
| cAssociated with age at menopause at p<0.05 | | | | | |
|  | | | | | |