

Appendix 1. All-cause mortality during 33 years of follow-up according to Body Mass Index and Handgrip Strength in different age groups and different follow-up periods. Mini-Finland Health Examination Survey (n = 3594).

| | | 50-69 years | | | | ≥ 70 years | | | |
|-------------|-------------------|-------------|--------------|---------|--------------|------------|--------------|---------|--------------|
| | | Model 1 | | Model 2 | | Model 1 | | Model 2 | |
| | | HR | (95% CI) | HR | (95% CI) | HR | (95% CI) | HR | (95% CI) |
| 0-15 years | Body Mass Index | | | | | | | | |
| | 18.5-24.9 | 1.00 | | 1.00 | | 1.00 | | 1.00 | |
| | 25-29.9 | 1.00 | (0.90, 1.11) | 0.97 | (0.88, 1.08) | 0.87 | (0.74, 1.03) | 0.81 | (0.68, 0.96) |
| | ≥ 30 | 1.03 | (0.93, 1.15) | 1.07 | (0.94, 1.21) | 0.85 | (0.69, 1.05) | 0.79 | (0.64, 0.98) |
| 15-33 years | Body Mass Index | | | | | | | | |
| | 18.5-24.9 | 1.00 | | 1.00 | | 1.00 | | 1.00 | |
| | 25-29.9 | 1.04 | (0.92, 1.17) | 1.01 | (0.90, 1.14) | 0.84 | (0.62, 1.16) | 0.79 | (0.57, 1.10) |
| | ≥ 30 | 1.14 | (1.01, 1.29) | 1.14 | (0.98, 1.32) | 0.81 | (0.55, 1.20) | 0.76 | (0.51, 1.13) |
| 0-15 years | Handgrip strength | | | | | | | | |
| | High | 1.00 | | 1.00 | | 1.00 | | 1.00 | |
| | Medium | 1.01 | (0.90, 1.13) | 0.99 | (0.89, 1.11) | 1.04 | (0.86, 1.25) | 0.99 | (0.82, 1.19) |
| | Low | 1.11 | (0.99, 1.25) | 1.09 | (0.97, 1.22) | 1.19 | (0.98, 1.44) | 1.19 | (0.98, 1.44) |
| 15-33 years | Handgrip strength | | | | | | | | |
| | High | 1.00 | | 1.00 | | 1.00 | | 1.00 | |
| | Medium | 1.07 | (0.94, 1.21) | 1.04 | (0.92, 1.19) | 1.07 | (0.75, 1.51) | 1.03 | (0.73, 1.47) |
| | Low | 1.10 | (0.96, 1.26) | 1.09 | (0.96, 1.25) | 1.29 | (0.91, 1.81) | 1.23 | (0.87, 1.74) |

Notes: Model 1 adjusted for age, sex, education, smoking, alcohol use, physical activity and handgrip strength / body mass index.

Model 2 additionally adjusted for baseline hypertension, cardiovascular disease, diabetes and cancer.

Appendix 2. All-cause mortality during 33 years of follow-up according to Body Mass Index and Handgrip Strength in different age groups and smoking status. Mini-Finland Health Examination Survey (n = 3594).

| | | 50-69 years | | | | ≥ 70 years | | | |
|-------------------|-----------|-------------|--------------|---------|--------------|------------|--------------|---------|--------------|
| | | Model 1 | | Model 2 | | Model 1 | | Model 2 | |
| | | HR | (95% CI) | HR | (95% CI) | HR | (95% CI) | HR | (95% CI) |
| Body Mass Index | | | | | | | | | |
| Never smoker | 18.5-24.9 | 1.00 | | 1.00 | | 1.00 | | 1.00 | |
| | 25-29.9 | 1.07 | (0.93, 1.24) | 1.05 | (0.89, 1.24) | 1.00 | (0.82, 1.23) | 0.91 | (0.74, 1.12) |
| | ≥ 30 | 1.14 | (0.96, 1.34) | 1.03 | (0.89, 1.19) | 1.03 | (0.80, 1.31) | 0.96 | (0.75, 1.24) |
| Body Mass Index | | | | | | | | | |
| Ever smoker | 18.5-24.9 | 1.00 | | 1.00 | | 1.00 | | 1.00 | |
| | 25-29.9 | 0.92 | (0.80, 1.07) | 0.90 | (0.77, 1.04) | 0.58 | (0.40, 0.84) | 0.52 | (0.35, 0.76) |
| | ≥ 30 | 1.39 | (1.14, 1.69) | 1.24 | (1.01, 1.51) | 0.51 | (0.31, 0.84) | 0.40 | (0.24, 0.68) |
| Handgrip strength | | | | | | | | | |
| Never smoker | High | 1.00 | | 1.00 | | 1.00 | | 1.00 | |
| | Medium | 1.08 | (0.93, 1.27) | 1.04 | (0.89, 1.21) | 1.28 | (1.02, 1.60) | 1.20 | (0.96, 1.50) |
| | Low | 1.17 | (1.00, 1.37) | 1.12 | (0.96, 1.32) | 1.37 | (1.10, 1.71) | 1.35 | (1.08, 1.69) |
| Handgrip strength | | | | | | | | | |
| Ever smoker | High | 1.00 | | 1.00 | | 1.00 | | 1.00 | |
| | Medium | 1.05 | (0.89, 1.23) | 1.03 | (0.88, 1.22) | 0.90 | (0.61, 1.33) | 0.79 | (0.53, 1.17) |
| | Low | 1.12 | (0.95, 1.32) | 1.10 | (0.93, 1.30) | 0.91 | (0.59, 1.39) | 0.91 | (0.59, 1.41) |

Notes: Model 1 adjusted for age, sex, education, smoking, alcohol use, physical activity and handgrip strength / body mass index.

Model 2 additionally adjusted for baseline hypertension, cardiovascular disease, diabetes and cancer.