**Table S1.** Biomarkers of systemic inflammation in men and women.

| | Women (n = 148) | Men (n = 90) |
|---|---|---|
| TNF-$\alpha$[a] (au) | 3.1 ± 0.4 | 3.2 ± 0.4 |
| IL-6 (au) | 3.3 ± 0.6 | 3.4 ± 0.8 |
| IL-10 (au) | 3.7 ± 0.4 | 3.9 ± 0.4* |
| IL-18 (au) | 8.0 ± 0.5 | 8.3 ± 0.5* |
| MCP-1 (au) | 12.5 ± 0.4 | 12.5 ± 0.4 |
| MIP-1$\alpha$ (au) | 5.3 ± 0.5 | 5.5 ± 0.5* |

[a]Women n = 147. Au = arbitrary units. *$p < 0.05$ vs. women.

**Table S2.** Associations (β-coefficients and 95% CI) between muscle health and pro- and anti-inflammatory biomarkers in older women.

| | Skeletal muscle index[a] | 5-sit-to-stand |
|---|---|---|
| **Model 2** | | |
| CRP[b] | -0.379 (-0.619 to -0.139)* | - |
| Fibrinogen | -0.377 (-0.625 to -0.130)* | - |
| TNF-$\alpha$[a] | - | 0.189 (0.015 to 0.364)* |
| IL-6 | -0.369 (-0.622 to -0.130) | - |
| **Model 3** | | |
| CRP[b] | -0.330 (-0.590 to -0.070)* | - |
| Fibrinogen | -0.358 (-0.625 to -0.091)* | - |
| TNF-$\alpha$[a] | - | 0.184 (0.003 to 0.364)* |
| IL-6 | -0.375 (-0.648 to -0.102)* | - |
| **Model 4** | | |
| CRP[b] | -0.311 (-0.582 to -0.040)* | - |
| Fibrinogen | -0.415 (-0.692 to -0.139)* | - |
| TNF-$\alpha$[a] | - | 0.188 (0.007 to 0.369)* |
| IL-6 | -0.364 (-0.648 to -0.040)* | - |

[a]n = 147. [b]n = 146. Model 2 = Data adjusted by WC, age, medication use (Yes/No) and protein intake. Model 3 = Model 2 + average counts per minute. Model 4 = Model 3 + Participation in ≥2 muscle strengthening activities per week (Yes/No). *$p < 0.05$. CRP = C-reactive protein. TNF-$\alpha$ = tumor necrosis factor alpha. IL-6 = interleukin-6.