**Supplemental Table 1.** Effect and sample size calculations from each meta-analyses the effect of protein supplementation during RET on whole body and regional lean mass, strength, physical function and and muscle mass in older adults



**Supplemental Table 2.** RCTs included in the meta-analyses sorted by effectiveness, supplement comparison type (rows), a by inclusion into the meta-analyses (columns) and then by frequency of use in meta-analytical analysis.



**Supplemental Table 3**. Articles discussed or cited in meta-analyses examining the chronic effect of resistance exercise training with protein and/or amino acid nutrition on muscle size and strength in older adults.

|  |  |
| --- | --- |
|  | **Meta-Analysis** |
| **Author Year** | **Cermak 2012** | **Finger 2016** | **Gomes-Neto 2017** | **Morton 2017** | **Liao 2017** | **Luo 2017** | **Haaf 2018** | **Hidayat 2018** | **Hou 2019** | **Li 2019** | **Liao 2019** | **Labata-Lezaun 2020** | **O'Bryan 2020** |
| **Cermak 2012** | N/A |  |  |  |  |  |  |  |  |  |  |  |  |
| **Finger 2016** | N/A | N/A |  |  |  |  |  |  |  |  |  |  |  |
| **Gomes-Neto 2017** | N/A | N/A | N/A |  |  |  |  |  |  |  |  |  |  |
| **Morton 2017** | N/A | N/A | N/A | N/A |  |  |  |  |  |  |  |  |  |
| **Liao 2017** | N/A | N/A | N/A | N/A | N/A |  |  |  |  |  |  |  |  |
| **Luo 2017** | N/A | N/A | N/A | N/A | N/A | N/A |  |  |  |  |  |  |  |
| **Haaf 2018** | N/A | N/A | N/A | N/A | N/A | N/A | N/A |  |  |  |  |  |  |
| **Hidayat 2018** | N/A | N/A | N/A | N/A | N/A | N/A |  | N/A |  |  |  |  |  |
| **Hou 2019** | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |  |  |  |  |
| **Li 2019** | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |  |  |  |
| **Liao 2019** | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |  |  |
| **Labata-Lezaun 2020** | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| **O'Bryan 2020** | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| In meta-analysis, discussed or cited, filled in grey; Not included or mentioned, blank. N/A, not applicable. |

**Supplemental Table 4.** Inclusion and exclusion criteria used in meta-analyses examining the chronic effect of resistance exercise training with protein and/or amino acid nutrition on muscle size and strength in older adults.



**Supplemental Table 5.** Type of nutritional intervention included and actually used in meta-analyses examining the chronic effect of resistance exercise training with protein and/or amino acid nutrition on muscle size and strength in older adults.

