

Cell Reports Medicine, Volume 4

Supplemental information

**The anabolic response to protein ingestion
during recovery from exercise has no upper limit
in magnitude and duration *in vivo* in humans**

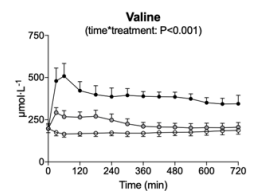
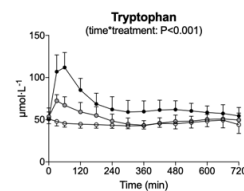
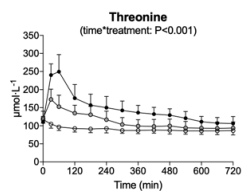
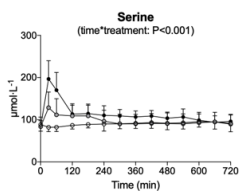
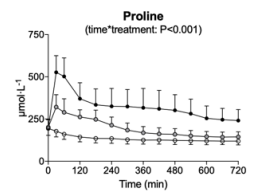
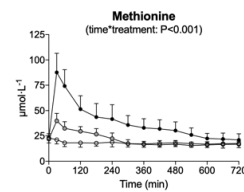
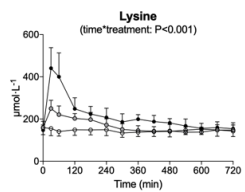
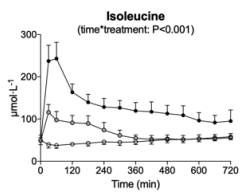
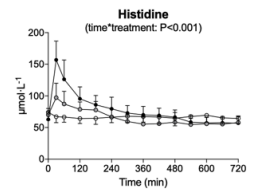
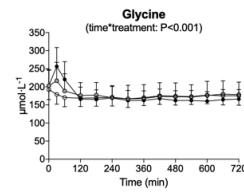
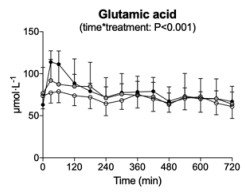
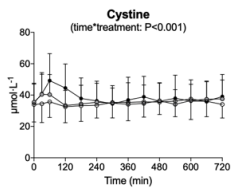
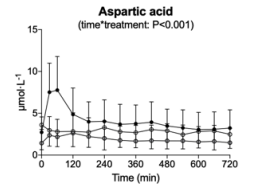
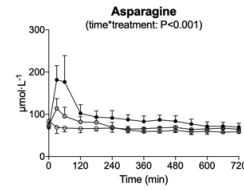
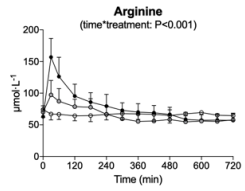
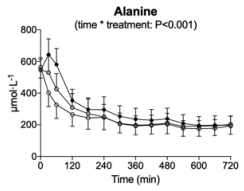
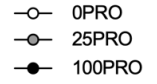
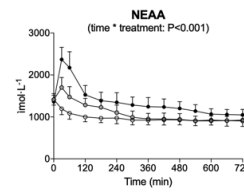
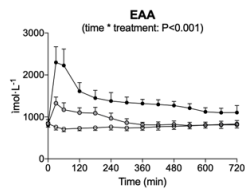
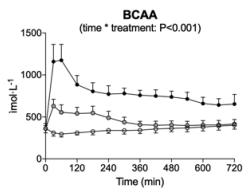
Jorn Trommelen, Glenn A.A. van Lieshout, Jean Nyakayiru, Andrew M. Holwerda, Joey S.J. Smeets, Floris K. Hendriks, Janneau M.X. van Kranenburg, Antoine H. Zorenc, Joan M. Senden, Joy P.B. Goessens, Annemie P. Gijzen, and Luc J.C. van Loon

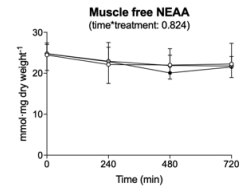
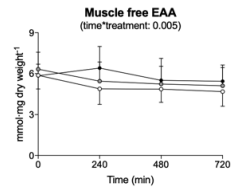
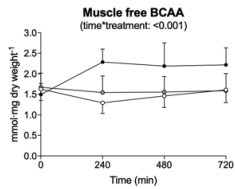
SUPPLEMENTAL TITLES AND LEGENDS

Supplemental Figure 1. Plasma amino acid responses following protein ingestion. Related to figure 1.

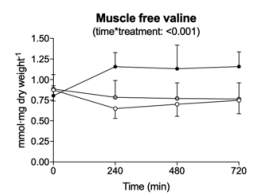
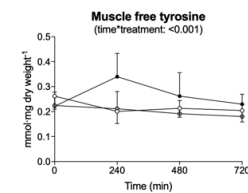
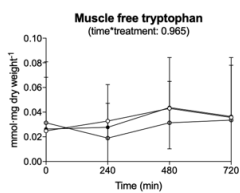
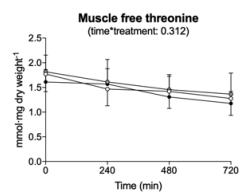
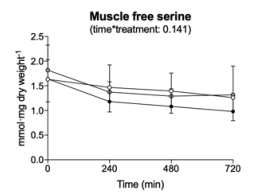
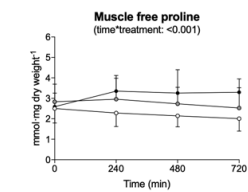
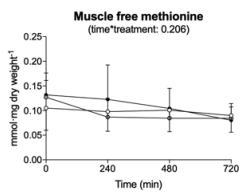
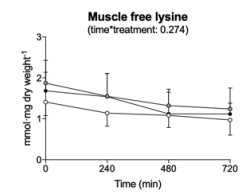
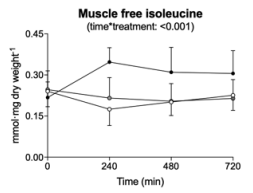
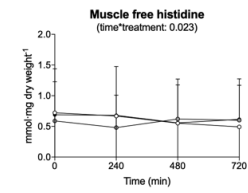
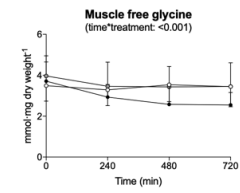
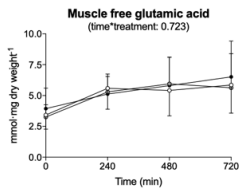
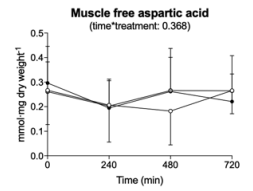
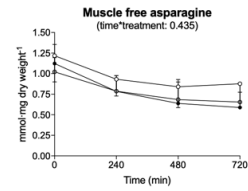
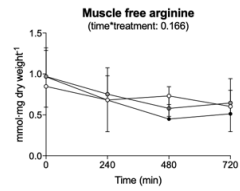
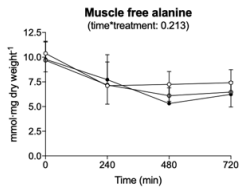
Supplemental Figure 2. Muscle free amino acid response following protein ingestion. Related to figure 3.

Supplemental table 1. Subject's characteristics. Related to figure 1.





○ 0PRO
□ 25PRO
● 100PRO



Supplemental table 1. Subject's characteristics

| | OPRO (n=12) | | 25PRO (n=12) | | 100PRO (n=12) | | Total (n=36) | |
|--|-----------------------|--------|------------------------|--------|-------------------------|--------|------------------------|--------|
| | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| Age (y) | 24 | ± 5 | 25 | ± 5 | 27 | ± 7 | 25 | ± 6 |
| Body mass (kg) | 75.5 | ± 14.1 | 79.1 | ± 10.4 | 75.7 | ± 10.6 | 76.8 | ± 11.6 |
| Height (m) | 1.79 | ± 0.08 | 1.83 | ± 0.07 | 1.81 | ± 0.08 | 1.81 | ± 0.08 |
| BMI ($\text{kg} \cdot \text{m}^{-2}$) | 23.5 | ± 3.2 | 23.6 | ± 3.2 | 23.0 | ± 2.5 | 23.4 | ± 2.9 |
| Body fat (%) | 17 | ± 6 | 16 | ± 6 | 14 | ± 4 | 16 | ± 5 |
| Fat free mass (kg) | 62.5 | ± 7.7 | 66.3 | ± 7.5 | 64.6 | ± 8.1 | 64.5 | ± 7.7 |
| Skeletal muscle mass (kg) | 32.3 | ± 4.1 | 34.3 | ± 4.4 | 33.4 | ± 4.6 | 33.4 | ± 4.3 |
| 1RM Leg Press (kg) | 215 | ± 61 | 197 | ± 44 | 204 | ± 39 | 205 | ± 48 |
| 1RM Leg Extension (kg) | 107 | ± 28 | 108 | ± 22 | 114 | ± 24 | 110 | ± 25 |
| 1RM Lat pulldown (kg) | 80 | ± 24 | 79 | ± 14 | 79 | ± 15 | 79 | ± 18 |
| 1RM Chest press (kg) | 89 | ± 33 | 90 | ± 23 | 93 | ± 21 | 91 | ± 25 |
| Energy intake ($\text{MJ} \cdot \text{kg} \text{ BM}^{-1} \cdot \text{d}^{-1}$) | 0.13 | ± 0.02 | 0.12 | ± 0.03 | 0.14 | ± 0.03 | 0.13 | ± 0.03 |
| Protein intake ($\text{g} \cdot \text{kg} \text{ BM}^{-1} \cdot \text{d}^{-1}$) | 1.4 | ± 0.4 | 1.1 | ± 0.3 | 1.5 | ± 0.3 | 1.3 | ± 0.3 |
| Carbohydrate intake ($\text{g} \cdot \text{kg} \text{ BM}^{-1} \cdot \text{d}^{-1}$) | 3.5 | ± 0.9 | 3.5 | ± 0.9 | 4.0 | ± 1.3 | 3.7 | ± 1.1 |
| Fat intake ($\text{g} \cdot \text{kg} \text{ BM}^{-1} \cdot \text{d}^{-1}$) | 1.1 | ± 0.3 | 1.1 | ± 0.3 | 1.2 | ± 0.4 | 1.1 | ± 0.3 |

Values represent mean ± SD. Dietary records data in PLA: n=11.