Supplemental Digital Content 2

**Mass spectrometry**

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| Content of ceramide and sphingosine derivatives from homogenized muscle measured at rest overnight fasted before and after 14 days of prolonged daily cycling in 6 older men. Values are in pmol·mg-1w.w. |
|  | Pre | Post | P-value |
| SPH | 0.0548 ± 0.0189 | 0.0631 ± 0.0094 | *p* = 0.217 |
| S1P | 0.0067 ± 0.0014 | 0.0058 ± 0.0006 | *p* = 0.289 |
| SPA | 0.0102 ± 0.0056 | 0.0091 ± 0.0078 | *p* = 0.751 |
| C14-cer | 0.0071 ± 0.0041 | 0.0074 ± 0.0040 | *p* = 1.000 |
| C16-cer | 0.2201 ± 0.0801 | 0.2649 ± 0.0642 | *p* = 0.162 |
| C18:1-cer | 0.0070 ± 0.0028 | 0.0059 ± 0.0025 | *p* = 0.524 |
| C18-cer | 0.4944 ± 0.0699 | 0.4367 ± 0.1284 | *p* = 0.100 |
| C20-cer | 0.0388 ± 0.0105 | 0.0446 ± 0.0147 | *p* = 0.131 |
| C22-cer | 0.2894 ± 0.0656 | 0.3422 ± 0.1215 | *p* = 0.180 |
| C24:1-cer | 1.5478 ± 0.5669 | 1.2373 ± 0.3821 | *p* = 0.035 \* |
| C24-cer | 0.5495 ± 0.0964 | 0.5499 ± 0.1324 | *p* = 0.990 |

Abbreviations: SPH, sphingosine; S1P, sphingosine-1-phosphate; SPA, sphinganinge; C14-cer, *N*-myristoyl-D-*erythro*-sphingosine C16-cer, *N*-palmitoyl-D-*erythro*-sphingosine; C18:1-cer, *N*-oleoyl-D-*erythro*-sphingosine; C18-cer, *N*-stearoyl-D-*erythro*-sphingosine; C20-cer, *N*-arachidoyl-D-*erythro*-sphingosine; C22-cer, *N*-behenoyl-D-*erythro*-sphingosine; C24:1-cer, *N*-nervonoyl-D-*erythro*-sphingosine; C24-cer, *N*-lignoceroyl-D-*erythro*-sphingosine. The values are mean ± SEM. \*: (p<0.05) Pre vs. Post.