**Table SDC 4.** **Additional cerebrovascular flow and function measures of the acute impact of prolonged sitting (SIT) and interruptions in prolonged sitting (BREAKS).** Measured after finishing the 16-week familiarization period (T1), n=25 for vascular measurements and n=24 for cerebrovascular measurements. P-values represent the acute impact of 3-hour sitting (A), and whether SIT *versus* BREAKS modifies this effect (A\*B). Values are corrected for the sequence of SIT and BREAKS measurement days. Data are reported as mean±SEM.

|  | Pre-intervention (T1) | **P-values** |
| --- | --- | --- |
| **Breaks (B)** | SIT | BREAKS |   |   |
| **Acute (A)** | 0h | 3h | 0h | 3h | **A** | **A\*B** |
| Cerebrovascular flow and function |
| Hypocapnia |
|   | MAP (mmHg) | 83±2 | 85±2 | 86±2 | 85±2 | 0.65 | 0.21 |
|   | CBFv (cm/s) | 36.0±1.5 | 33.0±1.5 | 32.1±1.5 | 32.0±1.5 | 0.07 | 0.08 |
|   | CVCi (cm/s/mmHg) | 0.43±0.02 | 0.39±0.02 | 0.38±0.02  | 0.38±0.02 | 0.09 | 0.07 |
| Hypercapnia |
|   | MAP (mmHg) | 115±2 | 114±2 | 116±2 | 116±2 | 0.66 | 0.80 |
|   | CBFv (cm/s) | 66.8±3.5  | 64.0±3.6 | 60.6±3.4 | 61.4±3.4 | 0.59 | 0.33 |
|  | CVCi (cm/s/mmHg) | 0.58±0.03 | 0.56±0.03 | 0.52±0.03  | 0.53±0.03 | 0.92 | 0.55 |
| Slow sit-stands |
|   | MAP (mmHg) | 100±1 | 103±1 | 99±1 | 102±1 | **<0.01** | 0.99 |
|   | CBFv (cm/s) | 46.0±2.3 | 43.0±2.3 | 42.0±2.2 | 45.5±2.4 | 0.87 | **0.03** |
|   | CVCi (cm/s/mmHg) | 0.46±0.02 | 0.42±0.2 | 0.43±0.2 | 0.45±0.02 | 0.47 | **0.04** |
|  | Gain (cm/s/mmHg) | 0.39±0.03 | 0.40±0.03 | 0.37±0.03 | 0.41±0.03 | 0.28 | 0.60 |
|  | nGain (%/mmHg) | 0.86±0.07 | 0.96±0.07 | 0.90±0.07 | 0.91±0.7 | 0.26 | 0.30 |
|  | Phase (degrees) | 48.7±3.8 | 44.1±3.8 | 45.9±3.6 | 43.7±3.9 | 0.24 | 0.67 |
|  | Coherence (unit) | 0.60±0.04 | 0.61±0.04 | 0.57±0.03 | 0.61±0.04 | 0.41 | 0.62 |
|  | Gain BRS (ms/mmHg) | 3.33±0.44 | 3.74±0.44 | 3.29±0.42 | 3.55±0.45 | 0.27 | 0.80 |