

**Supplementary Table 2.** Comparison of ventilator parameters during periods of low and high sustained acceleration. For each minute, the median sustained acceleration and the mean of the ventilator parameters were calculated. For each recording, the 1-minute period with lowest and highest sustained acceleration was chosen. Only recordings when there was at least 0.25 m/sec<sup>2</sup> difference between the highest and lowest sustained acceleration have been included (n=33). Group means and standard deviations of these data are shown in table.

Abbreviations: VT<sub>emand</sub>: expired tidal volume of ventilator inflations; MV: minute ventilation; PIP: peak inflating pressure; FiO<sub>2</sub>: fraction of inspired oxygen; SD: standard deviation.

	Minute with lowest sustained acceleration	Minute with largest sustained acceleration	
	Group mean (SD)	Group mean (SD)	P value *
Acceleration (m/sec <sup>2</sup> ) &	0.32 (0.19)	0.82 (0.26)	<0.0001
VT <sub>emand</sub> (mL/kg)	5.25 (1.72)	5.34 (1.92)	0.47
MV (mL/kg/min)	0.32 (0.12)	0.31 (0.12)	0.93
PIP (cmH <sub>2</sub> O)	21.1 (6.6)	20.7 (6.8)	0.66
FiO <sub>2</sub> (%)	45.3 (28.7)	44.2 (27.8)	0.27

\*: Two-tailed paired Student T-test; &: Euclidean length of acceleration vector (see Methods).