**Supplementary Table S2**

Invasively obtained volitional respiratory muscle strength stratified by gender

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Healthy volunteers** | **LLN\*\*** | **P-value\*** |
|  | **Overall (n=64)** | **Males (n=25)** | **Females (n=39)** | **Males** | **Females** |
| **Anthropometrics** |
| Age (years) | 34±13 | 36±16 | 35±12 |  |  | NS |
| Height (cm) | 175±9 | 184±6 | 171±6 |  |  | <0.01 |
| BMI (kg/m²) | 25±4 | 26±4 | 24±4 |  |  | NS |
| **Invasive manometry during volitional breathing maneuvers** |
| Tidal breathing |
| Pdi (cmH2O) | 7 ± 3 | 8 ± 3 | 7 ± 7  | 7 (5) | 7 (5) | NS |
| Pes (cmH2O) | -3 ± 3 | -3 ± 3  | -4 ± 3 | -1 (-1) | -3 (-1) | NS |
| Pgas (cmH2O) | 4 ± 1 | 4 ± 3 | 3 ± 1 | 3 (1) | 3 (1) | NS |
| Sniff maneuver |  |  |  |  |  |  |
| Pdi (cmH2O) | 86 ± 27 | 102 ± 24.48 | 75 ± 22 | 91 (78) | 68 (57) | <0.01 |
| Pes (cmH2O) | -63 ± 31 | -82 ± 26 | -49 ± 27 | -71 (-57) | -41 (-41) | <0.01 |
| Pgas (cmH2O) | 21 ± 18 | 20 ± 12 | 26 ± 20 | 16 (12) | 15 (7) | NS |
| Meuller maneuver |
| Pdi (cmH2O) | 86 ± 38 | 93 ± 42  | 82 ± 36 | 76 (63) | 69 (48) | NS |
| Pes (cmH2O) | -46 ± 38 | -53 ± 44  | -42 ± 33 | --35 (-11) | -33 (-13) | NS |
| Pgas (cmH2O) | 41 ± 37 | 41 ± 38  | 40 ± 37 | -35 (-10) | -33 (11) | NS |
| Valsalva maneuver |
| Pdi (cmH2O) | 52 ± 37 | 60 ± 39  | 48 ± 35  | 44 (34) | 37 (19) | NS |
| Pes (cmH2O) | 49 ± 44 | 61 ± 48  | 42 ± 39 | 42 (12) | 30 (11) | NS |
| Pgas (cmH2O) | 101 ± 42 | 120 ± 42 | 89 ± 38 | 103 (91) | 78 (64) | <0.01 |
| Cough maneuver |
| Pdi (cmH2O) | 42 ± 49 | 46 ± 56  | 39 ± 45  | 25 (1) | 25 (1) | NS |
| Pes (cmH2O) | 59 ± 53 | 71 ± 63  | 50 ± 44  | 46 (16) | 35 (16) | NS |
| Pgas (cmH2O) | 99 ± 45 | 118 ± 42  | 88 ± 42  | 102 (87) | 75 (52) | NS |
| Feedback maneuver |  |  |  |  |  |  |
| Pdi (cmH2O) | 102 ± 38 | 101 ± 41  | 103 ± 37 | 84 (67) | 91 (64) | NS |
| Pes (cmH2O) | -22 ± 57 | -15 ± 65  | -27 ± 52  | -11 | -11 | NS |
| Pgas (cmH2O) | 79 ± 45 | 86 ± 45  | 73 ± 46  | 68 | 59 | NS |

Data are presented as mean ± standard deviation or percentage, unless stated otherwise.

\*\*LLN, lower limit of normal of the 95% C.I. around the mean (the 5 th percentile respectively); NS, not significant; Pdi, transdiaphragmatic pressure (gastric pressure – esophageal pressure); Pes, esophageal pressure; Pgas, gastric pressure.