

Supplementary Table 1: Effect Sizes with 95% Confidence Intervals of PEEP Settings on Cardiac Parameters

<i>n</i> =26	PEEP, cmH ₂ O			
	8	10	13	15
Cardiac Energetics				
PVA, mmHg x mL				
Healthy	-568 [-1157, 21]	-1682 [-2207,-1156] ‡	-2992 [-3582,-2403] ‡	-3738 [-4263,-3212] ‡
LV-CS	-264 [-812, 284]	-795 [-1291,-298] †	-857 [1406,-308] †	-1425 [-1922,-929] ‡
MPE, mmHg x L/min				
Healthy	-54 [-12, 5]	-121 [-175,-67] ‡	-204 [-264,-143] ‡	-251(-304,-197) ‡
LV-CS	-24 [-64, 16]	-48 [-84,-11] *	-44 [-85,-41] *	-64 [-100,-28] ‡
SW, mmHg x mL				
Healthy	-181 [-585, 224]	-858 [-1,219,-497] ‡	-1,473 [-1,877,-1,068] ‡	-1,853 [-2,214, 1,492] ‡
LV-CS	-61 [-410, 288]	-364 [-680,-48] *	-336 [-685, 13]	-681 [-996,-365] ‡
PE, mmHg x mL				
Healthy	-388 [-870, 94]	-824 [-1,254,-393] ‡	-1520 [-2,002,-1,039] ‡	-1885 [-2,315,-1,455] ‡
LV-CS	-209 [-507, 88]	-431 [-701,-162] †	-528 [-826,-230] ‡	-745 [-1,1015,-476] ‡
CE, %				
Healthy	1 [-2, 4]	1 [-2, 3]	3 [-1, 6]	4 [2, 7] †
LV-CS	1 [-1, 3]	1 [-1, 3]	2 [0, 4]	1 [-1, 3]
Cardiac Function				
CO, L/min				
Healthy	1.1 [-0.1, 2.2]	-0.1 [-1.1, 0.8]	0.9 [-0.3, 2.0]	-0.2 [-1.1, 0.7]
LV-CS	0.8 [-0.3, 1.8]	-0.1 [-0.9, 0.7]	0.8 [-0.2, 1.8]	-0.1 [-0.9, 0.7]
SV, mL				
Healthy	0 [-5, 5]	-3 [-7, 2]	-4 [-10, 1]	-5 [-10, 0] *
LV-CS	0 [-5, 5]	-3 [-8, 2]	-2 [-7, 3]	-5 [-10,-0] *
HR, bpm				
Healthy	-1 [-5, 2]	-1 [-4, 2]	-1 [-4, 2]	-1 [-4, 1]
LV-CS	1 [-4, 2]	1 [-2, 4]	1 [-3, 4]	4 [1, 7] *
Ees, mmHg/mL				
Healthy	0.05 [-0.08, 0.18]	0.01 [-0.10, 0.13]	0.18 [0.05, 0.31] †	0.11 [-0.01, 0.22]
LV-CS	0.00 [-0.07, 0.07]	0.05 [-0.01, 0.11]	0.02 [-0.05, 0.09]	0.04 [-0.02, 0.10]

dP/dt(max), mmHg/s				
Healthy	-43 [-164, 78]	-139 [-287,-71] †	-276 [-397,-155] ‡	-433 [-541,-325] ‡
LV-CS	-31 [-93, 30]	-73 [-129,-17] *	-73 [-134,-11] *	-132 [-188,-76] ‡
LVEF, %				
Healthy	0.5 [-2.5, 3.5]	0.9 [-1.8, 3.6]	2.4 [-0.6, 5.4]	4.1 [1.4, 6.8]
LV-CS	0.1 [-1.6, 1.8]	0.7 [-0.8, 2.2]	0.8 [-0.9, 2.5]	0.4 [-1.1, 1.9]
Ea/Ees ratio				
Healthy	-0.06 [-0.28, 0.17]	-0.09 [-0.29, 0.11]	-0.14 [-0.36, 0.08]	-0.33 [-0.53,-0.13] †
LV-CS	-0.09 [-0.37, 0.19]	-0.15 [-0.40, 0.10]	-0.08 [-0.36, 0.20]	0.3 [-0.23, 0.28]
Afterload Parameters				
Ea, mmHg/mL				
Healthy	-0.12 [-0.36, 0.11]	-0.19 [-0.39, 0.02]	-0.28 [-0.51,-0.04] *	-0.40 [-0.61,-0.19] ‡
LV-CS	-0.14 [-0.30, 0.02]	-0.11 [-0.26, 0.04]	-0.12 [-0.28, 0.04]	-0.10 [-0.25, 0.04]
LVESP, mmHg				
Healthy	-4 [-9, 1]	-10 [-15,-5] ‡	-17 [-22,-11] ‡	-23 [-28,-19] ‡
LV-CS	-3 [-6, 1]	-4 [-7,-0] *	-5 [-9,-1] †	-7 [-10,-4] ‡
P_{max}, mmHg				
Healthy	-2 [-7, 3]	-9 [-13,-4] ‡	-16 [-21,-11] ‡	-21 [-26,-17] ‡
LV-CS	-1 [-5, 2]	-4 [-7,-0] *	-4 [-8,-0] *	-8 [-11,-5] ‡
LV Wall Stress, mmHg				
Healthy	-15 [-33, 34]	-32 [-48,-15] ‡	-57 [-76,-39] ‡	-73 [-90,-57] ‡
LV-CS	-8 [-20, 3]	-16 [-27,-5] †	-20 [-32,-8] †	-28 [-39,-18] ‡
LVESV, mL				
Healthy	-5 [-10, 1]	-9 [-14,-4] ‡	-18 [-24,-13] ‡	-23 [-28,-18] ‡
LV-CS	-2 [-7, 2]	-7 [-11,-3] †	-8 [-12,-3] †	-11 [-15,-7] ‡
Preload Parameters				
LVEDV, mL				
Healthy	-2 [-7, 2]	-10 [-14,-6] ‡	-20 [-24,-15] ‡	-26 [-30,-22] ‡
LV-CS	-1 [-9, 7]	-9 [-16,-1] *	-8 [-16,-0] *	-14 [-22,-7] ‡
LVEDP, mmHg				
Healthy	0.2 [-0.4, 0.9]	0.4 [-0.2, 1.0]	0.2 [-0.4, 0.9]	0.4 [-0.2, 1.0]
LV-CS	-0.6 [-2, 1]	-0.8 [-2.2, 0.6]	-1.1 [-2.7, 0.4]	-2.0 [-3.4,-0.6]

Data from the stepwise PEEP increase from the combined main analysis (n=26). Data are presented as mean effect size with 95% confidence interval (CI) and associated *P*-values are derived from a repeated measures mixed model with positive end-expiratory pressure (PEEP) as fixed effect and each pig at a given state as random effects.

* $P < 0.05$ vs. PEEP at 5 cmH₂O

+ $P < 0.01$ vs. PEEP at 5 cmH₂O

‡ $P < 0.001$ vs. PEEP at 5 cmH₂O

Abbreviations as in Table 1, 2