



# 1 Supplemental Materials

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**Table A.** Descriptive statistics of the exercise group.

	Day 0		Day 10		Day 60	
	Exercise Group (n = 18)		Exercise Group (n = 18)		Exercise Group (n = 18)	
	mean ± SD	median ± IQR	mean ± SD	median ± IQR	mean ± SD	median ± IQR
Pulse (bpm)	70.99 ± 12.57	70.38 ± 23.00	69.61 ± 6.98	69.00 ± 10.25	66.89 ± 9.39	67.50 ± 9.00
BP-Systole (mmHg)	125.28 ± 14.46	123.5 ± 14.50	126.44 ± 13.60	124.0 ± 22.25	125.72 ± 12.08	129.5 ± 18.25
BP-Diastole (mmHg)	76.44 ± 9.97	78.0 ± 15.00	77.83 ± 8.41	76.0 ± 14.50	79.33 ± 7.75	79.5 ± 8.50
Oral FeNO (ppb)	40.78 ± 23.03	38.0 ± 39.00	22.89 ± 12.42	21.0 ± 19.00	30.56 ± 24.16	23.0 ± 44.00
Nasal FeNO (ppb)	465.33 ± 178.07	451.0 ± 146.0	363.56 ± 195.63	354.0 ± 346.0	390.67 ± 248.82	367.0 ± 319.0
Nasal Eosinophil Count (%)	6.72 ± 13.43	1.95 ± 5.40	2.63 ± 3.33	1.31 ± 2.18	7.59 ± 15.02	1.65 ± 6.53
Mucociliary Clearance Time (min)	11.13 ± 5.44	15.00 ± 7.56	8.59 ± 5.54	7.21 ± 10.67	11.51 ± 5.39	15.00 ± 7.88
<b>Spirometry</b>						
FVC (%)	108.17 ± 17.66	108.0 ± 12.75	108.33 ± 15.88	108.0 ± 10.75	111.50 ± 13.46	110.0 ± 10.25
FEV1 (%)	96.28 ± 20.98	98.5 ± 21.25	98.44 ± 18.92	97.5 ± 24.00	98.28 ± 16.58	97.0 ± 28.75
FEV1/FVC (%)	93.39 ± 11.81	95.0 ± 17.00	94.83 ± 10.79	98.0 ± 17.00	92.39 ± 10.75	94.0 ± 18.25
PEF (%)	99.50 ± 26.37	102.5 ± 35.00	99.33 ± 22.09	100.0 ± 25.00	103.17 ± 20.69	99.0 ± 26.75
MEF 25%–75%	73.33 ± 31.74	71.5 ± 33.50	78.61 ± 30.67	75.5 ± 35.75	73.28 ± 29.91	71.0 ± 32.75
<b>Differential Blood Count</b>						
WBC (10 <sup>3</sup> /μl)	7.41 ± 1.81	7.20 ± 2.25	6.42 ± 1.30	6.16 ± 1.48	7.01 ± 1.12	6.92 ± 1.22
RBC (106/μl)	4.82 ± 0.37	4.79 ± 0.41	4.79 ± 0.39	4.79 ± 0.34	4.79 ± 0.36	4.68 ± 0.44
Blood Neutrophil Count (%)	59.81 ± 8.52	59.96 ± 12.95	57.64 ± 8.81	58.75 ± 13.35	57.37 ± 9.04	59.10 ± 12.98
Blood Eosinophil Count (%)	3.85 ± 2.95	3.35 ± 1.92	4.28 ± 4.85	2.90 ± 3.35	4.18 ± 3.90	2.95 ± 2.50
<b>Six-Minute Walk Test</b>						
6MWT-Distance (%)	104.35 ± 8.17	105.99 ± 10.97	106.13 ± 6.59	105.75 ± 11.25	105.69 ± 7.72	106.80 ± 11.78
Peak Respiratory Frequency (1/min)	36.66 ± 10.00	36.35 ± 11.40	33.16 ± 8.58	35.10 ± 6.67	30.71 ± 12.73	35.90 ± 10.50
Peak Minute Ventilation (L/min)	52.67 ± 14.27	50.55 ± 17.52	55.46 ± 12.52	54.30 ± 19.97	53.46 ± 11.11	53.55 ± 19.05
BORG Scale Dyspnea Post-Test	2.11 ± 1.22	2.0 ± 2.00	1.72 ± 1.10	2.0 ± 2.38	1.50 ± 1.22	1.5 ± 1.50
BORG Scale Fatigue Post-Test	2.22 ± 1.10	3.0 ± 2.00	1.97 ± 1.05	2.0 ± 2.00	1.78 ± 1.34	2.0 ± 1.00
<b>RhinAsthma Questionnaire</b>						
Total Score	19.09 ± 12.20	15.87 ± 20.18	14.80 ± 10.97	11.27 ± 13.06	14.20 ± 12.70	7.75 ± 10.66
Limitation in Daily Life	15.80 ± 12.48	11.11 ± 23.89	12.72 ± 11.68	10.00 ± 18.89	11.98 ± 12.10	8.89 ± 22.78
Respiratory Problems	20.37 ± 14.24	16.67 ± 14.39	16.16 ± 14.55	10.61 ± 18.18	15.66 ± 13.60	12.12 ± 14.39
Rhinoconjunctivitis Score	21.69 ± 15.77	21.43 ± 26.19	11.90 ± 11.11	9.52 ± 13.10	15.61 ± 16.15	9.52 ± 16.67
Treatment and Medication Problems	14.44 ± 14.86	10.00 ± 18.33	11.48 ± 16.93	6.67 ± 13.33	9.26 ± 16.19	0.00 ± 13.33
Impairment in Sensory Perceptions	23.15 ± 17.52	20.83 ± 22.92	21.76 ± 16.94	25.00 ± 22.92	18.52 ± 17.28	16.67 ± 16.67
<b>Questionnaires</b>						
Asthma Control Test	21.39 ± 3.57	22.5 ± 4.50	2.61 ± 2.20	23.0 ± 3.75	22.61 ± 4.09	24.0 ± 2.75
Visual Analogue Scale–General Health	71.66 ± 14.10	85.50 ± 19.00	81.78 ± 14.99	85.50 ± 6.25	81.06 ± 13.80	71.22 ± 13.75
Visual Analogue Scale–Allergic Symptoms	71.31 ± 22.17	74.5 ± 12.19	85.17 ± 20.07	94.5 ± 11.00	83.28 ± 13.24	86.5 ± 11.50

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**Table B.** Descriptive statistics of the control group.

	Day 0		Day 10		Day 60	
	Control Group (n = 22)		Control Group (n = 22)		Control Group (n = 22)	
	mean ± SD	median ± IQR	mean ± SD	median ± IQR	mean ± SD	median ± IQR
Pulse (bpm)	68.73 ± 8.81	67.00 ± 10.75	69.18 ± 7.92	69.50 ± 9.00	68.73 ± 8.58	69.50 ± 8.75
BP-Systole (mmHg)	118.45 ± 12.35	117.0 ± 20.00	116.32 ± 9.74	116.0 ± 14.00	115.45 ± 8.85	116.0 ± 12.50
BP-Diastole (mmHg)	72.95 ± 10.19	70.0 ± 17.75	70.73 ± 7.72	69.5 ± 9.50	70.77 ± 8.53	69.0 ± 8.75
Oral FeNO (ppb)	38.91 ± 22.30	36.0 ± 22.50	38.45 ± 26.55	32.5 ± 26.25	52.05 ± 49.94	39.0 ± 21.75
Nasal FeNO (ppb)	430.64 ± 187.93	421.0 ± 207.0	437.55 ± 202.33	390 ± 131.0	482.59 ± 167.78	475.0 ± 283.25
Nasal Eosinophil Count (%)	5.70 ± 14.43	1.16 ± 1.56	3.71 ± 4.77	1.53 ± 3.94	8.21 ± 10.84	3.21 ± 7.22
Mucociliary Clearance Time (min)	12.43 ± 5.67	13.62 ± 6.81	11.20 ± 5.10	11.75 ± 7.19	11.66 ± 4.59	15.00 ± 7.07
<b>Spirometry</b>						
FVC (%)	110.32 ± 16.08	109.0 ± 24.50	110.27 ± 13.32	113.0 ± 20.50	109.14 ± 13.86	113.5 ± 24.25
FEV1 (%)	103.73 ± 13.21	99.5 ± 18.50	104.27 ± 11.42	104.5 ± 19.50	102.91 ± 11.62	103.0 ± 18.75
FEV1/FVC (%)	97.73 ± 8.17	99.5 ± 9.75	98.55 ± 8.25	98.5 ± 10.25	98.55 ± 8.57	98.0 ± 12.25
PEF (%)	98.95 ± 15.12	97.0 ± 24.75	105.86 ± 14.94	104.5 ± 25.50	103.64 ± 15.56	97.0 ± 25.25
MEF 25%–75%	87.18 ± 21.81	88.5 ± 35.00	87.68 ± 23.24	87.5 ± 35.00	86.27 ± 22.71	81.5 ± 36.25
<b>Differential Blood Count</b>						
WBC (10 <sup>9</sup> /μl)	5.48 ± 1.51	5.38 ± 2.15	6.10 ± 1.41	6.24 ± 1.70	5.63 ± 1.46	5.89 ± 1.66
RBC (106/μl)	4.97 ± 0.85	4.75 ± 0.49	4.75 ± 0.38	4.62 ± 0.45	4.73 ± 0.36	4.73 ± 0.42
Blood Neutrophil Count (%)	55.55 ± 8.03	56.00 ± 10.38	56.71 ± 7.58	56.90 ± 9.50	56.53 ± 7.28	56.70 ± 11.02
Blood Eosinophil Count (%)	3.37 ± 1.80	3.15 ± 2.40	3.38 ± 2.05	3.10 ± 2.90	3.85 ± 2.21	3.30 ± 2.67
<b>Six Minute Walk Test</b>						
6MWT-Distance (%)	103.36 ± 10.49	102.59 ± 15.75	108.79 ± 9.51	106.64 ± 14.41	107.60 ± 8.74	107.53 ± 12.96
Peak Respiratory Frequency (1/min)	30.78 ± 4.08	31.10 ± 4.50	36.55 ± 8.11	34.10 ± 10.52	35.31 ± 7.09	35.70 ± 7.45
Peak Minute Ventilation (L/min)	50.64 ± 16.06	47.35 ± 14.85	56.30 ± 16.02	55.80 ± 17.73	54.97 ± 17.82	55.05 ± 26.07
BORG Scale Dyspnea Post-Test	1.73 ± 1.07	2.0 ± 1.00	1.95 ± 1.67	2.0 ± 2.38	1.55 ± 1.66	1.0 ± 1.50
BORG Scale Fatigue Post-Test	1.61 ± 1.22	2.0 ± 1.38	2.07 ± 1.91	2.0 ± 2.38	1.93 ± 1.89	2.0 ± 1.38
<b>RhinAsthma Questionnaire</b>						
Total Score	20.28 ± 14.04	19.25 ± 11.34	15.45 ± 13.55	11.89 ± 15.10	22.23 ± 18.46	13.94 ± 26.98
Limitation in Daily Life	18.99 ± 18.74	11.11 ± 27.78	13.84 ± 16.83	7.78 ± 15.00	17.98 ± 18.21	8.89 ± 22.22
Respiratory Problems	17.91 ± 16.86	12.12 ± 16.67	13.50 ± 15.56	6.06 ± 18.18	17.36 ± 16.39	13.64 ± 22.73
Rhinoconjunctivitis Score	20.78 ± 18.50	14.29 ± 27.38	21.43 ± 18.34	16.67 ± 27.38	30.74 ± 26.32	26.19 ± 32.14
Treatment and Medication Problems	16.06 ± 18.01	6.67 ± 33.33	10.30 ± 16.93	0.00 ± 20.00	18.18 ± 22.18	10.00 ± 26.67
Impairment in Sensory Perceptions	27.65 ± 19.65	25.00 ± 22.92	18.18 ± 17.75	16.67 ± 25.00	26.89 ± 27.21	16.67 ± 31.25
<b>Questionnaires</b>						
Asthma Control Test	22.86 ± 3.20	24.0 ± 2.75	23.68 ± 2.64	25.0 ± 1.75	23.32 ± 3.09	24.0 ± 2.00
Visual Analogue Scale–General Health	80.77 ± 17.82	87.50 ± 15.25	79.27 ± 19.50	85.00 ± 15.75	76.59 ± 22.72	79.50 ± 26.00
Visual Analogue Scale–Allergic Symptoms	82.45 ± 13.47	85.0 ± 16.50	83.59 ± 11.90	82.5 ± 19.75	67.50 ± 25.95	74.0 ± 24.25

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