

# **Effects of chronic cholinergic stimulation associated with aerobic physical training on cardiac morphofunctional and autonomic parameters in spontaneously hypertensive rats**

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## **Results**

Aerobic physical training increased the total variance, oscillation of LF in absolute units, and LF/HF ratio. In turn, pyridostigmine bromide treatment increased the oscillation of both LF and HF in absolute units. On the other hand, the association of both to aerobic physical training attenuated the oscillation of HF in absolute units and increased the LF/HF ratio.

**Table S1.** Values of cardiac autonomic tonic balance after the pharmacological blockade with methylatropine and propranolol and heart rate variability.

	UNTRAINED			TRAINED			Training Factor		Drug Factor		Interaction	
	Vehicle	Pyr-5mg	Pyr-15mg	Vehicle	Pyr-5mg	Pyr-15mg	F(d.f.)	P	F(d.f.)	P	F(d.f.)	P
<b>Autonomic tonic control</b>												
HR / methylatropine, bpm	397 ± 4	376 ± 3	357 ± 5	380 ± 5	362 ± 3	360 ± 2	F <sub>(1,53)</sub> : 7.75	0.008	F <sub>(2, 53)</sub> : 26.03	<0.001	F <sub>(2,53)</sub> : 3.15	0.052
Δ HR / methylatropine, bpm	18 ± 2	32 ± 1	31 ± 3	30 ± 1	27 ± 1	46 ± 4	F <sub>(1,53)</sub> : 18.21	<0.001	F <sub>(2, 53)</sub> : 23.39	<0.001	F <sub>(2,53)</sub> : 13.99	<0.001
HR / propranolol, bpm	307 ± 7	299 ± 9	285 ± 2	300 ± 8	288 ± 5	278 ± 7	F <sub>(1,53)</sub> : 4.23	0.045	F <sub>(2, 53)</sub> : 8.97	<0.001	F <sub>(2, 53)</sub> : 0.08	0.925
Δ HR / propranolol, bpm	72 ± 5	45 ± 7	41 ± 5	50 ± 2	47 ± 8	36 ± 5	F <sub>(1,53)</sub> : 7.89	0.007	F <sub>(2, 53)</sub> : 21.17	<0.001	F <sub>(2, 53)</sub> : 5.61	0.006
IHR, bpm	331 ± 5	305 ± 2	296 ± 6	315 ± 5	295 ± 4	295 ± 2	F <sub>(1,53)</sub> : 5.75	0.002	F <sub>(2, 53)</sub> : 17.49	<0.001	F <sub>(2, 53)</sub> : 1.29	0.283
<b>Heart rate variability</b>												
PI, ms	158 ± 2	174 ± 5	184 ± 2	171 ± 3	179 ± 3	191 ± 5	F <sub>(1,53)</sub> : 4.79	0.033	F <sub>(2,53)</sub> : 12.06	<0.001	F <sub>(2,53)</sub> : 0.36	0.700
Variance, ms <sup>2</sup>	30 ± 2	37 ± 2	37 ± 1	40 ± 3	42 ± 3	42 ± 2	F <sub>(1,53)</sub> : 6.44	0.014	F <sub>(2,53)</sub> : 1.12	0.334	F <sub>(2,53)</sub> : 0.38	0.687
LF, ms <sup>2</sup>	1.5 ± 0.1	1.4 ± 0.1	2.3 ± 0.2	1.7 ± 0.1	2.1 ± 0.06	2.5 ± 0.1	F <sub>(1,53)</sub> : 8.76	0.005	F <sub>(2,53)</sub> : 15.8	<0.001	F <sub>(2,53)</sub> : 1.82	0.173
LF, nu	21 ± 2	21 ± 3	17 ± 0.6	22 ± 0.7	20 ± 3	25 ± 2	F <sub>(1,53)</sub> : 2.36	0.131	F <sub>(2,53)</sub> : 0.14	0.874	F <sub>(2,53)</sub> : 3.10	0.054
HF, ms <sup>2</sup>	4.5 ± 0.3	5.6 ± 0.4	11 ± 0.3	6.6 ± 0.4	5.7 ± 0.5	7.0 ± 0.4	F <sub>(1,53)</sub> : 3.74	0.059	F <sub>(2,53)</sub> : 52.3	<0.001	F <sub>(2,53)</sub> : 32.2	<0.001
HF, nu	79 ± 2	79 ± 3	83 ± 0.6	78 ± 1	80 ± 3	74 ± 2	F <sub>(1,53)</sub> : 1.66	0.204	F <sub>(2,53)</sub> : 0.1	0.906	F <sub>(2,53)</sub> : 1.22	0.304
LF/HF ratio	0.29 ± 0.03	0.24 ± 0.01	0.20 ± 0.01	0.25 ± 0.03	0.31 ± 0.05	0.34 ± 0.02	F <sub>(1,53)</sub> : 5.86	0.019	F <sub>(2,53)</sub> : 0.06	0.945	F <sub>(2,53)</sub> : 5.72	0.006

All values are presented as the mean ± SEM. Pyr-5 mg, pyridostigmine bromide treatment at a dose of 5 mg/kg/day; Pyr-15 mg, pyridostigmine bromide treatment at a dose of 15 mg/kg/day bpm, beats per minute; HR, heart rate; Δ HR, heart rate variation delta; IHR, intrinsic heart rate; PI, pulse interval; ms, milliseconds; LF, low frequency band; nu, normalized units; HF, high frequency band; F, factor; df, degrees of freedom.