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**POST-EXERCISE HYPOTENSION AND MECHANISMS ARE DIFFERENT IN THE MORNING AND EVENING**

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**Objective:** To compare BP physiologic responses after an aerobic exercise (E) bout performed in the morning (M) and in the evening (EV), controlling for changes observed when no E was executed.

**Methods:** 16 men underwent 4 sessions (random order): 2 at 9am and 2 at 6:30pm. At each time, a control (C - rest) and an E (cycling, 45 min, 50%VO<sub>2</sub>peak) sessions were conducted. BP, cardiac output (CO), stroke volume (SV), systemic vascular resistance (SVR), heart rate (HR), sympathovagal balance (LF/HF), and leg vasodilatory capacity (LVC) were assessed pre and post interventions. At each time, the net effect of E was calculated by [(post-pre E) – (post-pre C)], and M and EV net effects were compared by a paired T-test, P<0.05.

**Results:** Systolic BP decreased more in the M than the EV (-7±3 vs -3±4 mmHg). Diastolic BP decreased similarly. CO decreased and SVR increased in the M (-460±771ml/min and +2.0±3.8 U). They didn't change in the EV. SV decreased similarly at both times of day, while HR increased less in the M (+7±5 vs +10±5 bpm). LF/HF increased only in the EV (+1.5±1.6) and the LVC increased only in the EV (+116±172 vs -32±225 U).

**Conclusion:** PEH occurs at both times of day. The hypotensive effect of exercise is greater in the M for systolic BP. It occurs because CO decreases more in the M due to a lower increase in HR and LF/HF at this time of day. LVC increases just in the EV. So, in the M, PEH is more related to CO decrease, and in the EV to vasodilatory response.