Toward a Lower Human Metabolic Baseline

Abstract

Modern humans often ventilate and cognitively operate above a true physiological minimum, maintaining a subtle but persistent "regulatory overhead" expressed as elevated breathing, autonomic noise, and reduced recovery efficiency. This paper proposes that a lower, coherent baseline state is accessible and trainable: a stable operating regime characterized by markedly reduced ventilation ("micro-ventilation"), diaphragm-led mechanical control, and autonomic quieting while maintaining normal oxygenation and CO_2 balance. Drawing from sustained first-principles observation and iterative practice, the work frames baseline down-regulation as a two-timescale process: (1) rapid breathing-pattern retraining as a learnable motor/attention skill, and (2) slower system-wide consolidation in which metabolic demand and autonomic setpoints recalibrate over weeks. The paper outlines testable predictions and a measurement-first validation pathway, emphasizing instrumentable signatures (respiration rate/variability, end-tidal CO_2 via capnography, SpO_2 guardrails, HR/HRV, and recovery curves following standardized perturbations). The goal is not to make medical claims, but to translate a repeatable regulation phenomenon into modern scientific language: operational definitions, falsifiable hypotheses, safety constraints, and a practical roadmap for collaborative study in human performance and physiology.