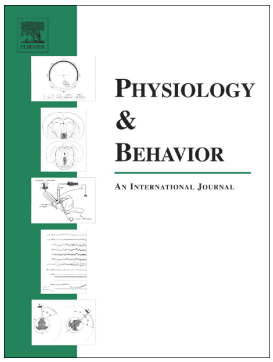

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Circulating MicroRNAs Are Upregulated Following Acute Aerobic Exercise in Obese Individuals

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ABSTRACT

Introduction/Purpose: MicroRNAs (miRNAs), a class of non-coding RNAs, are involved in the regulation of gene expression and numerous biological processes, including inflammation and metabolism in obese populations. Emerging research indicates that physical activity provides health-related benefits in obesity-associated inflammatory diseases. This study examined how acute aerobic exercise would mediate the changes in plasma level of inflammation-related circulating miRNA (ci-miRNA) expression (miR-21, miR-126, miR-130b, miR-221, and miR-222) in obese and normal-weight subjects. **Methods:** Twenty-four subjects (12 obese and 12 normal-weight) were recruited to participate in a 30-minute aerobic