Oxygen Consumption and Heart Rate Responses Between Different Sequences of a Vinyasa Yoga Practice

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Vinyasa yoga (VY) has been previously established to meet criteria of moderate-intensity physical activity. VY features several sequences that link poses together: integration, sun salutations, crescent lunge series, balancing, standing, back bending, and restorative. However, it is unclear whether the poses in a sequence during a VY practice produce different oxygen (VO$_2$) consumption and heart rate (HR) responses. **PURPOSE:** To evaluate potential differences in VO$_2$ and HR responses across sequences of a standardized 60-minute VY session. **METHODS:** Data were collected on 40 healthy adults with self-reported yoga experience (20 females; body mass index=24.6±3.2 kg/m$^2$; age=30.9±8.8 y). The VY sequence implemented was based on the *Journey into Power Sequence* from Baron Baptiste. VO$_2$ (ml/kg/min) was measured using portable indirect calorimetry (Oxycon Mobile). HR (bpm) was measured using a Polar heart rate monitor (Kempele, Finland). One-way repeated measures ANOVA were utilized to examine the differences in VO$_2$ and HR among sequences. Post-hoc analyses (with Bonferroni correction) for multiple pairwise comparisons between each sequence. **RESULTS:** VO$_2$ and HR differed significantly across different sequences of the VY session (VO$_2$: $F(3.3,116.5) = 450.2$, $p<0.001$; HR: $F(2.9,104.0)=51.3$, $p<0.001$). Post-hoc analyses indicated that VO$_2$ for the integration, sun salutations, crescent lunge series, balancing, standing, back bending, and restorative (7.5±1.5, 14.8±2.2, 15.5±2.5, 14.0±2.4, 12.5±2.2, 13.7±2.4, and 9.0±1.6 ml/kg/min, respectively) was significantly different from each other ($p<0.001$) except for balancing and back bending being similar. HR during the integration and restorative were similar (91±2 and 94±2 bpm, respectively) and significantly lower compared to sun salutation, crescent lunge series, balancing, standing and back bending (110±4, 119±4, 118±4, 115±3, 118±3 bpm, respectively). The highest VO$_2$ and HR were in the crescent lunge series; the lowest VO$_2$ and HR were during integration. **CONCLUSION:** VO$_2$ and HR differ significantly across different sequences of a standardized 60-minute VY practice. This data could inform an individualized prescriptive yoga series based off current fitness levels to maintain or improve cardiorespiratory fitness and warrants further investigation.