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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= $24.6 \pm 3.2 \text{ kg/m}^2$; age= $30.9 \pm 8.8 \text{ y}$). 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 $9.0 \pm 1.6 \text{ ml/kg/min}$, 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 $94 \pm 2 \text{ bpm}$, respectively) and significantly lower compared to sun salutation, crescent lunge series, balancing, standing and back bending (110 ± 4 , 119 ± 4 , 118 ± 4 , 115 ± 3 , $118 \pm 3 \text{ bpm}$, 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.