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The Impact of Gender on Self-Reported RPE during a Graded Exercise Test

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Ratings of perceived exertion (RPE) are commonly used to both assess and prescribe exercise intensity.

PURPOSE: To determine if gender impacts how accurately subjects can assess exercise intensity using RPE during a VO_2max test. **METHODS:** Six men (age: 21.7 ± 0.8 yr; height: 172.6 ± 5.3 cm; mass: 86.5 ± 8.4 kg; body fat: $22.6 \pm 7.1\%$; VO_2max : 53.0 ± 7.2 $\text{ml}\cdot\text{kg}^{-1}\cdot\text{min}^{-1}$) and six women (age: 20.8 ± 0.4 yr; height: 162.3 ± 5.5 cm; mass: 66.9 ± 18.5 kg; body fat: $27.1 \pm 11.5\%$; VO_2max : 44.9 ± 5.6 $\text{ml}\cdot\text{kg}^{-1}\cdot\text{min}^{-1}$) participated in the study. Subjects completed the modified Bruce Protocol on the treadmill to volitional fatigue. Prior to testing, subjects received standardized instructions on Borg RPE scaling procedures.

Overall RPE was collected every minute and oxygen consumption (VO_2) was continually assessed. VO_2 was averaged during the stages that the subject was in the defined RPE intensity zones for analysis.

Independent Samples T-tests were used to compare subjects' $\% \text{VO}_2\text{max}$ between genders at very light (RPE <9; <37% VO_2max), light (RPE 9-11; 37-45% VO_2max), moderate (RPE 12-13; 46-63% VO_2max), vigorous (RPE 14-17; 64-90% VO_2max), and maximal (RPE >18; $\geq 91\%$ VO_2max) intensity zones, based on their reported RPE. **RESULTS:** There were no significant differences in $\% \text{VO}_2\text{max}$ between genders at self-reported RPE equating to very light (men: 34.4 ± 9.1 ; women: $37.7 \pm 7.0\%$; $p = .388$), light (men: 56.6 ± 14.0 ; women: $59.1 \pm 10.2\%$; $p = .750$), moderate (men: 62.5 ± 16.3 ; women: $78.5 \pm 14.6\%$; $p = .106$), vigorous (men: 84.6 ± 9.2 ; women: $90.1 \pm 9.0\%$; $p = .321$), or maximal (men: 97.0 ± 2.1 ; women: $100.0 \pm 0.0\%$; $p = .149$) exercise intensities. **CONCLUSION:** There was no difference in self-reported RPE between the men and women at any intensity level. However, both genders underreported RPE at the light intensity, while the women also underreported at the moderate and vigorous workloads.

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