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More Cycling, Less Talking: Syllable Production, Attentional Focus, and Affective Responses across Exercise Intensity Levels

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The *Talk Test* appears sensitive to changes in exercise intensity and shows promise as a non-intrusive means of establishing appropriate levels, yet remains to be fully endorsed by ACSM. Further development of relationships between the *Talk Test* and other sensitive measures of exercise intensity, such as affective responses and attentional focus, will only bolster the rationale for its use. To date, however, few investigations have done so. **PURPOSE:** To examine measures of speech production (i.e. longest [LSy], shortest [SSy], and average [ASy] number of syllables per breath), heart rate (%HR_{max}), affect (FS), and attentional focus (AFS) responses across a range of exercise intensities. **METHODS:** Sixteen participants (Age: 22.68±3.82 yrs; BMI: 25.24±4.56 kg·m⁻²) completed three 15 minute bouts of cycling exercise at (a) a self-selected intensity (as measured by Watts) and (b) randomized intensities of 20% below and 20% above the self-selected intensity. Participants read a paragraph from *The Rainbow Passage* at the end of exercise to measure syllables per breath. %HR_{max}, FS, and AFS were recorded at end of exercise. End of exercise values were compared using one-way repeated measures ANOVAs. **RESULTS:** Exercise intensity produced a significant change in end of exercise LSy ($p = .003$; $\eta_p^2 = .324$), %HR_{max} ($p < .0001$; $\eta_p^2 = .611$), FS ($p = .039$; $\eta_p^2 = .194$), and AFS ($p = .015$; $\eta_p^2 = .245$). LSy was significantly different between 20% below ($M = 31.94 \pm 9.43$) and self-selected ($M = 25.63 \pm 7.87$; $p = .005$) but not 20% above ($M = 27.38 \pm 7.94$; $p = .083$). Differences were observed between 20% below ($M = 62.13\% \pm 0.8$) and both self-selected ($M = 68.25\% \pm 0.9$; $p = .005$) and 20% above ($M = 71.69\% \pm 1.10$; $p < .0001$) self-selected exercise intensity for %HR_{max}. FS evidenced significant differences between 20% below ($M = 3.00 \pm 1.36$) and 20% above ($M = 2.00 \pm 1.75$; $p = .031$) as did AFS between 20% below ($M = 5.69 \pm 2.27$) and 20% above ($M = 4.18 \pm 2.26$; $p = .008$). **CONCLUSIONS:** As exercise intensity levels increased, speech production became more difficult. Likewise, participants evidenced greater physiological strain and reported more associative attentional focus and less positive affective responses to increased demand. Collectively, the *Talk Test* appears sensitive to multiple measures of distress, which may strengthen the rationale for its use in exercise programming.