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## Metabolic Expenditure of Video-Instructed Hula Dancing in Novice Females

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Hula, a cultural form of dance native to Hawaii, can be practiced as an art form or as a group fitness activity. Previous physiologic research in hula dancing has focused on the demands of elite performers. Very little research has explored hula dance in other populations. **PURPOSE:** The purpose of this study was to determine the metabolic expenditure of video-instructed novice hula dancing and evaluate the intensity level according to American College of Sports Medicine (ACSM) guidelines. **METHODS:** Thirteen healthy female college students with no previous hula dancing experience participated in this study. Subjects were introduced to hula over the course of two sessions. On the first day, the volunteers completed a 15-minute familiarization video introducing the five basic hula steps, proper posture, and essential terminology. The five basic hula steps were the Kaholo, 'Ami, Hela, U'wehe, and Ka'o. The instructional hula video viewed on the second visit consisted of a five-minute warm-up, 15-minutes of the five basic hula steps in sequential order, and a brief cool down period. Volunteers wore a chest strap heart rate monitor. A portable metabolic gas analyzer, for the measurement of  $VO_2$  and  $VCO_2$ , was worn in a small fitted backpack for the duration of testing. Measurements were recorded at rest, the end of the warm-up, and the end of each steps' instruction. **RESULTS:** The average relative  $VO_2$  was  $13.38 \pm 2.73$  ml/kg/min and the average MET was  $3.82 \pm 0.78$ . The steps with the lowest and highest energy costs were the Ka'o ( $3.45 \pm 1.13$ ) and Hela ( $4.01 \pm 0.64$ ), respectively. A repeated measures ANOVA ( $F_{(4, 12)} = 59.464$ ,  $p < 0.001$ ) and follow-up comparisons identified the U'wehe and Ka'o steps as more metabolically demanding than the other basic hula steps ( $p < 0.05$ ). U'wehe and Ka'o were not different from each other ( $p > 0.05$ ). **CONCLUSION:** Though some steps represent a greater metabolic demand than others, all introductory hula steps and hula instruction overall should be classified as a moderate intensity activity. Hula dancing, even at the most introductory levels, can be enjoyed as an exercise modality.