

## Gender Performance Differences in Standard Upper Quarter Y-Balance Test and Two Modified Versions

VILMEAU SAMUEL, AMASAY TAL, ETCHEBASTER MICHELLE, & CEDENO RYAN

Motion Analysis Center; Department of Sport & Exercise Sciences, Barry university;  
Miami Shores, FL

---

Category: Undergraduate

Advisor / Mentor: Amasay, Tal (tamasay@barry.edu)

### ABSTRACT

Preparticipation screening evaluating musculoskeletal functioning is gaining popularity in young adults. The Upper Quarter Y-Balance Test (UQYBT) is often used to measure shoulder mobility and stability, and screening for upper extremities musculoskeletal injuries. The UQYBT is renowned for its unique approach to testing shoulder and core stability in the athletic and active population. Its feasibility in less active individuals is questionable due to its strength and balance requirements. Moreover, there is minimal data comparing UQYBT scores between genders of different fitness levels. **PURPOSE:** To examine performance differences between women and men executing the standard UQYBT and two modifications. **METHODS:** Eleven women (22.5±3.2 years, 1.64±0.04 m, 66.1±10.5 kg) and nine men (27.0±8.8 years, 1.74±0.03 m, 74.2±12.8 kg) college students took part in this study. Prior to testing, participants completed five minutes warm-up on an arm ergometer. Participants completed the three UQYBT variations in a randomized order; Standard (traditional push-up position), Modified (modified push-up position), and Wall (standing erect). In each variation, participants completed three reaches in the medial, inferolateral, and superolateral direction. Maximal relative scores were collected, and composite scores were calculated. MANOVA was conducted comparing the differences between women and men reach scores in each direction and for each UQYBT variation. Significance level was set to .05. **RESULTS:** Significant differences were observed in the Modified UQYBT for the inferolateral reach, women had higher max relative scores than men, p-value<.01. Women average maximal relative score was 89±10%, whereas men average score was 80±8%. Similar significance trend was identified in the Wall UQYBT during the inferolateral reach. Women reach score (82±8%) was higher than the men reach score (72±11%), p-values<.01. No significant differences were observed in any of the other reaches measured during the three UQYBT variations. **CONCLUSION:** In this study we measured gender differences during three UQYBT variations. The most body weight the upper extremity needs to balance is during the Standard position, followed by the Modified and Wall UQYBT. We have found gender differences in the Modified and Wall UQYBTs during the inferolateral reach. The difference may be related to fact that during the Modified and Wall UQYBTs there is less body weight on the upper extremity which may increase women ability to have better shoulder mobility and stability than the men. Further research is required in this area.