Methods

Subjects
- 54 recreationally active men and women, ages 19-64 participated in this study
- 44 participants were divided into categories based on age (19-25 and 45-64).
- 10 young adults served as the control group
- Randomly assigned to one of two groups: Functional n=12 or Traditional n=12

Participant Requirements
- Complete pre- and post-testing
- Attend 19 of 21 training sessions in 7 weeks
- Train no more than two consecutive days
- Complete ONLY assigned lifts
- No limiting injuries

Procedures
- Pre-testing was completed over 4-day period. Tests included:
  - Height, weight, abdominal skinfold, and waist circumference
  - Timed flexion, extension, RSB, and LSBD endurance
  - Balance and flexibility measurements
- 5 RM tests for upper and lower body strength
- Orientation to specific resistance program was held within 1 week after pre-testing.
- Researchers were each assigned ~6 participants to meet with once per week to progress participants, observe/correct lifting technique, and answer questions
- Functional training group exercises (refer to Figure 1):

Traditional resistance training utilizes fixed machines or movements that isolate body parts, joints, and muscles, and are often the first exercises incorporated in any resistance training program because of the established gains that these programs have regarding specific training adaptations such as increases in upper and lower body strength, balance, and flexibility. A secondary aim of this study was to compare TRX training adaptations within younger and older populations. The hypothesis of the study is that TRX training yields greater gains in core endurance, flexibility, and body composition compared to a more traditional training program. Also, within each population, there will be a relative increase in upper and lower body strength, core endurance, flexibility, and body composition but older adults will achieve greater gains in balance.

Summary and Conclusions

The results suggest that TRX training methods are just as beneficial for increasing core endurance, flexibility and measures of functional movement compared to a more traditional training program. Changes in upper body endurance performance were not program specific despite the different modality use between groups.

Measurable gains were observed after 7 weeks of TRX or traditional exercise training in the majority of fitness parameters.

Limitations
- Small sample size of 21 young adults and 10 older adults.
- Each training session was not monitored; intensity was self-reported.
- Different researchers tested individuals pre and post testing, leading to potential inter-rater variability.
- Only a 7-week training period limits conclusions on long-term effects of TRX training.