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Sex differences in muscle pain: Effects on behaviors and activities

The current literature concerning sex differences in exercise-induced muscle pain is equivocal. This investigation builds upon our previous work on this issue by considering not only ratings of muscle pain, but also the performance of self-care behaviors for pain and the effects of pain on daily activities.

Methods

Participants called into a telephone data collection system at 24, 48, and 72 hours after eccentric contractions induced delayed-onset muscle pain. The participants rated the muscle pain, the frequency of feeling pain during daily activities, and the performance of self-care behaviors for pain.

Results

Muscle pain intensity ($F_{3,129} = 43.94, p < .01, \eta^2 = .51$) and unpleasantness ($F_{3,129} = 40.32, p < .01, \eta^2 = .48$) increased from pre-exercise. No sex differences in pain ratings were observed when work was controlled. The performance of self-care behaviors for pain and the frequency that pain was felt during daily activities did not differ between the sexes. However, a significant sex by time interaction indicated that women reported greater interference in their activities from the muscle pain than men at 72 hours ($F_{1,41} = 6.20, p = .02, \eta^2 = .13$).

Conclusion

Despite successful induction of pain, no sex differences were detected in pain ratings, self-care behaviors, or feeling pain during daily activities. These findings support an absence of meaningful sex differences in exercise-induced muscle pain. However, women reported more interference from pain with activities, which may be related to greater decreases in range of motion and weakness among women.