Duke University School of Medicine
Doctor of Physical Therapy

Effects of Exercise on Women with Postpartum Depression: A Systematic Review of the Literature

Valerie Adams, SPT, BS; Jennifer Volo, SPT, BS, CSCS; Aubrey Burnside SPT, BS; Jasmine Cross, SPT, BS; Marrion Kalafut SPT, BS; Carol Figuers, MS, PT, EdD

Background

- Postpartum depression (PPD) affects about 10-15% of women in the year after giving birth.
- The efficacy of exercise as an intervention for depression is well recognized.
- There is less research supporting exercise as a treatment for depression during the postnatal period.
- The most common barriers to physical activity at 3 and 12 months postpartum are lack of time and issues with childcare.

Purpose

The purpose of this study was to evaluate the effectiveness of exercise on women with PPD.

Methods

Study Design
- Systematic review
  - ❖ Embase, CINAHL, PubMed
  - ❖ Search terms included: postpartum depression, yoga, Pilates, exercise, resistance training, swimming, walking, running, jogging, sports, dancing

Subjects
- Postpartum women (4 weeks – 12 months)
- Clinically diagnosed with PPD or categorized as "depressed" or "displaying clinical signs of depression"

Results

- Eight studies satisfied the inclusion criteria and were included in the review.
- Effectiveness: 7 of 8 studies demonstrated a reduction in depressive symptoms for exercise intervention groups.

Study Interventions	Implications for Intervention Group compared to Control Group
Group Pram Walking	• Women displayed increased fitness levels and reduced depressive symptomatology. *Armstrong et al. 2004*
Group and Individual Yoga Program	• Yoga is a "promising complementary therapy." • Women engaging in yoga displayed a quicker decline in depressive symptomatology compared to controls. *Buttner et al. 2015*
Individual Home-based Exercise Program	• Women with initially higher depressed mood scores displayed greater reduction in depressive symptoms. *Da Costa et al. 2009** • Exercise can reduce both physical and mental fatigue in women who experience postpartum depression. *Dritsa et al. 2008** • Women who were later in the postpartum period and women with higher depression scores benefited the most from the exercise intervention.* *Dritsa et al. 2009** *same sample of women was re-analyzed
Self-Designed Individual Exercise with External Support	• Exercising women displayed lower depressive mood scores and higher social support scores. *Daley et al. 2015* • No significant difference in decreased depressive symptoms was found between the exercise and non-exercise group. *Daley et al. 2008*
Group and Individual-Based Exercise Program	• Depression scores in both groups decreased significantly. However, women in the exercise group had lower depression scores than their counterparts in the control group. *Heh et al. 2008*

Conclusions

- Exercise may reduce symptoms of PPD.
- Heterogeneity of methodology makes comparison difficult.
- Additional research with large sample sizes and extended follow-up is advised.

Clinical Relevance

- Postpartum women may benefit from a screening for signs and symptoms correlated with PPD.
- Medical providers should educate postpartum women on the relationship between PPD and exercise.
- Various forms of exercise have been shown to have positive effects on PPD.

Acknowledgements / References

1. Gaynes et al. *Evid Rep Technol Assess (Summ)*. 2005; 119:1-8. 2. Dennis et al. *Birth*. 2006; 33(4):323-331. 3. Evenson et al. *J Womens Health (Larchmt)*. 2009; 18(12): 1925-1934. 4. Lopresti et al. *J Affect Disord*. 2013; 148(1):12-27. Photo Credits: http://www.whattoexpect.com/first-year/postpartum-depression; http://www.evolutionprenatalandfamily.com; http://babbyy.com/2016/03/04/only-child-why-we-only-want-one/