

References:

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Research Abstract:

Effects of an Aerobic and Resistance Exercise Intervention on Health Related Quality of Life in Women with Obesity

Megakli T, Vlachopoulos SP and Theodorakis Y. Journal of Applied Biobehavioral Research 2016, 21(2), 82-106. doi: 10.1111/jabr.12047

ABSTRACT: The efficacy of a combined aerobic and resistance exercise intervention was examined in improving health related quality of life in women with obesity. An experimental design was used with a 1 year follow up. After randomization into a control and an exercise group, women with obesity (n=72) participated in a structured exercise program for 12 weeks. Health related quality of life variables were measured using the Short Form 36v2 Health Survey instrument. Exercise effects were revealed for physical functioning, vitality, bodily pain, mental health, and role emotional, but not social functioning, general health, role physical, and reported health transition. Exercise intervention effects lasted between nine and 12 months. A 12 week aerobic and resistance exercise program may improve health related quality of life in women with obesity.

Quick review of some exercise guideline terms:

- 1 An effective exercise program includes all aspects of the FITT Principle: Frequency, Intensity, Time and Type;
- 2 Heart Rate Reserve (HRR): resting heart rate minus maximum heart rate;
- 3 One repetition maximum (1-RM): maximum amount of force that can be generated in one maximal contraction.

PREGNANCY

By Katie Kelly, PT and member of the Newsletter Subcommittee

As physiotherapists working in the field of women's health, it is common to receive questions regarding exercise during pregnancy. For Canadian practitioners, the most recent recommendations for these exercise guidelines came from the Society of Obstetricians and Gynaecologists of Canada (SOGC) in 2003. According to the SOGC, all women without contraindications should be encouraged to include aerobic and strengthening exercise into a healthy lifestyle. The goal should be to maintain good fitness while not trying to reach peak fitness or train for athletic competition (for a full list of contraindications and precautions please see the SOGC recommendations, Davies et al 2003). Women are also encouraged to choose activities that limit risk of fall and fetal trauma. Just like the general population, it is accepted that exercise provides a number of benefits during pregnancy. These include decreased loss of aerobic and muscular fitness, lower risk of gestational diabetes, hypertension, DVT, varicose veins, excessive weight gain and fewer complaints of symptoms like dyspnea, low back pain and poor psychological adjustment (Wolfe, et al 2000).

There is limited evidence for the benefit of exercise on pregnancy outcomes. However, a recent RCT by Price et al (2012) examined 62 pregnant women allocated to exercise versus non-exercise pre-natal programs. Those in the exercise group completed 45-60 minute, moderate-intensity workouts, 4 times weekly. This included cardiovascular activity and circuit training with strengthening and stretching exercises. While the exercise regimen was intense enough to statistically improve aerobic fitness and strength, it had no adverse effect on pregnancy length, fetal birth weight, Apgar scores, or placenta weight compared with sedentary controls. Furthermore, the exercise group underwent significantly fewer caesarean sections (6% versus 32%) and recovered from delivery faster.

While some women struggle to meet the recommended exercise guidelines, many wish to continue activity and sport at an elite level. This past September a review article was released by the IOC international expert committee to examine the literature on physical activity during pregnancy in elite athletes (Bø et al, 2016). Part 1 of this 5 part series examined exercise in women who are planning pregnancy and those who are pregnant. This rigorous review suggests that higher intensity exercise and aerobic testing might be possible without increased fetal risk in well-trained individuals. They explain maternal physiological changes and recommend sport and activities to avoid during pregnancy. The remaining parts of this series will examine effect of exercise on labour and neonatal/fetal outcomes, guidance on returning to exercise in the postpartum period, research directions, and recommendations for health professionals.

Physiotherapists provide a unique role in a multidisciplinary team to help women with fitness while overcoming some challenges associated with exercise during pregnancy. Canadian physiotherapists should continue to follow the exercise guidelines supported by the SOGC. All pre-natal exercise plans should be discussed with a patient's obstetric practitioner. A practical tool to prepare for this discussion is the PARmed-X for Pregnancy; available from the Canadian Society for Exercise Physiology (<http://www.csep.ca/CMFiles/publications/parq/parmed-xpreg.pdf>). Research continues to support the role of exercise in a healthy pregnancy and physiotherapists will continue to serve as an important component of this recommendation.

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PREGNANCY CONTINUED: MINI-INTERVIEWS

By *Katerina Miller, PT and member of the Newsletter Subcommittee*

As physiotherapists for the female population, we often get asked about our recommendation around exercising during pregnancy. The APOC are clear with their stand, saying that “Women with uncomplicated pregnancies should be encouraged to engage in aerobic and strength-conditioning exercises before, during, and after pregnancy.”

Although this is encouraging, there are still questions that are not answered. We reached out to three leading women's health physiotherapists from different parts of the world with a few tough questions, and they graciously replied to all. Thank you, ladies for your wonderful input! Here are their answers for all of us to enjoy:

Lori Forner



Lori's tertiary background includes a Bachelor's degree in Science from the University of Guelph in her home province of Ontario, Canada, and a Graduate Entry Masters in Physiotherapy Studies from the University of Queensland in Brisbane, Australia where she still lives.

She has worked as an exercise physiologist, rehab-based pilates instructor and physiotherapist for musculoskeletal private practice physiotherapy clinics in Canada and Australia. She found her passion in researching and teaching pregnancy and postnatal clients, which lead her on a great journey of education in the field of Continence and Women's Health.

Her clinical interests are in helping patients who are suffering with persistent pelvic pain, as well as balancing pelvic floor dysfunctions within fitness and sport.

Lori has been an active board member of the Australian Physiotherapy Association's Continence and Women's Health committee for the past 5 years and acted as Chair of the committee in 2016. She is also a member of the Women's Health Training Associates since its commencement, provides articles and lectures for allied health professionals, and educates the community on pelvic health. Even when not working, she still enjoys finding and sharing great information and humour within the pelvic health world. Be sure to check out her various arms of social media and of course the podcast she produces and co-hosts, [The Pelvic Health](#) Podcast.

While acknowledging the benefits of exercising, what in your experience is the greatest risk around exercising during pregnancy?

Greatest risks of exercise in pregnancy (aside from those in which exercise is cautioned or contraindicated) - women pushing themselves too hard. The pendulum is starting to swing the other way. At one point people were way too conservative when advising exercise in pregnancy and women were doing very little or stopped exercising altogether (understanding that this is still true for some). Now, with high intensity exercise being very popular, many women who were very fit prior to pregnancy are continuing this type of exercise during their pregnancy with little to no guidance from many fitness professionals who do not have the knowledge or experience to guide them. They are given the advice of “listen to your body” and many still continue higher risk activities like skipping or heavy weight lifting too far into their third term. The risk lays for the mother, generally not the baby, in possibly setting themselves up for pelvic floor dysfunctions such as incontinence and prolapse with damage to pelvic fascia. Of course it's individual but the higher intensities and heavier weights are not generally a goal for a new mom in the first 3-6 months after having a baby.