

Physical activity interventions for smoking cessation during pregnancy

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Today I will present:

- Arguments for using physical activity as an aid to smoking cessation during pregnancy
- Survey of pregnant smokers attitudes to exercise
- Pilot study
- RCT

Why might physical activity aid smoking cessation during pregnancy?

- Increases quit rates in non-pregnant women smokers
- Reduces cravings/withdrawal
- Weight control
- Exercise recommended in pregnancy
- Alternative to NRT

Ussher et al 2012 Exercise interventions for smoking cessation. Cochrane Review.

Cross-sectional survey

- 88 pregnant smokers
- Assessing physical activity (PA) levels and psychosocial variables

Ussher et al., 1997. Factors associated with exercise participation and attitudes to exercise among pregnant smokers., *Journal of Smoking Cessation*.

Results

- 88% agreed physical activity important in pregnancy
- 60% very/extremely interested in exercising to help them quit
- Main barriers:
 - Fatigue:48%
 - Time: 18%
 - Exercise uncomfortable:11%
 - Not sure what to do:11%
- None or little social support: 71%
- Low self-efficacy for exercise: 58%



Conclusions

- Potential for using physical activity interventions with pregnant smokers
- PA intervention needs to address barriers to exercise and low social support and self-efficacy

Pilot Study

Title: Physical activity as an aid to smoking cessation during pregnancy: Two feasibility studies.

Ussher et al., 2008, BMC Public Health

Aim

To assess the feasibility of a PA intervention combined with behavioural support for smoking cessation during pregnancy

Methods

Participants:

- 18 yrs+
- Motivated to quit
- 12-20 weeks gestation
- smoking ≥ 1 cig/day

Methods

- Pilots 1 & 2: 6 weekly sessions cessation support
- Pilot 1: n=10, 6 weekly supervised exercise sessions (walking)
- Pilot 2: n=22, 15 supervised exercise sessions over 9 weeks (walking/cycling/DVD)

Main Findings

- Overall: 8/32 (25%)
- Pilot 1: 5/10 abstinent
- Pilot 2: 3/22 abstinent
- 10% of women recruited
- Women receptive to intensive intervention.
- Desire to smoke reduced (further study in progress)
- Women prefer hospital to home setting

Conclusions

Feasible to recruit pregnant smokers to
exercise intervention for smoking
cessation

LEAP

A pragmatic randomized controlled trial of physical activity as an aid to smoking cessation during pregnancy

Collaborators: Paul Aveyard, Isaac Manyonda, Sarah Lewis, Robert West, Beth Lewis, Bess Marcus, Adrian Taylor, Pelham Barton, Tim Coleman

**Funded by National Institute for Health Research (NIHR)
Health Technology Assessment Program**

Aim of study

To compare quit rates at end of pregnancy for:

1. Individual behavioural support plus a physical activity intervention

versus

2. Individual behavioural support alone

Who is eligible?

- Motivated to quit
- Age 16+
- Smoking ≥ 1 cig/day & at least 5 cig/day before pregnancy
- 10-24 weeks gestation
- NRT not permitted at the outset

Approximately 9000 pregnant smokers invited to join study at 10-24 weeks gestation

Screened for eligibility and 866 women recruited and randomised at their first visit

Physical activity intervention group
N= 433

Control group
N= 433

- Smoking cessation support once a week for six weeks
- 14 sessions of supervised exercise: twice a week for six weeks and once a week for two weeks
- 9 exercise consultations over 8 weeks

Smoking cessation support once a week for six weeks

Primary outcome: continuous abstinence at end of pregnancy

Physical activity intervention

- Treadmill walking
- Physical activity consultation
(e.g. goal setting,
self-monitoring,
Relapse prevention
planning)



Recruitment

- Direct calling
- Midwife referral
- Flyers/posters



Target: recruit 10% of pregnant smokers
Current: 10% (685/6927)

Reasons for exclusion

Not interested	30% (1344/4443)
First visit not attended	14% (606/4443)
<1cig/day	14% (628/4443)
Gestation >24 wks	13% (583/4443)
Unable to attend all visits	7% (308/4443)
Wants to use NRT	6% (255/4443)

Participant characteristics

Characteristic	Mean (SD)
Age	27.5 (6.5) years
Gestation	15.7 (3.3) weeks
Cigarettes per day (now) Cigarettes per day (before pregnancy)	9.8 (5.5) 17.5 (5.1)
	Percentage
Achieving 150 mins/week of moderate Intensity Physical Activity (mins)	73%
Walking as main activity	79%
Caucasian	77%

Follow-up at end of pregnancy

- Between 36 weeks gestation and 10 weeks after birth
- Continuous abstinence: have smoked 5 or less cigarettes since quit day
- Validated by expired CO and/or cotinine

Adherence and abstinence

Mean no of sessions attended by:

exercise group: 5.2 out of 14

sessions (37%)

control group: 3.5 out of 6

sessions (59%)

- Abstinence rate at end of pregnancy:
9% (49/546)

Progress

- Recruitment started in April 09
- 685 women recruited so far
- Recruitment ends Nov 2012