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Insight into the exercise advice pregnant women receive from their medical practitioners

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Running title: What exercise advice do practitioners give to pregnant women?

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I state that the contents are the authors' original work and that the paper has not been submitted for publication to another journal.

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Insight into the exercise advice pregnant women receive from their medical practitioners

Introduction:

Pregnancy is recognised as a time of increased inactivity and sedentary behaviour leading to poorer maternal outcomes. Despite the well-established health benefits to exercise during prengancy, less than 35% of Australian pregnant women are considered sufficiently active in accordance with evidence-based exercise during pregnancy guidelines[1], which recommend women participate in at least 150 minutes of moderate-vigorous exercise, accumulated across most, if not all days of the week, consisting of aerobic and resistance-based activity.[2]

Medical practitioners (MPs) are powerful motivators to behaviour change among pregnant women, particularly for women in rural, regional and remote communities of Australia who often have limited access to specialist healthcare services.[3] Women in these communities rely more heavily upon their MP to provide antenatal care services including exercise advice and counselling. Previous research suggests that MP knowledge of exercise during pregnancy is limited and that they may not be providing exercise advice to pregnant women.[4, 5] However, little is known about the specific advice that Australian MPs are providing pregnant women, or whether this advice is in accordance with current exercise during pregnancy guidelines. Thus, the aim of the present study was to explore the exercise advice pregnant women received from a sample of regionally-based Australian MPs.

Participants, methods & results

All MPs practicing in the Rockhampton (Central Queensland) area (n = 80–90) were invited to participate in a paper-based questionnaire. Participants reported whether they provided exercise advice to pregnant women, and if so, provided specific detail about the type of advice they were providing in accordance with exercise during pregnancy guidelines. The CQUniversity Human Ethics Committee approved this study (H13/06-123).

Fifty MPs responded (response rate 55-62%), consisting predominately of females (58%), aged 45+ years (44%), and who had been practicing medicine for 10+ years (46%). As shown in Table 1, thirty-two respondents reported providing exercise advice to pregnant women (64%). Of these, most reported providing specific advice regarding the frequency (84%) intensity (97%), time/duration (84%) and type (91%) of exercise. However, most of this advice was incorrect. Specifically, few respondents advised women to participate in 30 minutes (28%) of moderate-vigorous intensity exercise (0%) on most, if not all days of the week (4%). Additionally, respondents most frequently advised women to participate in walking (62%) and swimming (59%), but not resistance-based activity (3%).

Table 1. Overview of medical practitioner's exercise advice to women during pregnancy (n = 50)

Comment

The present findings suggest that regionally-based MPs in this study are engaging in conversations with pregnant women about their exercise behaviours, and providing specific advice on exercise frequency, intensity time/duration and type of exercise. However, much of this advice is not in accordance with current exercise during pregnancy guidelines.[2] Instead, MPs in this study offered advice that was more reserved and 'precautionary' with women predominately advised to participate in less frequent, less intense aerobic activity for shorter periods of time. Specifically, no MP recommended engaging in moderate-vigorous exercise, despite the strong link between moderate-vigorous exercise and health benefits. Similarly, only one respondent reported advising women to participate in resistance-based activity, despite current guidelines recommending women participate in at least two sessions a week of resistance-based activity.[2]

Given the significant influence MPs can have on pregnant womens' exercise behaviours, it is essential that MPs provide exercise advice that aligns with current exercise during pregnancy guidelines. The present data suggest MPs are 'doing their part' by engaging

in conversations with pregnant women about their exercise behaviours, it is now up to the system to provide training and professional development opportunities to provide MPs with the knowledge and skills required to provide pregnant women with evidence-based exercise advice.

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Table 1. Overview of medical practitioner's exercise advice to women during pregnancy (n = 50)

	Yes **n (%)**	**No** **n (%)**
Provide exercise advice to pregnant women	32 (64)	18 (36)
If yes, provide specific advice:		
Frequency	27 (84)	5 (16)
Intensity	31 (97)	1 (3)
Time / Duration	27 (84)	5 (16)
Type	29 (91)	3 (9)
Frequency:		
1 – 2 days per week	1 (4)	
2 – 3 days per week	14 (52)	
3 – 4 days per week	3 (11)	
5 – 6 days per week (most days of the week)	5 (18)	
7 days (every day)	4 (15)	
Intensity:		
Light	17 (55)	
Light – Moderate	10 (32)	
Moderate	3 (10)	
Moderate – Vigorous	0 (0)	
Should be able to talk during/after exercise	1(3)	
Time / Duration:		
10 – 15 minutes per session	6 (22)	
15 – 20 minutes per session	2 (7)	
20 minutes per session	6 (22)	
20 – 30 minutes per session	3 (12)	
30 minutes per session	9 (33)	
40+ minutes per session	1 (4)	
Most common types of exercise:		
Aerobic Exercise:		
Swimming	18 (62)	

Walking	17 (59)
Jogging	6 (21)
Aqua aerobics	4 (14)
Aerobics	3 (10)
Stretching	3 (10)
Resistance-based Exercise	0 (0)

* Medical practitioners could provide more than one response to types of exercise.