Do first time mothers need a guideline for maximum periods of sitting or being sedentary?

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Public health guidelines and recommendations are developed to provide information for health professionals and the public about specific behaviours or practices to maximise individual and/or population health. They are based on the best available evidence of the known benefits or dangers. Obvious examples include eating two serves of fruit and five serves of vegetables per day, exclusive breastfeeding until six months, limiting alcohol consumption, and 30 minutes of physical activity a day on most days.

To achieve public health recommendations, it is assumed that these recommendations need to be adequately recognised and understood by the target population.¹ For example, first-time mothers in south-western Sydney who were aware of the breastfeeding recommendation were 5.6 times more likely to intend to meet the recommendation,² 26% more likely to initiate breastfeeding and 34% less likely to have stopped breastfeeding at 12 months than those who were not (unpublished data).

Mothers of young children represent a population group known to be at high risk of being physically inactive,^{3,4} despite a high level of understanding of the national physical activity guidelines.⁵ Further, research on the health impact of insufficient physical activity has diverged somewhat to differentiate prolonged sitting from insufficient physical activity. It is now suggested that there may be unique physiological processes associated with prolonged sitting (e.g. occupational computer use, television viewing), which possibly even negate the positive effects of physical activity accumulated throughout the day.⁶⁷

Using data from the Healthy Beginnings Trial⁸ we sought to explore the relationship between understanding of the Australian physical activity guidelines and levels of physical activity or sedentary behaviours (screen time) among first-time mothers. We found that there was very high agreement with the main physical activity messages – for three of the messages more than 90% agreed (for example, 30 minutes is enough to improve health, half an hour of brisk walking or increasing your heart rate slightly improves health), and for two others (exercise doesn't have to be done all at one time, it is essential to do vigorous exercise) there was more than 80% agreement. Almost three out of five (57%) of the mothers agreed with all five statements. At the same time, half this group (52%) of first-time mothers did not meet the minimum recommendation of 150 minutes per week of moderate intensity physical activity, and one in five (18%) had more than three hours of screen time per day.

However, when those mothers who agreed with all of the five statements (57%) were compared with the rest of the sample, there was no association between mothers' understanding of the guidelines and their actual physical activity or screen time (see Table 1).

The lack of associations found in this analysis may, on one hand, be due to the fact that current physical activity guidelines do not yet explicitly address sedentary behaviour. On the other hand, knowledge of physical activity guidelines shows a ceiling effect in achieving physical activity outcomes. Many other mediating factors influence behaviours, including social support, and economic and environmental conditions. These factors need to be addressed to promote physical activity. While guidelines represent a useful summary of health recommendations, a focus on guidelines alone is likely to be misplaced.

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Table 1: The relationships between understanding of physical activity messages, physical activity time and screen time (n=526).						
Agreement with physical activity messages	PA time per week (minutes) n (%)		p *	Screen time per day (hours) n (%)		p *
	<150	≥150		≤3	>3	
			0.32			0.13
Agreement to all Others	146 (59) 103 (41)	125 (54) 106 (46)		251 (58) 181 (42)	46 (49) 47 (51)	

* chi-squared test