Getting Evidence into Clinical Practice:
General Practice Nurse Evidence Based Practice (CAT Group)
Date: June 2017

Specific Question:

Is there evidence to show that participation in walking groups can benefit health outcomes?

Clinical bottom line

Walking has been advocated as one of the most popular forms of physical activity. There is strong evidence to suggest that walking may be an effective non-pharmacologic strategy for reducing resting blood pressure and other cardiovascular risks in adults. Interventions to promote walking in groups are efficacious at increasing physical activity.

Why is this important?

Regular physical activity positively impacts health potentially offering similar effects to some drug interventions in terms of mortality benefits. It has been suggested as an alternative or adjunct to conventional drug therapy. Walking at a pace of 3–5 m/h expends sufficient energy to be classified as moderate intensity and is an easy and accessible way of meeting physical activity recommendations.

Despite evidence and government campaigns to promote physically active lifestyles, few are active enough to be of benefit to general health. The impact of interventions in primary care to reduce inactivity appears limited; simple advice to be more active has only moderate yet short-term effects and an effective way of increasing physical activity and improving associated health indicators while also making the most efficient use of doctors' resources has yet to be determined.

General practices could look to set up walking groups as a way of promoting exercise and healthier lifestyles. Would the benefits of walking groups be measurable through outcomes such as BMI, HbA1C, BP, Cholesterol etc?

Search timeframe (e.g. 2006-2017)

Inception of searched databases to April 2017

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Inclusion Criteria

	Description	Search terms
Population and Setting	Adults with long term conditions such as Diabetes, Obesity, CVD, Hypertension.	**P:** Adults (with) Diabetes Obesity Hypertension CVD
Intervention or Exposure	Outdoor walking groups	**I**: Group walking Walking program Walking intervention Health walk Walking group Walking club Lay led walk Community Based walk Walking scheme Walk for health
Comparison, if any	Usual care (Health promotion activities such as lifestyle advice)	**C**: Usual care
Outcomes of interest	**Primary**: BP, BMI, Body fat %, HbA1c, Cholesterol, **Secondary:** Depression, general fitness QoL	O**:** BP BMI Body fat % Weight loss HbA1c Cholesterol Depression General fitness General Health QoL
Types of studies	RCTs and systematic reviews	(Filtered)

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Routine Databases Searched

Cinahl, BNI, Embase, Pubmed, Ahmed, Web of Science, PresQuipp

Date of search- April 2017

Results of the search

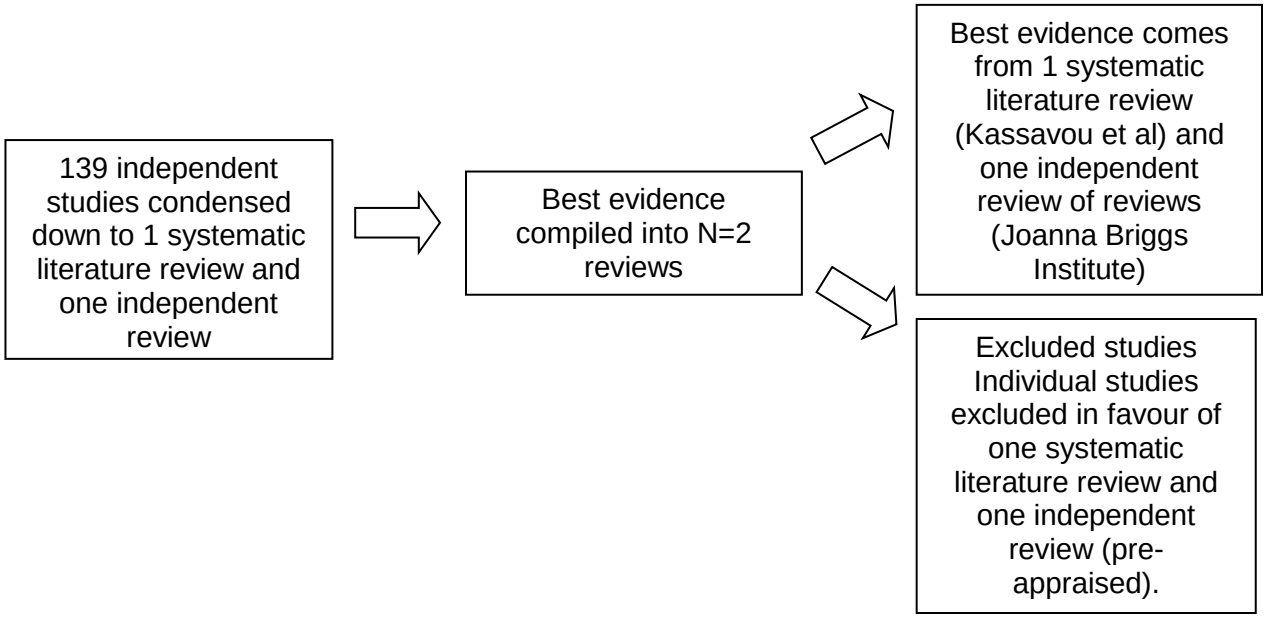

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Table 1- Detail of included studies

First Author, year and type of study	Population and setting	Intervention or exposure tested	Study results	Assessment of quality and comments
Kassavou et al (2013) Systematic literature Review	Adult population, all settings.	(a) interventions in which people walk collectively in groups. (b) interventions where participants walk with or without leaders' physical presence, and (c) interventions where people are allowed to choose a partner to walk with (i.e. group is defined as two people or more).	Lower quality studies had larger effect sizes than higher quality studies, studies reporting outcomes over six months had larger effect sizes than studies reporting outcomes up to six months, studies that targeted both genders had higher effect sizes than studies that targeted only women, studies that targeted older adults had larger effect sizes than studies that targeted younger adults. No significant differences were found between studies delivered by professionals and those delivered by lay people	Systematic literature review rather than systematic review so PRISMA not adhered to.
Ong (2016) Joanna Briggs independent review of reviews	Adults with hypertension	Walking	Compared to no exercise, walking-only interventions for a duration of greater than 4 weeks improve many risk factors for cardiovascular disease in inactive participants, including aerobic capacity, reduced systolic and diastolic blood pressure, waist circumference, weight, percentage body fat, and body mass index (BMI), but failed to alter lipids. Outdoor walking groups are effective and safe,	Unable to assess from pre-appraised reviews.

			with good adherence, and a wide range of health benefits, including: statistically significant reductions in mean difference for systolic blood pressure and diastolic blood pressure; resting heart rate; body fat; BMI, total cholesterol and statistically significant mean increases in VO2 max (aerobic capacity), the SF-36 (physical functioning) score and a 6-minute walk time. A standardized mean difference showed a reduction in depression scores. The evidence was less clear for other outcomes such as waist circumference fasting glucose, SF-36 (mental health) and serum lipids such as high-density lipids. There were no notable adverse side effects reported in any of the studies. A systematic review found that there was evidence for the beneficial effects of walking on the lowering either systolic or diastolic blood pressure or both. Trials interventions that showed a beneficial effect on blood pressure tended to have large sample sizes, higher baseline blood pressure level, employed moderate to high intensity walking programs and a longer intervention period	

			compared with those trials that did not show a beneficial effect. Even when no effect is observed on systolic blood pressure, regular brisk walking increases VO2 max, decreased body weight, BMI, percent body fat, and resting diastolic blood pressure in healthy, but previously sedentary adults compared to the control condition. A meta-analysis found walking exercise programs reduce resting blood pressure in adults. Statistically significant decreases of approximately 2% were found for both resting diastolic and systolic blood pressure. The meta-analysis also found a statistically significant increase in maximum oxygen consumption of approximately 12%, and significantly reduced resting heart rate.	

Summary

Evidence suggests that walking exercise programs reduce resting blood pressure in adults. Walking should have a central role in physical activity for health promotion. With low levels of attrition, high levels of adherence and virtually no adverse effects, walking groups should be considered as a practicable intervention, acceptable to patients as a line of treatment with a potential for both physiological and psychological health benefits, and recommended in patients who would benefit from increasing moderate physical activity. Recommendations on lowering blood pressure with a walking activity should address the issue of walking intensity to achieve a beneficial effect on lowering blood pressure.

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Implications for Practice/research

Taking into consideration the health benefits of physical activity and the benefits of group interventions to target more people than individually based interventions, it seems worth considering devoting resources to designing and implementing interventions to promote walking in groups (Kassavou et al, 2013).

What would you tweet? (140 characters)
Promoting walking groups within general practice presents many health benefits yet no notable adverse side effects.

References

Kassavou A, Turner A, French DP (2013) Do interventions to promote walking in groups increase physical activity? A meta-analysis. *International Journal of Behavioral Nutrition and Physical Activity.* 10:18

Ong J (2016) Blood Pressure (Adults): Walking. *The Joanna Briggs Institute.* Reviewed studies:

Murtagh EM, Nichols L, Mohammed MA, Holder R, Nevill AM, Murphy MH. The effect of walking on risk factors for cardiovascular disease: an updated systematic review and meta-analysis of randomised control trials. Prev Med. 2015;72:34-43.

Hanson S, Jones A. Is there evidence that walking groups have health benefits? A systematic review and meta-analysis. Br J Sports Med. 2015;49(11):710-5.

Lee LL, Watson MC, Mulvaney CA, Tsai CC, Lo SF. The effect of walking intervention on blood pressure control: a systematic review. Int J Nurs Stud.2010;47(12):1545-61.

Murphy MH, Nevill AM, Murtagh EM, Holder RL. The effect of walking on fitness, fatness and resting blood pressure: a meta-analysis of randomised, controlled trials [Abstract]. Prev Med. 2007;44(5):377-85.

Kelley GA, Kelley KS, Tran ZV. Walking and resting blood pressure in adults: a meta-analysis. Prev Med. 2001:33(2):120-7.

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