A WALKING PLAN FOR PREGNANT WOMEN WITH GESTATIONAL DIABETES: A FEASIBILITY STUDY

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Purpose

- Determine the feasibility of a structured walking plan for pregnant women diagnosed with gestational diabetes mellitus (GDM) within a maternal fetal medicine practice

Background and Significance

- Diabetes affects nearly 7% of all pregnancies[1]
- Diabetes is the most common co-morbid condition during pregnancy[1]

Uncontrolled diabetes in pregnancy can lead to[1]:

Maternal	Infant
Hypertension	Macrosomia
Pre-ecampsia	Hypoglycemia
C-section	Childhood obesity
Development of type 2 diabetes	Birth trauma

- Physical activity (PA) in combination with nutritional therapy has been shown to achieve glycemic control in women with GDM[2]
- Recommendations for PA in pregnancy include 150 minutes of moderate intensity exercise spread out over the week that is adjusted as necessary[3]
- Walking is safe for women with GDM

Evidence

- Walking at a brisk pace can reduce serum blood glucose (BG), preeclampsia, and excessive gestational weight gain[4]
- A walking plan is an effective intervention to lower BG & for meeting PA recommendations during pregnancy.[5,6]

Methods

Setting

- A maternal fetal medicine practice in the Southwestern United States

Population

- Females with a singleton pregnancy, over 18 years old, less than 34 weeks gestation, and a diagnosis of GDM

Intervention

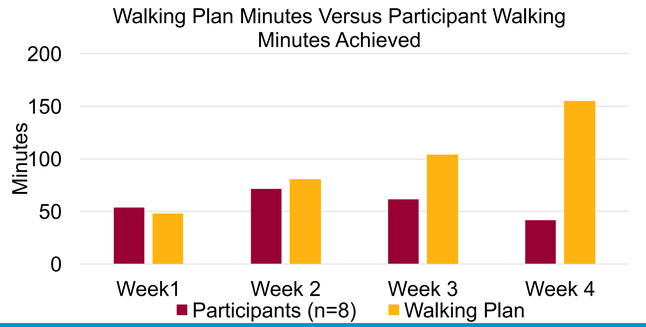
- Participants were recruited using a recruitment flyer
- Interested participants were screened for study qualification using the PARmed-X for Pregnancy[7]
- Participants received verbal and written instruction on an unsupervised 4 week walking plan that was set up to gradually increase PA to 150 minutes most days of the week
- A chart audit tool to evaluate walking plan completion and Survey Monkey® to evaluate participant satisfaction were used

Walking Plan for Previously Inactive Women in Pregnancy

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 1	Rest	WU: 3 min. easy walk, 10 min. brisk walk CD: 3 min. easy walk	Rest	WU: 3 min. easy walk 10 min. brisk walk CD: 3 min. easy walk	Rest	Rest	WU: 3 min. easy walk 10 min. brisk walk CD: 3 min. easy walk
Week 2	Rest	WU: 3 min. easy walk 12 min. brisk walk CD: 3 min. easy walk	Rest	WU: 3 min. easy walk 15 min. brisk walk CD: 3 min. easy walk	WU: 3 min. easy walk 15 min. brisk walk CD: 3 min. easy walk	Rest	WU: 3 min. easy walk 15 min. brisk walk CD: 3 min. easy walk
Week 3	Rest	WU: 3 min. easy walk 20 min. brisk walk CD: 3 min. easy walk	Rest	WU: 3 min. easy walk 20 min. brisk walk CD: 3 min. easy walk	WU: 3 min. easy walk 20 min. brisk walk CD: 3 min. easy walk	Rest	WU: 3 min. easy walk 20 min. brisk walk CD: 3 min. easy walk
Week 4	WU: 3 min. easy walk 25 min. brisk walk CD: 3 min. easy walk	WU: 3 min. easy walk 25 min. brisk walk CD: 3 min. easy walk	Rest	WU: 3 min. easy walk 25 min. brisk walk CD: 3 min. easy walk	WU: 3 min. easy walk 25 min. brisk walk CD: 3 min. easy walk	Rest	WU: 3 min. easy walk 25 min. brisk walk CD: 3 min. easy walk

Outcomes

- 50% (n=4) completed survey
- 100% agreed that the walking plan was useful
- 100% agreed that their awareness was increased about PA and walking during pregnancy
- 75% agreed the walking plan was trustworthy

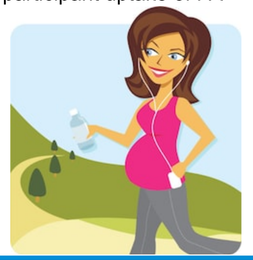


Conclusions

- Overall, an increase in walking was noted (*statistically significant. $p < 0.025$*)
- Positive movement towards first line therapy for controlling BG levels shown with increase of PA every week above participants baseline
- Follow-up is needed after the initial walking plan teaching as higher rates of participation were noted in week 1 and 2
- Participants who completed the survey believed the walking plan had the right amount of information and was not judgmental

Implications for Practice

- Walking is a common and popular PA choice during pregnancy because of its high accessibility
- The addition of a walking plan in GDM teaching is an effective strategy to lower BG levels and for meeting PA recommendations during pregnancy
- The use of a pedometer could be beneficial in participant uptake of PA
- **Project limitations**
  - Small sample size (n=8)



Future Research

- Reduction of oral medication and insulin use in GDM patients on a structured walking plan
- Examine outcomes of BG control using PA among women with GDM in a larger sample of patients in this practice[8]

For More Information

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