

The Effect of Sedentary Behaviour (SB) on Maternal Metabolic Health and Vascular Function

Background

- SB during pregnancy is typically increased compared to non-pregnant females (Hawkins et al 2017),
- ~78% of time spent sedentary, which increases with gestation (Evenson et al., 2011; Hawkins et al., 2017).
- SB is associated with cardiovascular disease, metabolic disease (Wagnild et al., 2019) and increased risk of premature delivery (Jones et al., 2021).

Aims

- Examine the effect of **uninterrupted prolonged sitting** on **vascular function** in healthy pregnant females.
- Investigate the effect of **uninterrupted prolonged sitting** on **glucose control** in healthy pregnant females.

Who?

Healthy pregnant females between 12 to 34 weeks of gestation with singleton pregnancy



How we do it?

Lab visit 1 & 2:
3 hours of SIT/WALK protocols
All females' diets will be standardised.

What do we measure?

Continuous Glucose Monitoring (CGM)
Flow Mediated Dilation (FMD)
Physical Activity Monitoring

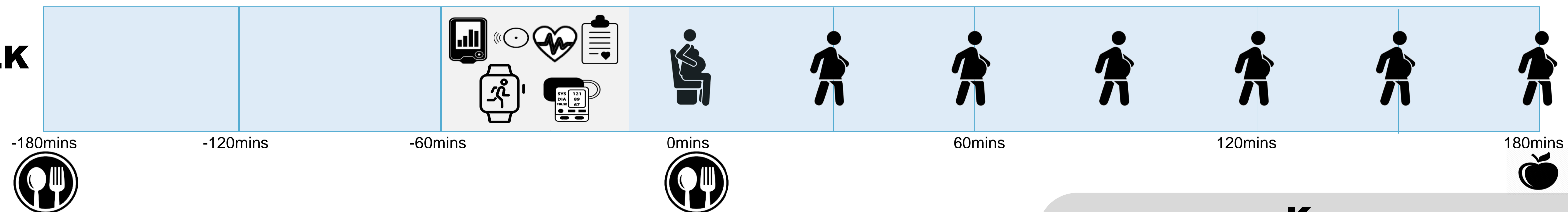
When do we measure?

FMD vascular function (brachial & femoral) before & after the SIT/WALK protocols
CGM & PA monitoring for 14 days

SIT



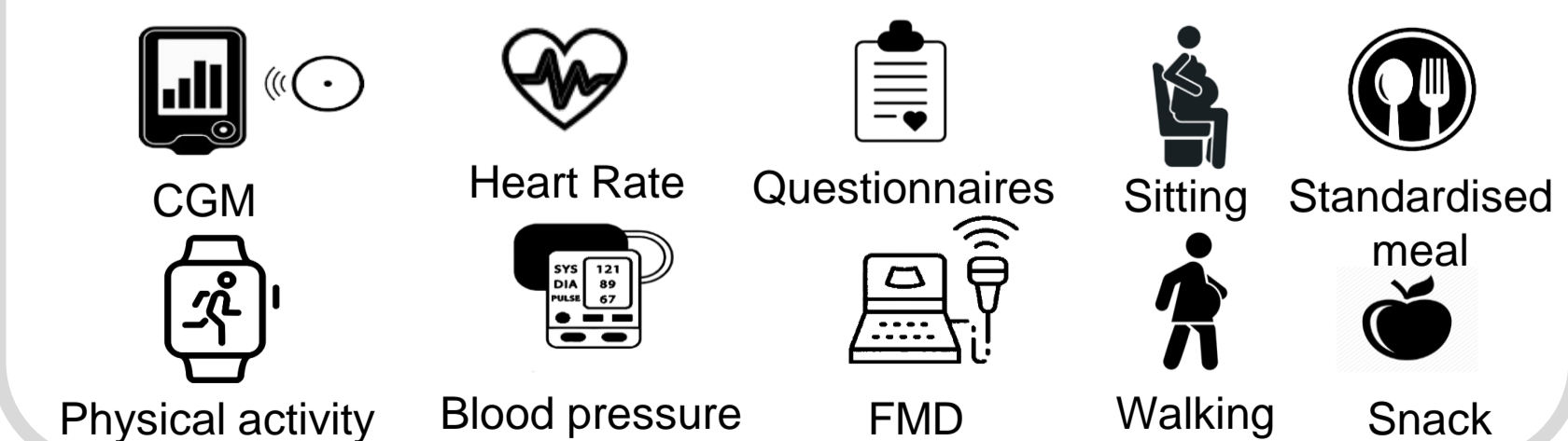
WALK



Implications

1. Data collected during this study will enhance understanding of the impact of SB (specially sitting) on vascular function in healthy pregnant females.
2. Data will inform lifestyle guidelines during pregnancy, allowing health care professionals to provide evidence-based recommendations on physical activity and SB.

Key



References

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