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Reducing the risk of progression from GDM to diabetes

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Gestational Diabetes Mellitus

- In Australia, 4.6% of hospital births were complicated by GDM in 2005-2006
- 30-50% risk of GDM in subsequent pregnancies

Big baby will not be ignored

An Indonesian woman gave birth to this 19.2 pound bundle of joy, the country’s biggest baby ever. Doctors think gestational diabetes is to blame.

We think he’s just an awesome giant. That other baby doesn’t even know what to think.

Risk of DM post GDM

- GDM = strongest single predictor of diabetes
  - 7-fold increased risk of developing DM in women post GDM, compared to women with non-GDM pregnancy (Bellamy et al., 2009)
  - Increased risk maintained over time
    - 71% greater risk of developing DM within 3 years post-GDM pregnancy, compared to women without GDM history (Ratner et al., 2008)
    - Increased risk still evident 5 years post index pregnancy (Bellamy et al., 2010)

Delaying DM post GDM

- Insulin sensitising drugs (Thiazolidinediones)

US DPP

Eligible participants

Randomized

Standard lifestyle recommendations

Intensive Lifestyle (n = 1079)  Metformin (n = 1073)  Placebo (n = 1082)

Lifestyle Intervention Structure

- 16 session core curriculum (over 24 weeks)
- Long-term maintenance program
- Supervised by a case manager
- Access to lifestyle support staff
  - Dietitian
  - Behavior counselor
  - Exercise specialist

US DPP Results

- Weight change in GDM group

N=122
N=111
N=117

Gaps

- RCTs specifically targeting women with a history of GDM
  - Enablers & Barriers
    - Time commitment?
    - Child care?
    - Transport?

GDM DPP

- Any patient diagnosed with GDM within 3 years at participating sites & all new cases of GDM will be invited to participate

- Randomised Control Trial:
  - Intervention: 6 session group intervention
  - Control: Usual care provided by GP

- Aim to assess the effectiveness of a group based diabetes prevention program for women post-GDM, compared to usual care provided by GPs.

Current 6 session structure

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<tr>
<th>Session 1</th>
<th>Session 2</th>
<th>Session 3</th>
<th>Session 4</th>
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<tbody>
<tr>
<td>Introduction to diabetes prevention</td>
<td>Reinforce lifestyle change</td>
<td>Physical activity goal setting</td>
<td>Healthy eating goal setting</td>
<td>Long-term goals</td>
<td>Review of progress</td>
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<tr>
<td>Risk perception outcomes and self-efficacy</td>
<td>Australian PA and dietary guidelines used</td>
<td>Self-monitoring of physical activity and eating habits</td>
<td>Label reading, healthy shopping card</td>
<td>Relaxation exercise</td>
<td>Maintaining lifestyle changes</td>
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<td>Self-monitoring of physical activity</td>
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Implications
A lifestyle intervention program for women post-GDM to reduce the likelihood of progression to diabetes has the potential to positively change the longer term health of women and their children.

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