

Pregnancy and Diabetes

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- Professional history
 - 21 years clinical experience in high risk obstetrics
- Personal history
 - 28 years experience as the partner/spouse of someone with T1D
 - 12 years experience as the parent of a child with T1D
 - 1 personal high risk pregnancy
 - 1 adoption

Jessica C. Kichler, CDCES, PhD, CPsych

- Professional history:
 - 18+ years clinical experience as a clinical and health psychologist in the psychosocial aspects of T1D
 - 15+ years experience as a Certified Diabetes Care and Education Specialist
- Personal history:
 - Orange bracelet
 - Two pregnancies (one miscarriage and one live birth)
 - Recently diagnosed with pre-T2D

Prior to Pregnancy

- Get healthcare team in place (endocrine, OB, maternal fetal medicine)
- Eye exam
- Review all medications
- Start prenatal vitamins/ folic acid
- Get CGM
- Stock up on insulin and pump supplies
- Don't panic!

Plan, Plan, Plan!

- The higher the A1c at time of conception, the higher the risk of complications for mom and baby throughout the pregnancy
- By the time most women realize they are pregnant, vital fetal development has already begun
- Blood sugars prior to conception and during the first trimester have a greater impact on baby's weight and health at birth than blood sugars during the last half of pregnancy

6.0%

A1c Goal

- 6.0% if possible without significant hypoglycemia
- 6.5% is widely accepted
- Note: A1c values during second and third trimester are falsely low due to rapid red blood cell turnover

Target Ranges

- Fasting / before meals < 95
- One hour after meals <140
- Two hours after meals <120
- Overnight 70-95

Insulin Choice

Preferred Insulins

- Humalog (lispro)
- Novolog (aspart)

- Regular
- Levemir (detemir)
- NPH

Second Choice

- Lyumjev (lispro)
- Fiasp (aspart)

- Apidra (glulisine)
- Tresiba (degludec)
- Lantus/Basaglar/ Toujeo (glargine)

What about other diabetes medications?

- GLP-1 receptor agonists (Trulicity, Byetta, Victoza, Ozempic) are not indicated in pregnancy due to lack of information on fetal safety
- Inhaled insulin (Afrezza) also does not have enough data for use during pregnancy

Insulin Pumps

- Software with automated features such as basal adjustments and automatic correction boluses have not been approved for use in pregnancy
 - Medtronic MiniMed 630G/770G/780G, t:slim Basal-IQ/Control-IQ, Omnipod 5
 - Do not allow users to adjust the target glucose lower to accommodate pregnancy blood sugar goals

Before Labor

- Find out hospital protocols for pumps and CGMs
- Make sure support person is fully trained on use of your pump
- Be mindful of CGM and pump site placement

Risk of T1D in Children

- If mom has T1D:
 - Risk is 1 in 25 if mom is less than 25 years old at time of pregnancy
 - Risk is 1 in 100 if mom is older than 25 when pregnant
- If dad has T1D risk is 1 in 17

(*all above risks are doubled if affected parent developed diabetes before age 11)

- If both parents have T1D risk is between 1 in 10 and 1 in 4

Psychosocial Considerations

#43: PREGNANCY!!

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Factors That Affect BG

Food	Biological
<ul style="list-style-type: none">↑↑ 1. Carbohydrate quantity→↑ 2. Carbohydrate type→↑ 3. Fat→↑ 4. Protein→↑ 5. Caffeine↓↑ 6. Alcohol↓↑ 7. Meal timing↑ 8. Dehydration? 9. Personal microbiome	<ul style="list-style-type: none">↑ 20. Insufficient sleep↑ 21. Stress and illness↓ 22. Recent hypoglycemia→↑ 23. During-sleep blood sugars↑ 24. Dawn phenomenon↑ 25. Infusion set issues↑ 26. Scar tissue and lipodystrophy↓↓ 27. Intramuscular insulin delivery↑ 28. Allergies↑ 29. A higher glucose level↓↑ 30. Periods (menstruation)↑↑ 31. Puberty↓ 32. Celiac disease↑ 33. Smoking
Medication	
<ul style="list-style-type: none">→↓ 10. Medication dose↓↑ 11. Medication timing↓↑ 12. Medication interactions↑↑ 13. Steroid administration↑ 14. Niacin (Vitamin B3)	
Activity	Environmental
<ul style="list-style-type: none">→↓ 15. Light exercise↓↑ 16. High-intensity and moderate exercise→↓ 17. Level of fitness/training↓↑ 18. Time of day↓↑ 19. Food and insulin timing	<ul style="list-style-type: none">↑ 34. Expired insulin↑ 35. Inaccurate BG reading↓↑ 36. Outside temperature↑ 37. Sunburn? 38. Altitude
	Behavioral & Decision Making
	<ul style="list-style-type: none">↓ 39. Frequency of glucose checks↓↑ 40. Default options and choices↓↑ 41. Decision-making biases↓↑ 42. Family relationships and social pressures

Psychosocial Considerations

- For individuals diagnosed with **Pregestational Diabetes** (PGM; a diagnosis of T1D or T2D prior to pregnancy) there is a:
 - Higher prevalence of mental health symptomatology (e.g., depression and anxiety) both during the pregnancy and in post-partum periods
 - Especially if have these symptoms prior to getting pregnant (1.5x higher risk)
 - These symptoms are often underdiagnosed

Psychosocial Considerations

- High levels of **diabetes distress** (~58% found in one study) can also be present (separate from depressive and anxiety symptoms) for all individuals with **Diabetes in Pregnancy (DIP; both pregestational and gestational diabetes)**
- Contributing factors have been found:
 - Social isolation (including lower quality social support)
 - Especially due to the COVID-19 pandemic
 - Whether the pregnancy was intended or not

Psychosocial Considerations

- Individuals with T1D should be screened at each pregnancy-related follow-up visit for:
 - common psychiatric conditions (particularly mood and anxiety disorders)
 - psychosocial stressors (diabetes distress, levels of social support)
- This allows for more holistic care during pregnancy:
 - **Emotional and tangible support** + relevant medical advice → can help buffer negative outcomes

Psychosocial Considerations

- Treatment interventions for DIP with some evidence-base findings are:
 - Mindfulness Interventions
 - mHealth (virtual support groups)

Mindfulness

- Thoughts do not cause distress
 - The way in which you react to the thoughts cause distress
 - Thoughts are not resisted, but acknowledged and released
- You do not have to believe all your thoughts
 - Defuse yourself from your thoughts (decentering/distancing)
 - Thoughts ≠ reality
- Goal is **psychological flexibility**
 - Greater range of coping skills to respond to cognitive processes that contribute to emotional distress or problem behavior

Mindfulness Activity



Now, get out a piece of paper and a pen...



What we resist, persists

Mindfulness – Additional Strategies

Cognitive Defusion

"Thank" the mind

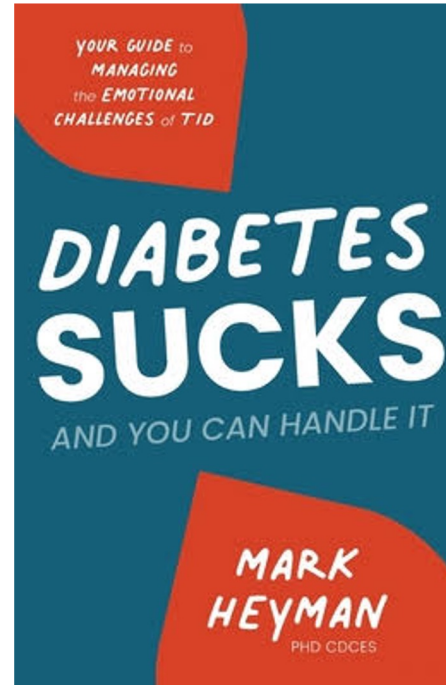
Redirect your focus

Become an observer

Just name things

Notice when you are judging

Come back to the present



Thank you!