

ECHO IDAHO

Diabetes and Metabolic Conditions

Gestational Diabetes: What PCPs Need to Know

Date: 9/3/26

Presenter: Rachel Myers, MSAN, RD, LD, CDCES from St. Lukes Humphreys
Diabetes Center

and

Matt Widdison, MD from EIRMC Family Medicine Residency

None of the planners or presenters for this educational activity have relevant financial relationship(s) to disclose with ineligible companies whose primary business is producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients.



University of Idaho
School of Health and Medical
Professions

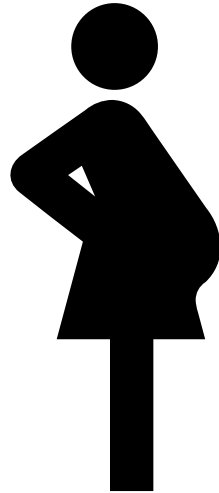


Learning Objectives

- Discuss importance of nutritional management in gestational diabetes (GDM)
- Learn the recommended meal plan for GDM
- Blood glucose management
- Address barriers to care

What is Gestational Diabetes (GDM)?

- Definition: Gestational diabetes mellitus (GDM) is a form of glucose intolerance that is first recognized during pregnancy and poses significant short and long-term risks to both the mother and the fetus.



Risk Factors: You're at risk for developing gestational diabetes (diabetes while pregnant) if you:

- History of GDM during a previous pregnancy, ever delivered a baby over 9 pounds.
- Have given birth to a baby who weighed more than 9 pounds
- Are overweight, and/or A1c of $>5.7\%$
- Are more than 25 years old (sharply increased risk at age 35+)
- Have a family history of type 2 diabetes
- Have polycystic ovary syndrome (PCOS) or any significant marker of insulin resistance (e.g., acanthosis nigricans)
- Are African American, Hispanic/Latino American, American Indian, Alaska Native, Native Hawaiian, or Pacific Islander

Diagnosing Gestational Diabetes (GDM)

Meet or exceed two or more of the following:

100g OGTT

- Fasting $\geq$ 95 mg/dl
- 1 hour $\geq$ 180 mg/dl
- 2 hour $\geq$ 155 mg/dl
- 3 hours $\geq$ 140 mg/dl

This is usually preceded by a 50g 1-hour test

(NIH criteria supported by ACOG, used in the Treasure Valley)

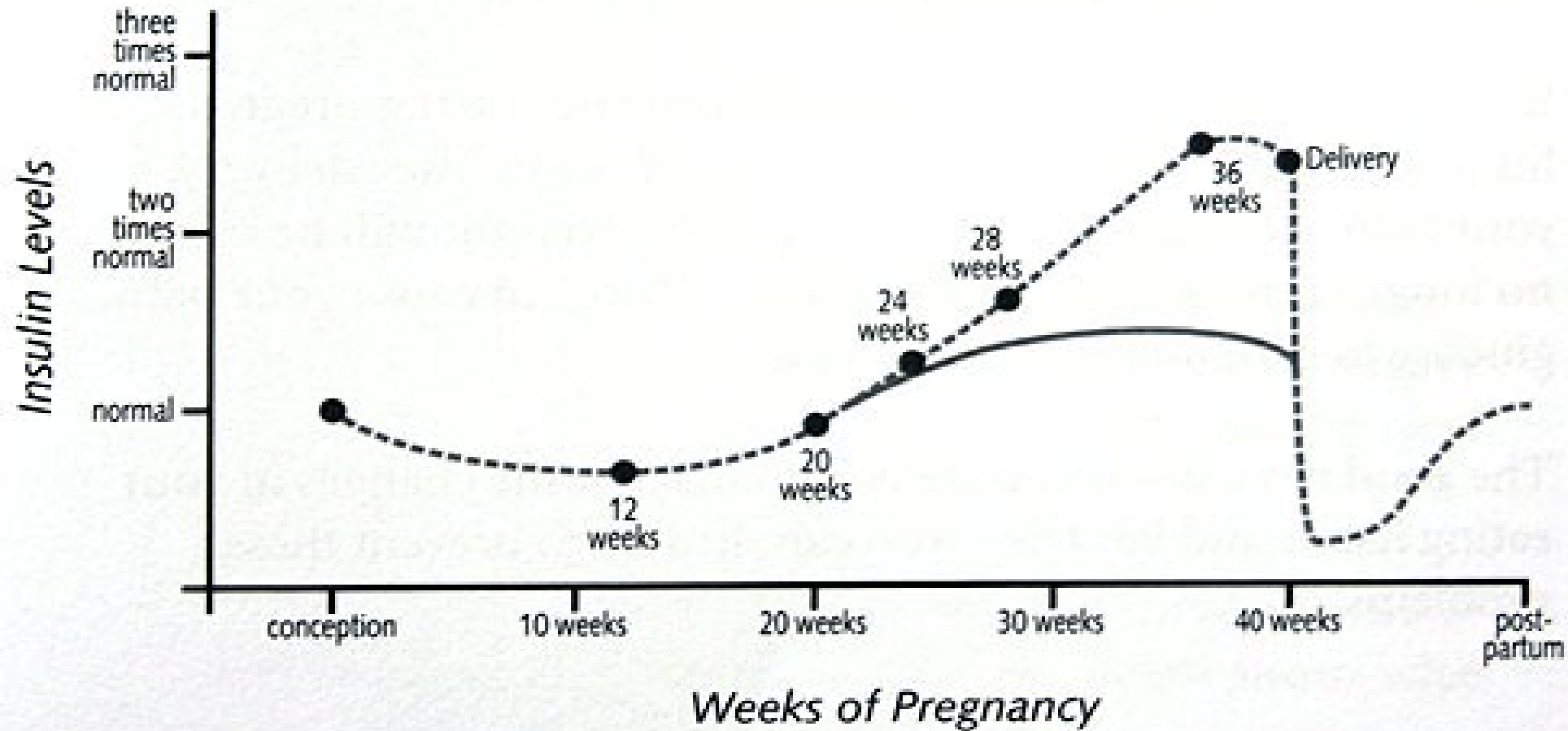
Meet or exceed any of the following:

75g OTT

- Fasting $\geq$ 92 mg/dl
- 1 hour $\geq$ 180 mg/dl
- 2 hour $\geq$ 153 mg/dl

(IADPSG criteria, not used locally)

Insulin Requirements during Pregnancy



----- = Usual insulin production during pregnancy

———— = Shortage of insulin production during pregnancy with gestational diabetes

Glucose Goals for GDM

- Note that there are not specific goals with CGMs for GDM (yet).
- The Provider can determine if they are going to align with the goals for Type 1 DM in Pregnancy.

Goals for sensor glucose ranges in pregnancy are:

- Goal sensor glucose range 63–140 mg/dL (3.5–7.8 mmol/L): TIR, goal >70%
- Time below range (TBR) (<63 mg/dL [<3.5 mmol/L]): level 1 TBR, goal <4%
- TBR (<54 mg/dL [<3.0 mmol/L]): level 2 TBR, goal <1%
- TAR (>140 mg/dL [>7.8 mmol/L]): TAR, goal <25%

Goals for time spent in each range are specific for pregnant individuals with type 1 diabetes.

Table 15.2—Blood glucose goals in pregnancies associated with diabetes

Glucose measurement	Blood glucose goal		
	Type 1 diabetes or type 2 diabetes ^A	GDM treated with insulin	GDM not treated with insulin
Fasting glucose	70–95 mg/dL (3.9–5.3 mmol/L)	70–95 mg/dL (3.9–5.3 mmol/L)	<95 mg/dL (<5.3 mmol/L)
1-h postprandial glucose	110–140 mg/dL* (6.1–7.8 mmol/L)	110–140 mg/dL* (6.1–7.8 mmol/L)	<140 mg/dL* (<7.8 mmol/L)
2-h postprandial glucose	100–120 mg/dL (5.6–6.7 mmol/L)	100–120 mg/dL (5.6–6.7 mmol/L)	<120 mg/dL (<6.7 mmol/L)

Gestational diabetes mellitus (GDM) blood glucose goals shown are recommended by the Fifth International Workshop-Conference on Gestational Diabetes Mellitus (45). ^ALower glucose limits do not apply to individuals with type 2 diabetes treated with nutrition alone. Aim for less stringent goals if these cannot be achieved without significant hypoglycemia, based on clinical experience and individualization of care.

*Optimal goal includes either a 1-h postprandial glucose level or 2-h postprandial glucose level within column of type of diabetes.

ADA Recommendations

Gestational Diabetes Mellitus

Recommendations

2.30 In individuals who are planning pregnancy, screen those with risk factors ([Table 2.5](#)) **B** and consider testing all individuals of childbearing potential for undiagnosed prediabetes or diabetes. **E**

2.31a Before 15 weeks of gestation, test individuals with risk factors ([Table 2.5](#)) **B** and consider testing all individuals **E** for undiagnosed diabetes at the first prenatal visit using standard diagnostic criteria if not screened preconception.

2.31b Before 15 weeks of gestation, screen for abnormal glucose metabolism (defined as A1C 5.9–6.4% [41–47 mmol/mol] or FPG 110–125 mg/dL [6.1–6.9 mmol/L]) to identify individuals who are at higher risk of adverse pregnancy and neonatal outcomes and are at high risk of a later gestational diabetes mellitus (GDM) diagnosis. **B**

2.32 Screen for GDM at 24–28 weeks of gestation in pregnant individuals not previously found to have diabetes or high-risk abnormal glucose metabolism detected earlier in the current pregnancy. **A**

2.33 Screen individuals with GDM for prediabetes or diabetes at 4–12 weeks postpartum, using the 75-g OGTT and clinically appropriate nonpregnancy diagnostic criteria. **B**

2.34 Individuals with a history of GDM should have lifelong screening for the development of prediabetes or diabetes every 1–3 years. **B**

Remember to check the patient's A1c every 1-3 years after they have had GDM.

There is a 20% risk of Type 2 Diabetes dx in 10 years, and the risk increases 10% every decade after that.

Prevention is Key!

Volume 49, Issue
Supplement_1

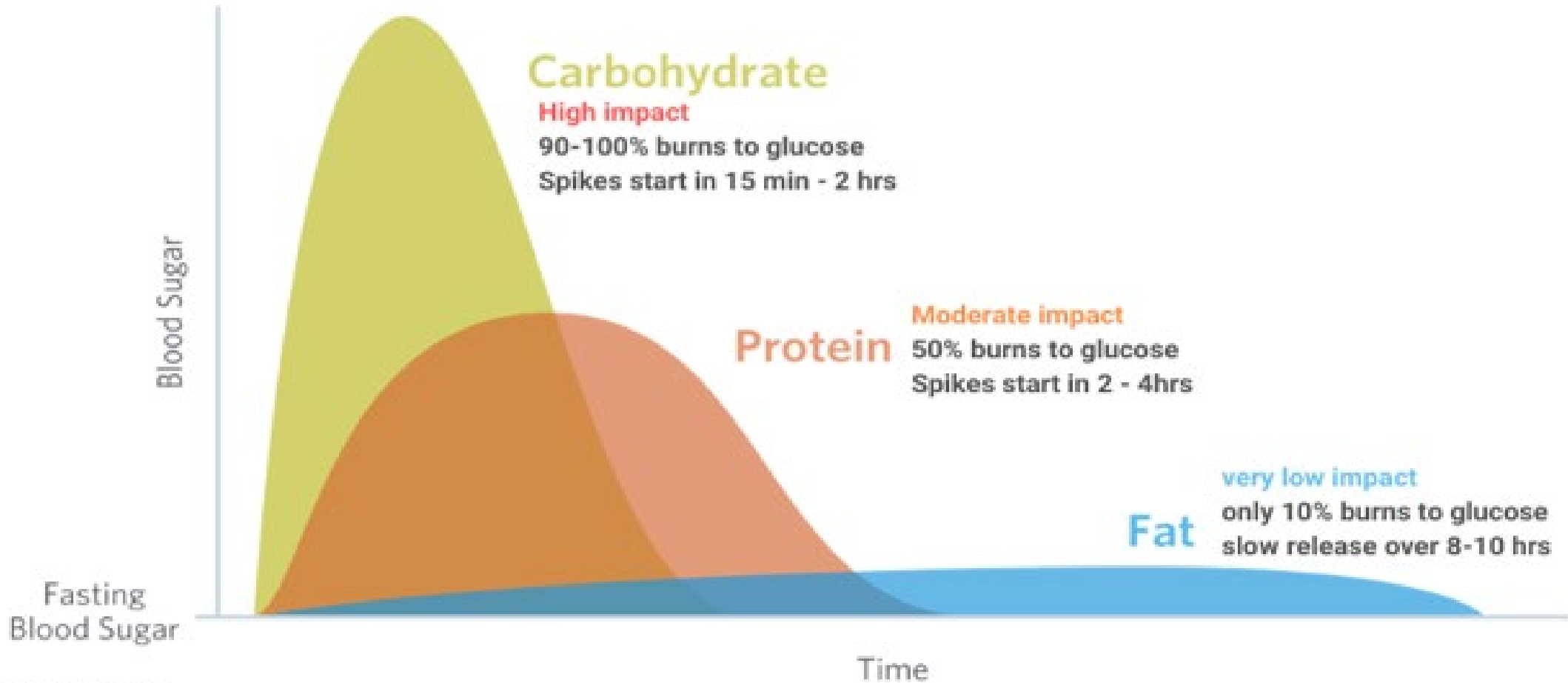
January 2026



Tools for Management

- Meal planning
- Regular exercise – aim for 30 minutes a day to help reduce insulin resistance!
 - Examples: Walking, yoga, swimming etc.
- Blood glucose monitoring
- Medication: Insulin or pills if needed

Affects of Macronutrients on Blood Sugar



Source: Virta health

What are the Basics?

- Eat whole, minimally processed, colorful foods
- Focus on plants, proteins, and unprocessed carb foods
- Focus on smaller portions of carbs at each meal or snack
- **Include a source of protein at meals and snacks**
- Use the plate handout for healthy portions
- Use the meter or CGM to help personalize carb portions
- Take prenatal vitamins daily

Plan Your Portions

NONSTARCHY VEGETABLES

CARBOHYDRATES

NONSTARCHY VEGETABLES

Asparagus	Broccoli
Brussels sprouts	Cabbage (cole slaw)
Cauliflower	Cucumbers
Dark leafy greens	Eggplant
Mushrooms	Okra
Pea pods	Peppers
Radishes	Salad greens
Tomatoes	Zucchini

CARBOHYDRATES

Corn	Corn tortilla
Fruit	Berries
Whole grains	Winter squash
Bean, lentils and peas	Milk and yogurt

PROTEIN

Chicken	Eggs and cheese
Fish: salmon, tuna, etc.	Lean beef
Nuts	Nut butter
Shrimp	Tofu

Use a 9-inch plate to help guide your portions.

Eat Real Food

What is “real food”? (Definition modified from Real food for Pregnancy (page 6) by Lily Nichols RD, CDE)

Real food is as close to its source as possible

Real food is minimally processed, so it appears just like you would find it in nature (less packages!)

Real food often does not have a label (like fresh fruits, vegetables, beans, or meat) but when it does it is made with few ingredients

Bottom line: Focus on less packages and more whole, minimally processed foods.

Apple > Applesauce > Apple Juice



19g carb 4 g fiber



15g carb, 1g fiber



19g carb, 0g fiber

REAL FOOD vs. PROCESSED FOOD



REAL FOOD

Made from natural ingredients.
Nutrient-dense, supports health.



REAL FRUIT

High in fiber, vitamins and antioxidants.



Supports immunity, digestion & heart health.



WHOLE OATS

High in fiber and complex carbohydrates.



Keeps you full longer, supports heart health.



GRILLED CHICKEN

Lean protein with no artificial additives.



Builds muscle, supports repair and growth.



NUTS

Natural source of healthy fats, protein and fiber.



Supports heart health and brain function.



WATER

Hydrating and essential for your body.



Supports energy, digestion and temperature control.



CHOOSE REAL FOOD MOST OFTEN

for more energy, a stronger immune system, and better overall health.



PROCESSED FOOD

Made in factories with added ingredients.
Often high in sugar, salt & unhealthy fats.



CANNED FRUIT IN SYRUP

Often packed in syrup with added sugar.



Higher in sugar, lower in nutrients.



SUGARY CEREAL

Refined grains with added sugar.



Can cause blood sugar spikes and crashes.



CHICKEN NUGGETS

Processed meat with fillers, breading and additives.



Higher in sodium, unhealthy fats and preservatives.



POTATO CHIPS

Fried in oil and high in salt.



Low in nutrients, may increase risk of disease.



SUGARY SODA

High in added sugar and empty calories.



May lead to weight gain, tooth decay and more.



LIMIT PROCESSED FOOD

to protect your health and reduce risk of chronic diseases.

Highly Processed vs. Minimally Processed



Minimally Processed vs. Highly Processed



Focus on minimally processed foods in all food categories

>

Highly processed, Limit these



Carbohydrates Guidelines

- Carbohydrate Meal Plan

Breakfast:	Up to 30 grams carbohydrate
Snack:	Up to 30 grams carbohydrate
Lunch:	Up to 60 grams carbohydrate
Snack:	Up to 30 grams carbohydrate
Dinner:	Up to 60 grams carbohydrate
Snack:	Up to 30 grams carbohydrate

In reality, 15g or less for breakfast and snacks, and 45g or less for lunch or dinner work best for most women.

Protein Needs in Pregnancy?

- RDA (low estimate- blanket statement) = 71g protein per day (**minimum**)
- Up To Date says “Depending on caloric needs protein intake should be 10-35% of calories.”

Calories in Diet	10% of calories as protein grams (g)	35% of calories as protein grams (g)
2000	50g!	175g
1900	47.5g!	166g
1800	45g!	157
1700	42.5!	149
1600	40!	140

My recommendation is to focus on eating 20-30g protein each meal. Optimal intake would be a minimum of ~100g/day (more for a larger person or very active).

Confusing and not really helpful! A wide disparity between 10-35% and doesn't meet the minimum RDA.

High Blood Sugars

High Fasting Sugars

- Often are related to the patient's physiology and long-acting insulin will be needed
- First try:
 - A walk in the evening
 - Improving sleep quality/quantity
 - Bedtime snack (protein focused, lower carb)
 - Making sure they aren't waiting longer than 10 hours after eating to check BGs

High Meal-time Sugars

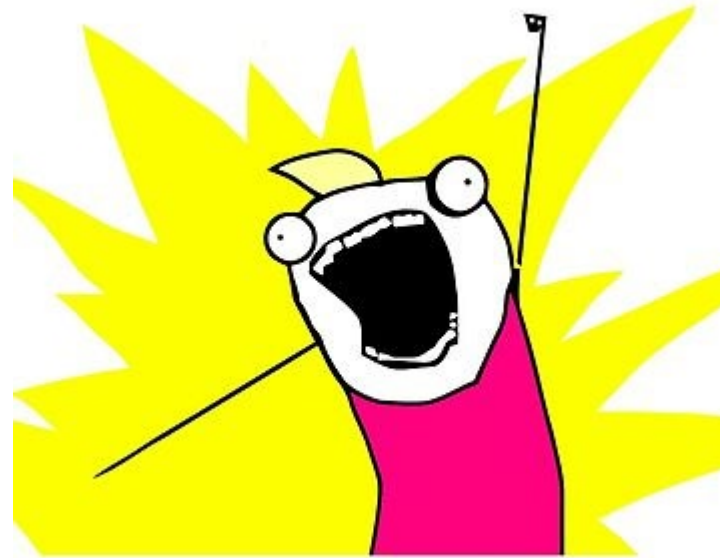
- Check carbohydrate portion sizes – consider decreasing the carb amount
- Opt for a walk or short activity before or 1 hour after meals
- Meal-time insulin may be needed if these changes do not help

References

- https://diabetesjournals.org/care/article/49/Supplement_1/S27/163926/2-Diagnosis-and-Classification-of-Diabetes
- https://diabetesjournals.org/care/article/49/Supplement_1/S321/163918/15-Management-of-Diabetes-in-Pregnancy-Standards
- <https://www.uptodate.com/contents/image?imageKey=OBGYN%2F60019>
- Reference 3

T1DM, T2DM, IDDM, MODY, GDM, A1, A2

- Diagnosed!?
- What should a PCP do?
- Depends



Why do we care about these numbers?

- Large-for-gestational-age/macrosomia
- Shoulder dystocia/birth trauma
- Neonatal hypoglycemia
- Preeclampsia and other pregnancy complications
- Longer-term metabolic consequences for offspring



When food isn't enough

- Let food be thy medicine
 - Hippocrates... probably.



When food isn't enough



Publications



Search...

Diabetes Care

Diabetes Care

Articles & Issues

Review Articles

Info & About

Podcasts

Volume 49, Issue
Supplement_1
January 2026



[Previous Article](#)

[Next Article](#)

Article Contents

Diabetes in Pregnancy

Glycemic Goals in Pregnancy

**Management of Diabetes in
Pregnancy**

Preeclampsia and Aspirin

STANDARDS OF CARE | DECEMBER 08 2025

15. Management of Diabetes in Pregnancy: Standards of Care in Diabetes—2026 **FREE**

American Diabetes Association Professional Practice Committee for Diabetes*



Diabetes Care 2026;49(Supplement_1):S321–S338

<https://doi.org/10.2337/dc26-S015>

PubMed:41358885

Split-Screen Views PDF Share Cite Get Permissions

The American Diabetes Association (ADA) “Standards of Care in Diabetes” includes the ADA’s current clinical practice recommendations and is intended to provide the components of diabetes care, general treatment goals and guidelines, and tools to evaluate quality of care. Members of the ADA [Professional Practice Committee for Diabetes](#), an interprofessional expert committee, are responsible for updating the Standards of Care annually, or more frequently as warranted. For a detailed description of ADA standards, statements, and reports, as well as the evidence-grading system for ADA’s clinical practice recommendations and a full list of Professional Practice Committee members, please refer to [Introduction and Methodology](#). Readers who wish to comment on the Standards of Care are invited to do so at professional.diabetes.org/SOC.

Diabetes in Pregnancy

Insulin!

Volume 49, Issue Supplement_1

January 2026



[< Previous Article](#) [Next Article >](#)

Article Contents

Diabetes in Pregnancy

Glycemic Goals in Pregnancy

**Management of Diabetes in
Pregnancy**

Preeclampsia and Aspirin

Pregnancy and Non-Glucose-
Lowering Drug Considerations

Postpartum Care

Health Care Delivery for People With Diabetes in Pregnancy

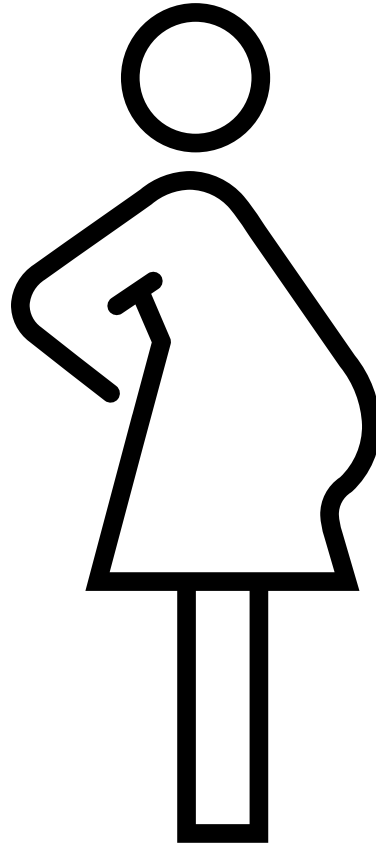
As discussed in PRECONCEPTION CARE, team-based care is recommended either through a single specialized center (when available) or multiple centers with interprofessional team members as part of the care plan during pregnancy. A meta-analysis of 32 RCTs evaluating the effectiveness of telehealth interventions, which ranged from telehealth visits to the use of health apps, used in combination with in-person visits for GDM, demonstrated reduced incidences of cesarean delivery, premature rupture of membranes, pregnancy-induced hypertension or preeclampsia, preterm birth, neonatal asphyxia, and polyhydramnios compared with standard in-person care alone (99).

Pharmacologic Therapy

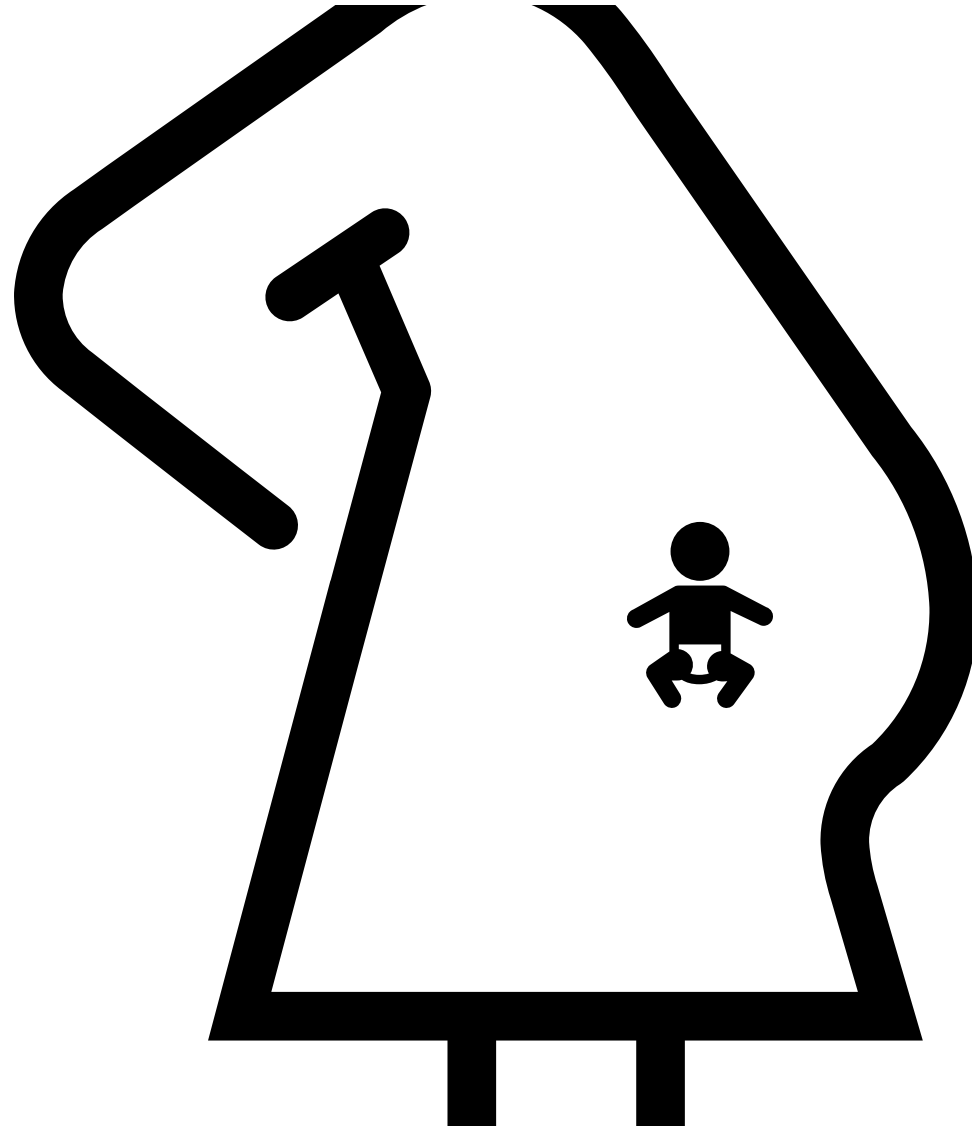
Insulin

Insulin should be used to manage type 1 diabetes in pregnancy and is preferred for the management of type 2 diabetes in pregnancy and GDM. The physiology of pregnancy necessitates frequent titration of insulin to match changing requirements and underscores the importance of daily and frequent glucose monitoring. In early pregnancy, many people with type 1 diabetes will have lower insulin requirements and an increased risk for hypoglycemia (38). At around 16 weeks, insulin resistance begins to increase, and total daily insulin doses increase linearly by ~5% per week through week 36. This usually results in a doubling of daily insulin dose compared with the prepregnancy requirement. While there is an increase in both basal and bolus insulin requirements, bolus insulin requirements take up a larger proportion of overall total daily insulin needs in individuals with preexisting diabetes as pregnancy progresses (39,40). The insulin requirement levels off toward the end of the third trimester. A rapid and significant reduction in insulin requirements may indicate the development of placental insufficiency (100), although data are conflicting (101).

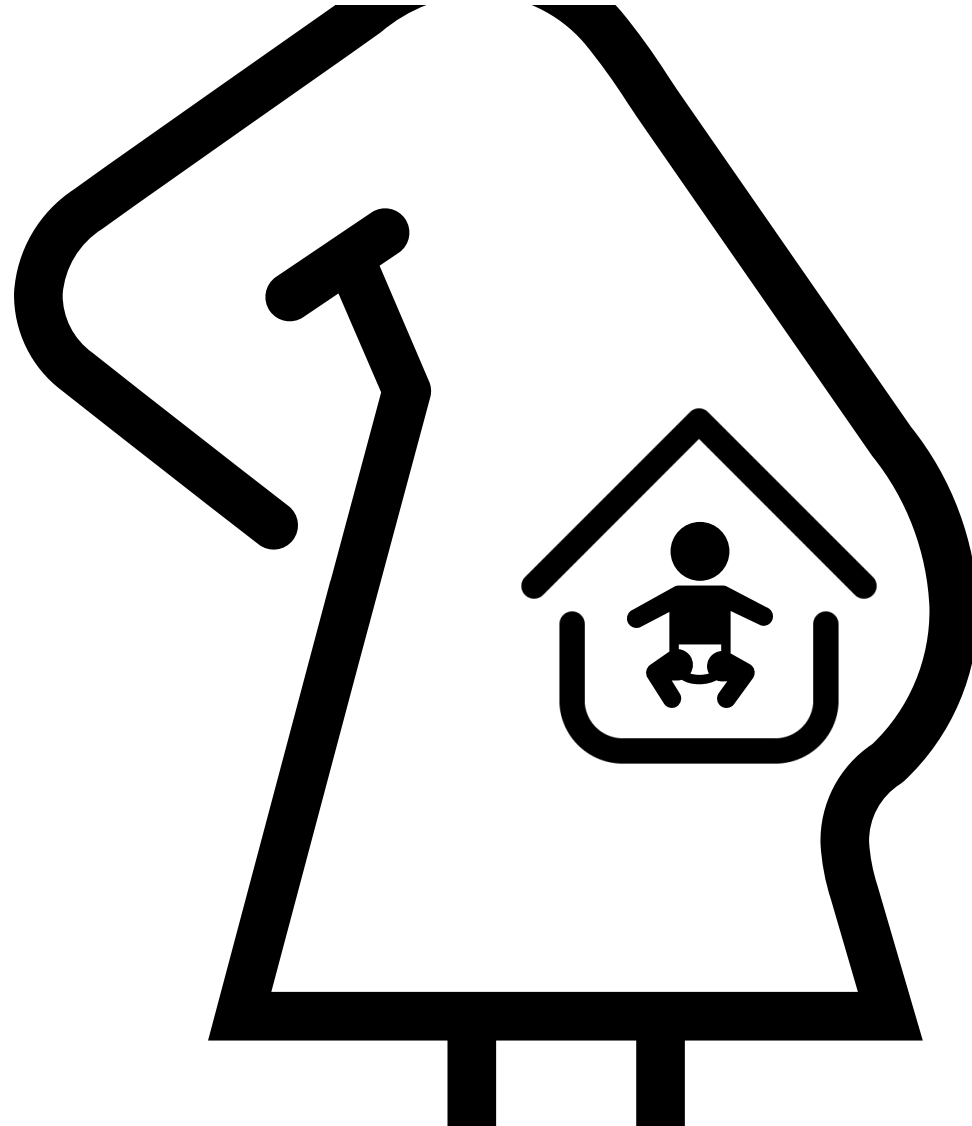
Quick Recap of why GDM is so harmful



Quick Recap of why GDM is so harmful



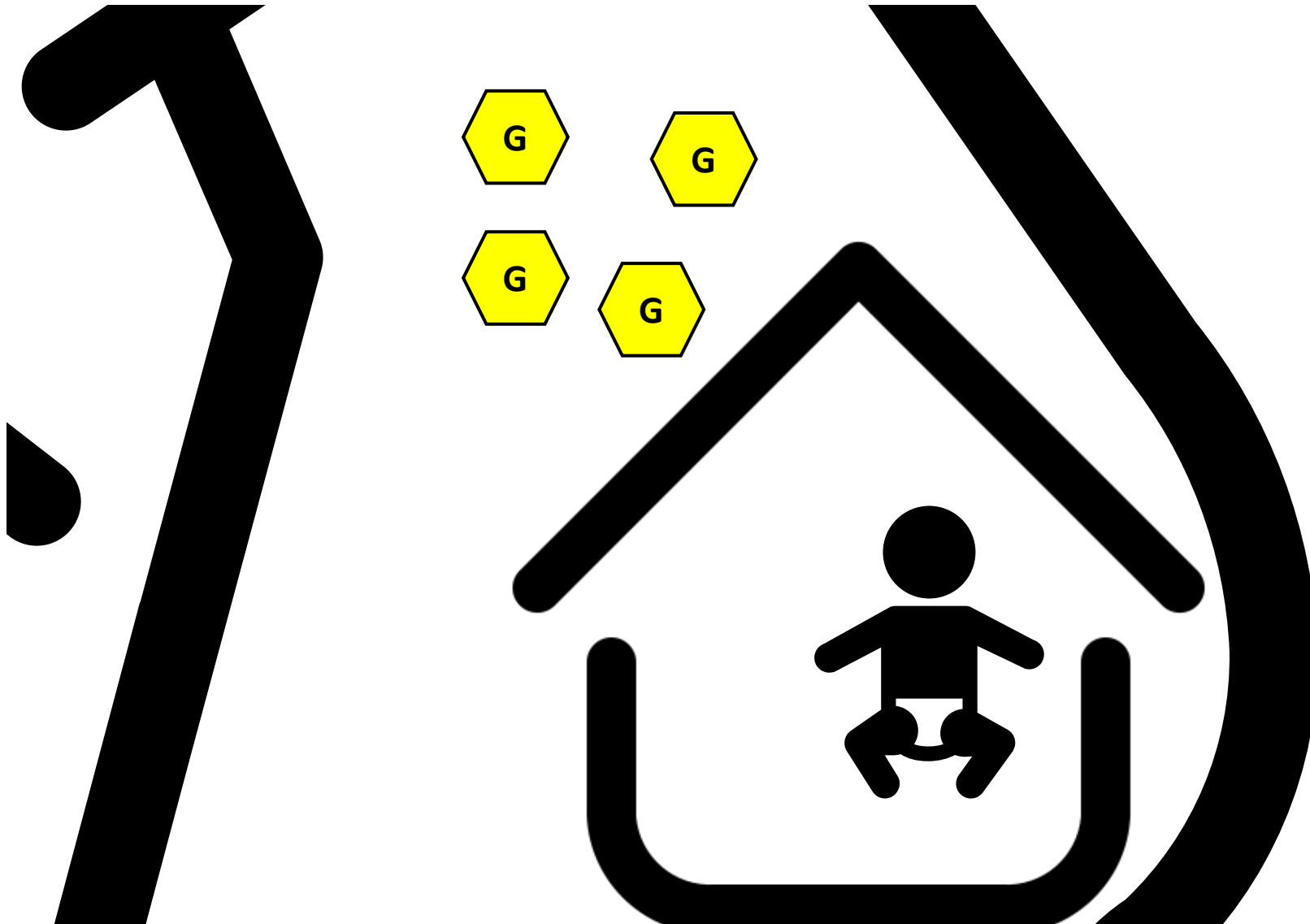
Quick Recap of why GDM is so harmful



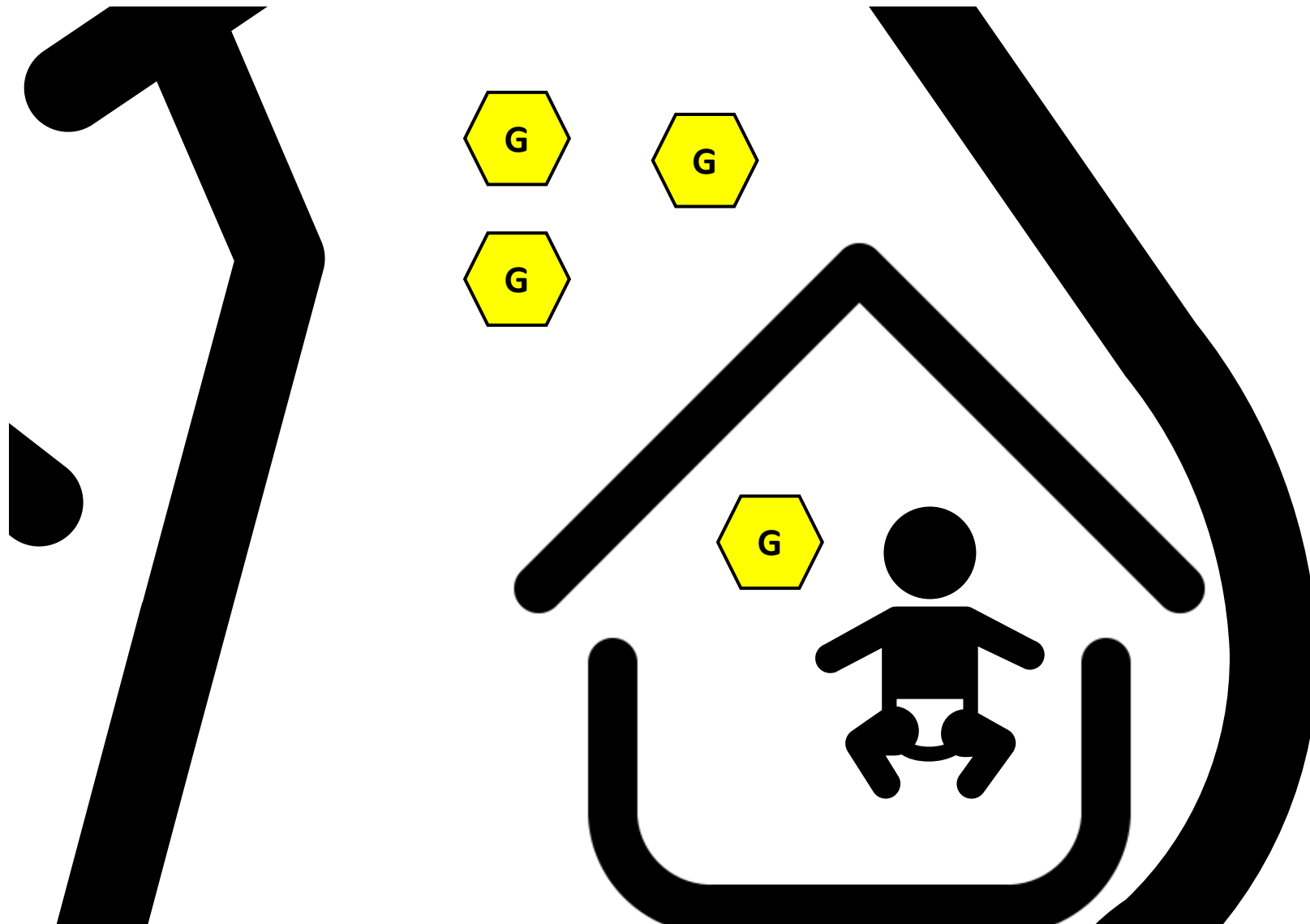
Quick Recap of why GDM is so harmful



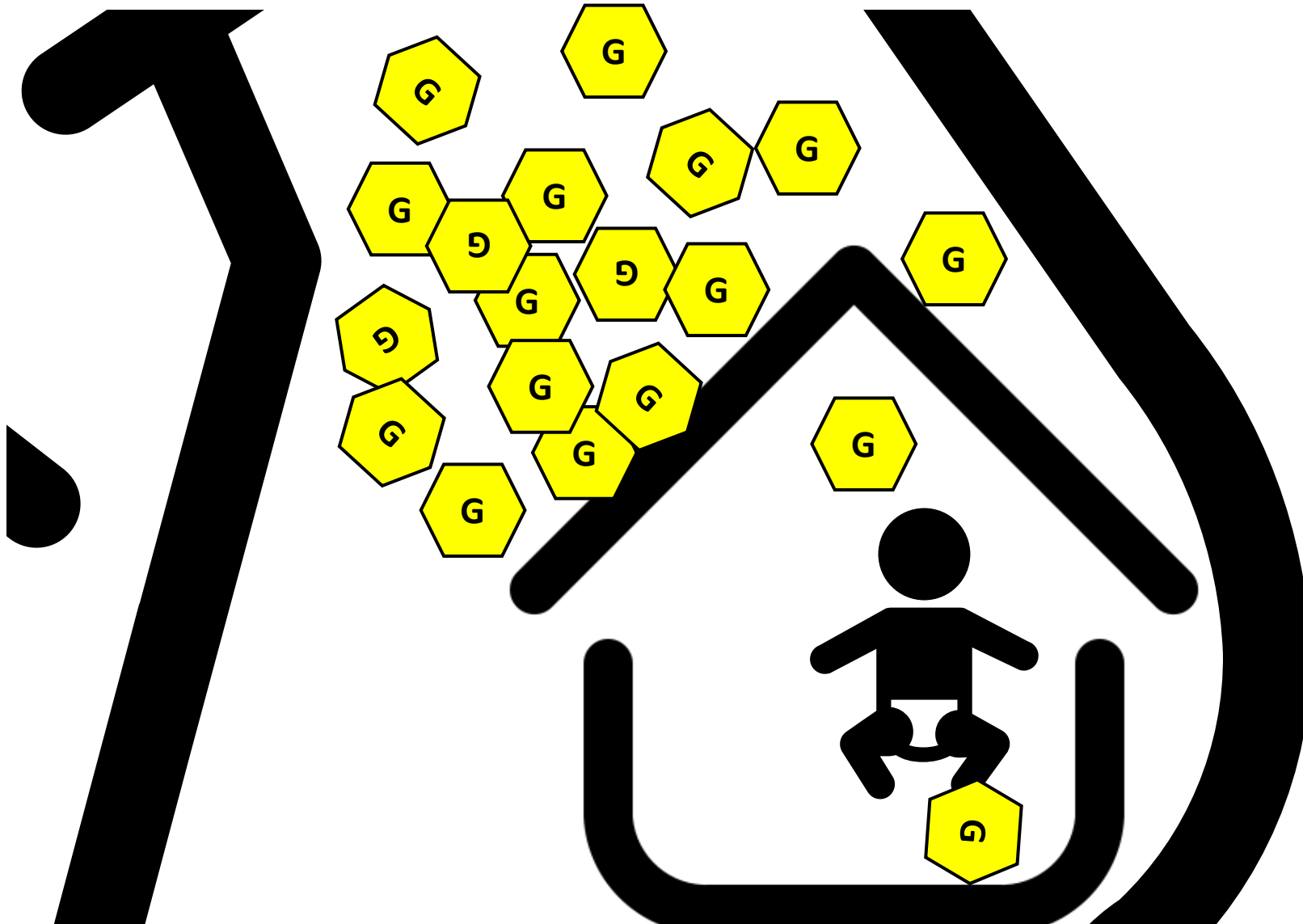
Quick Recap of why GDM is so harmful



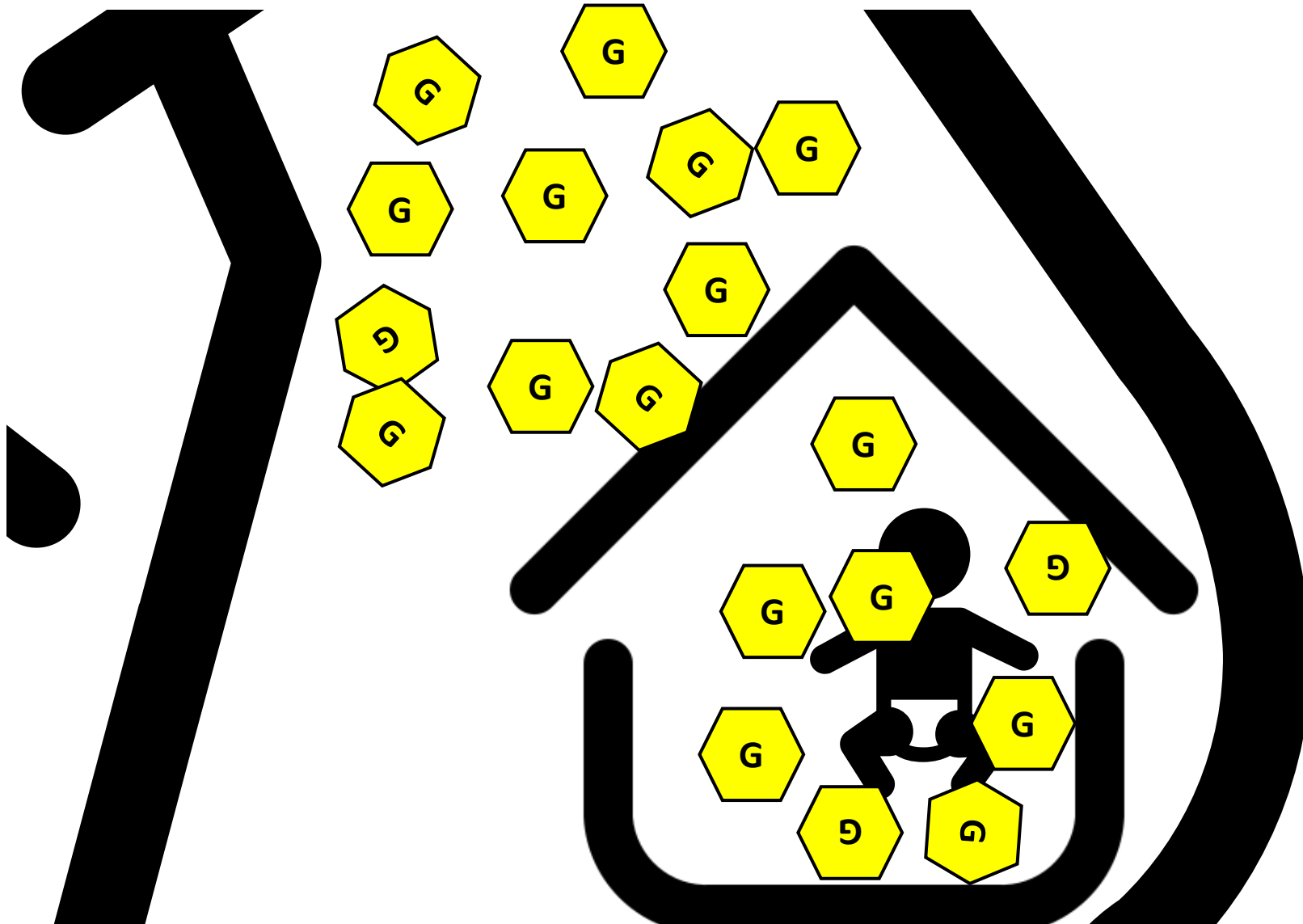
Quick Recap of why GDM is so harmful



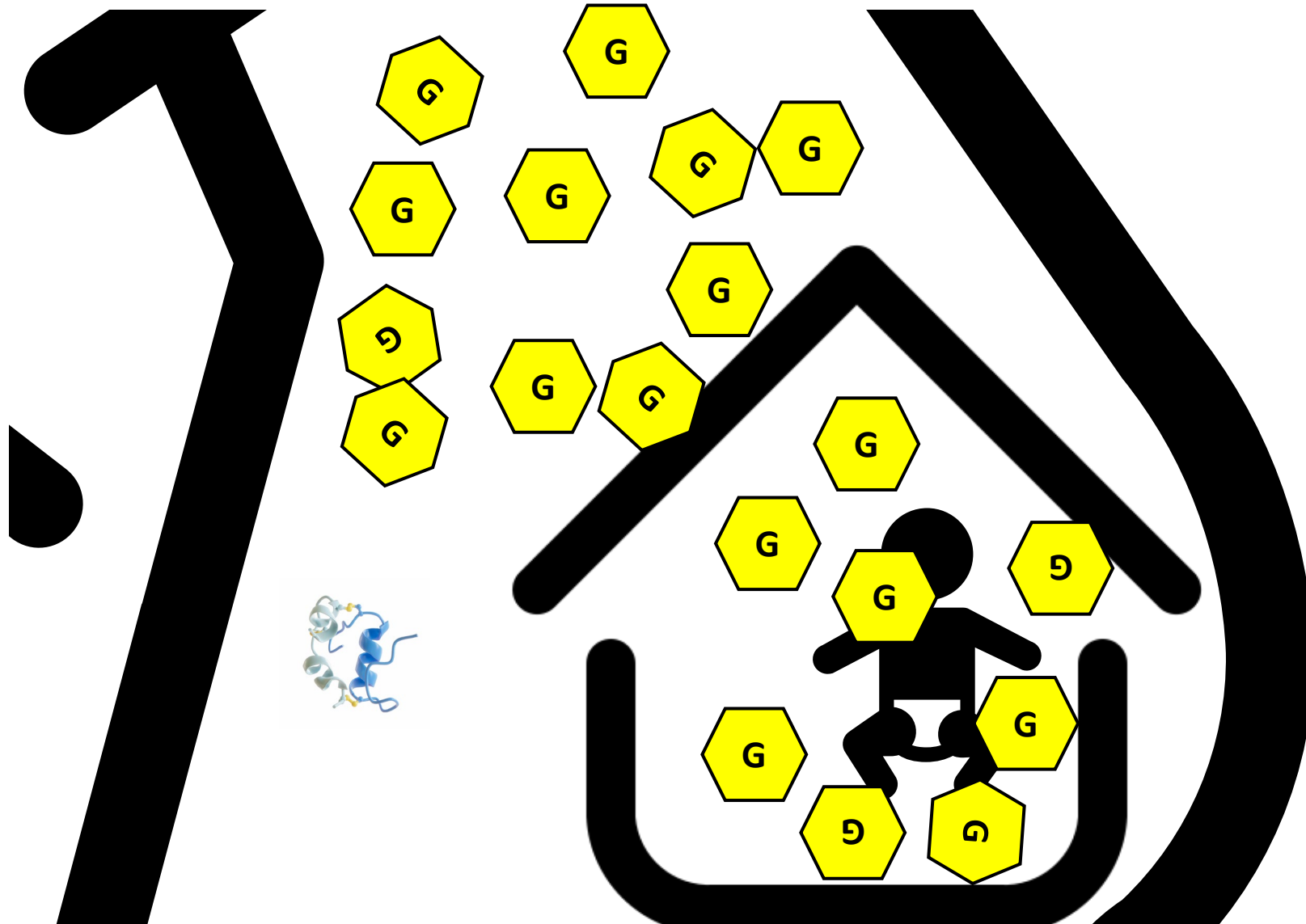
Quick Recap of why GDM is so harmful



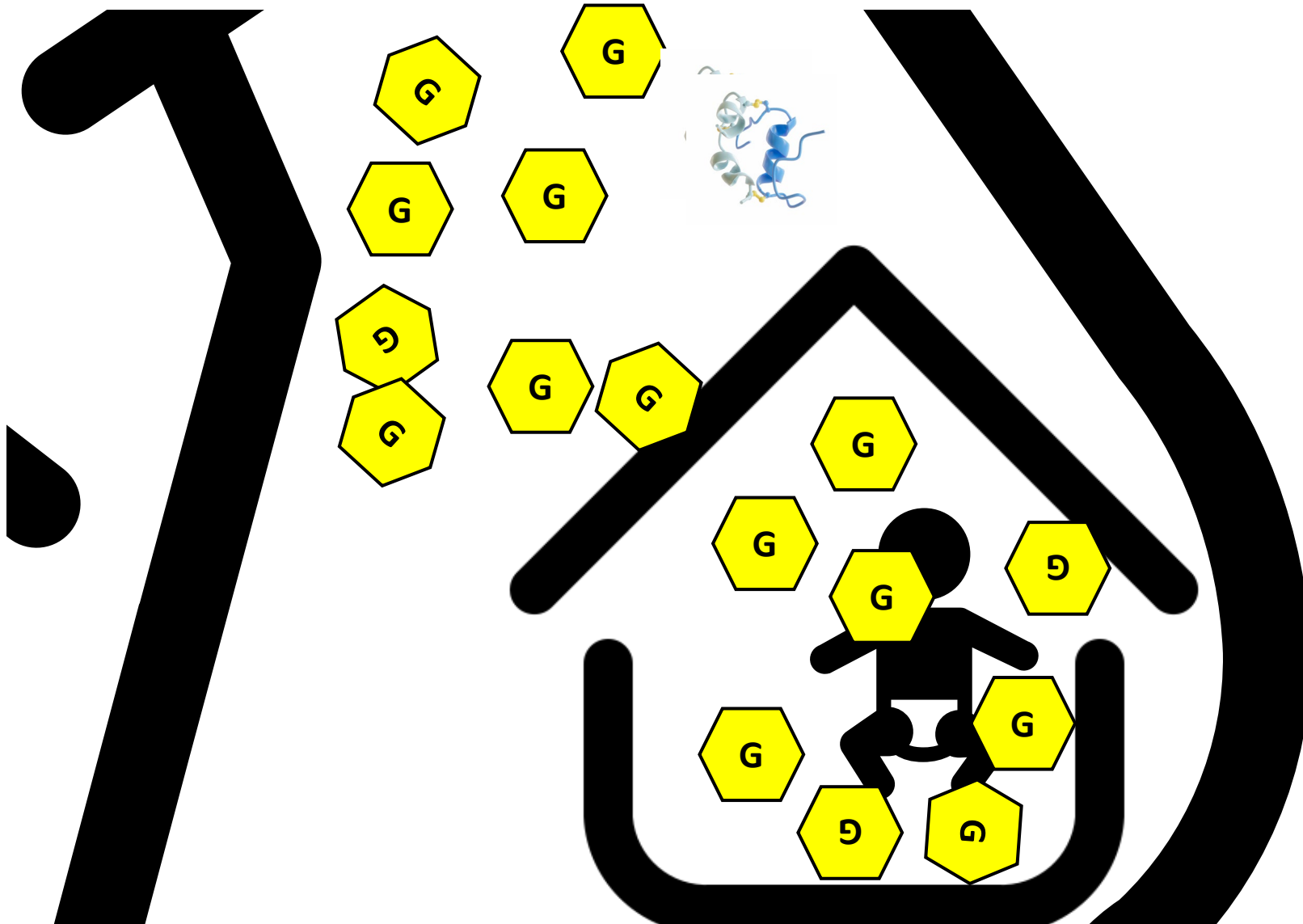
Quick Recap of why GDM is so harmful



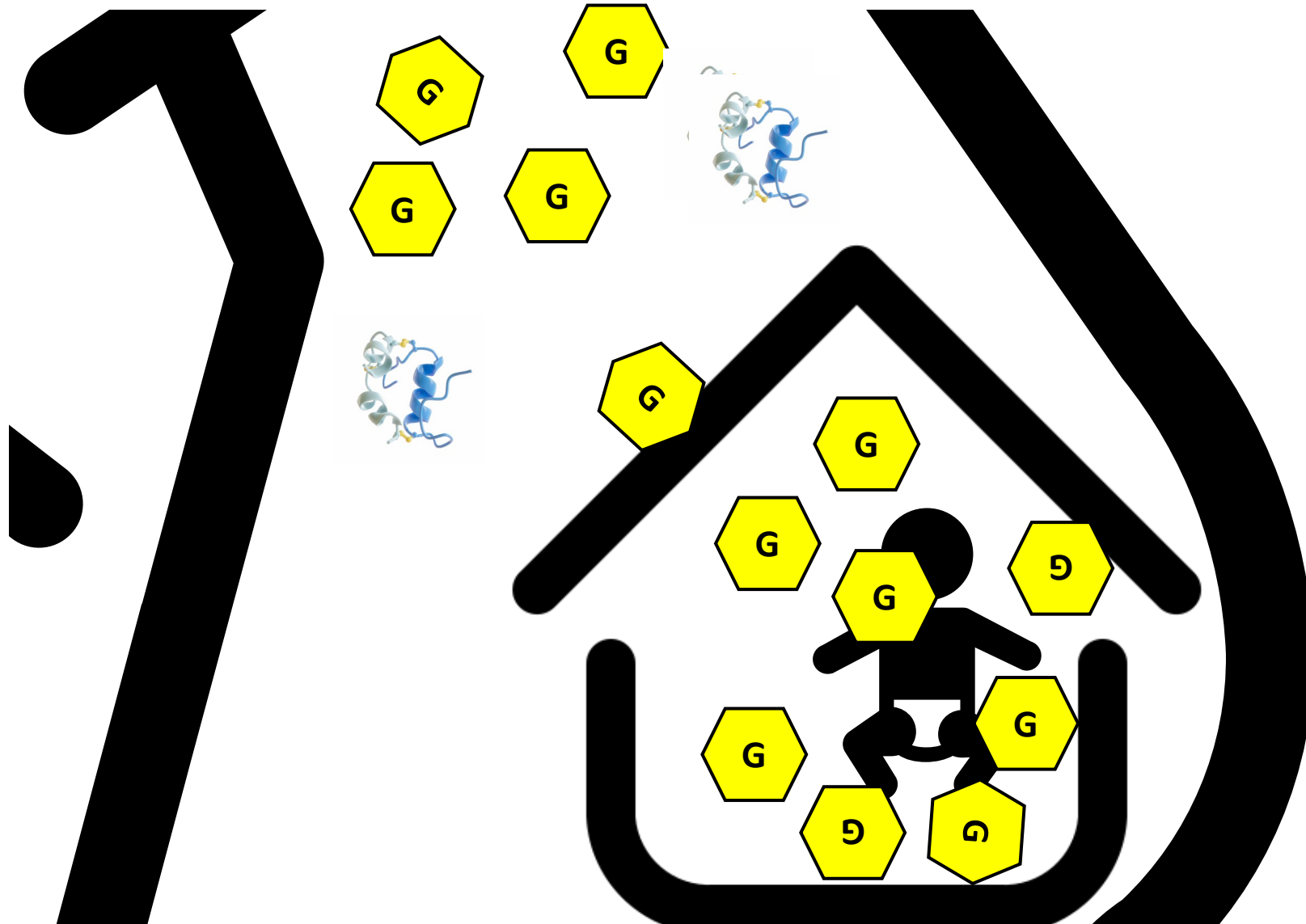
Quick Recap of why GDM is so harmful



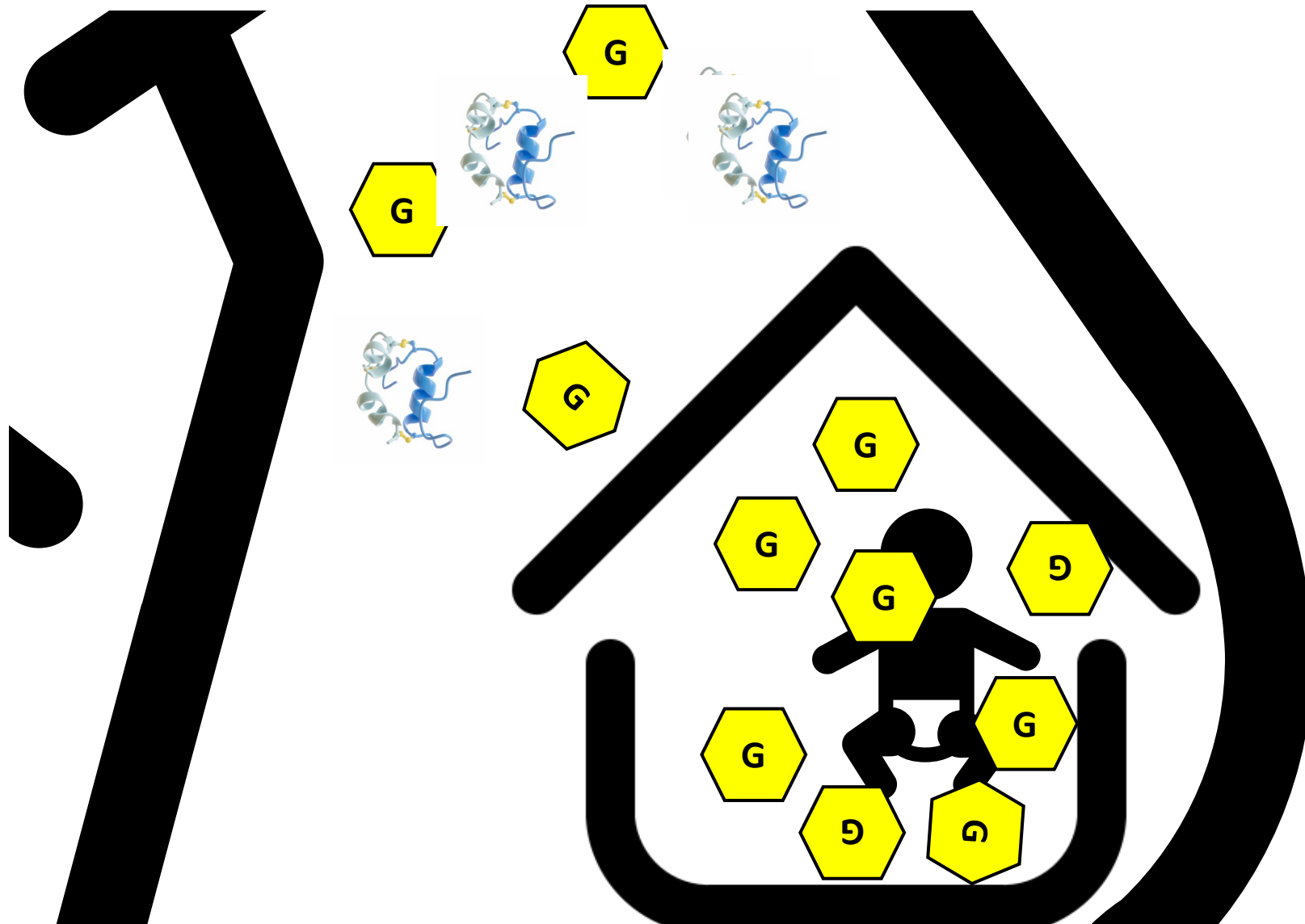
Quick Recap of why GDM is so harmful



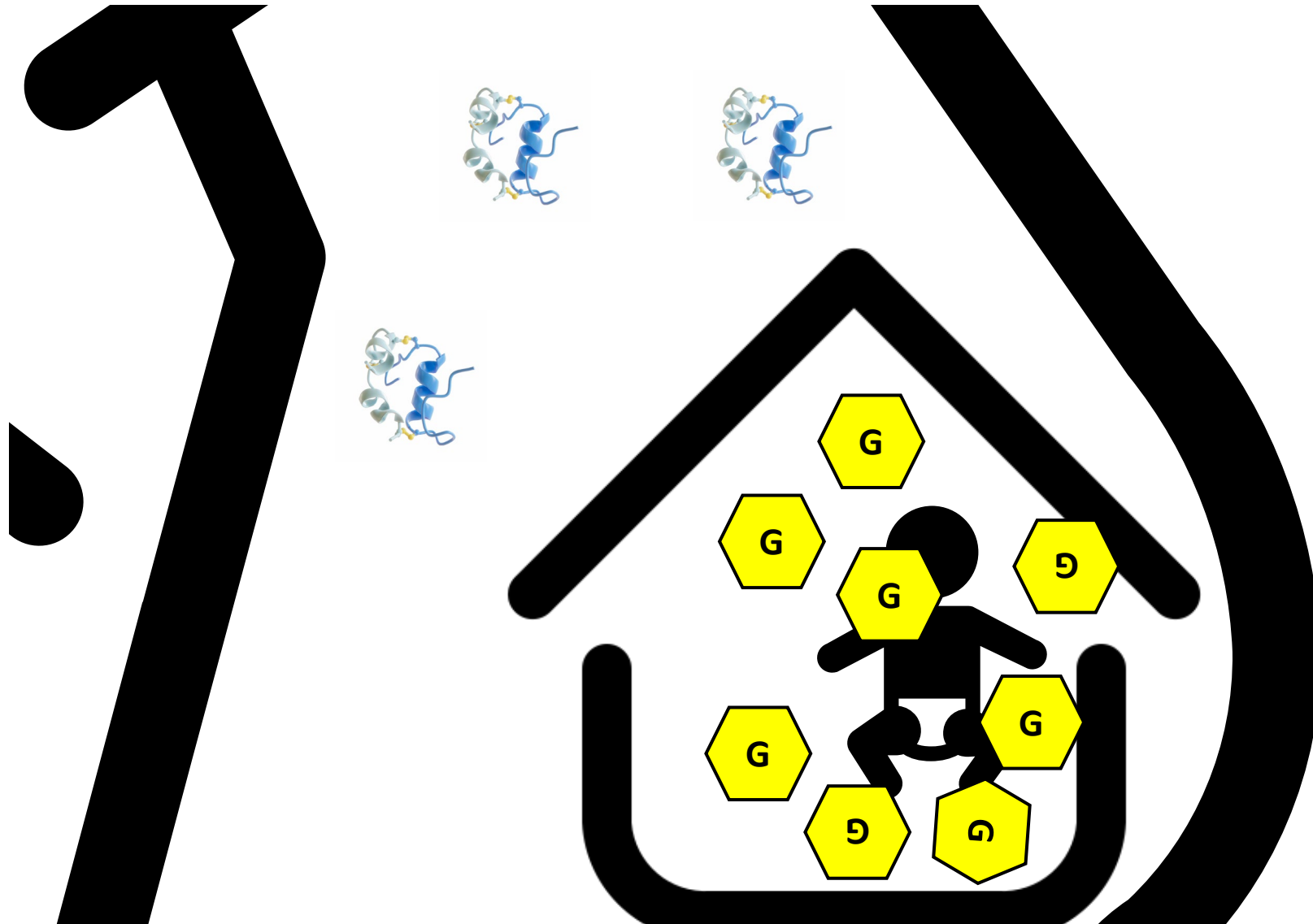
Quick Recap of why GDM is so harmful



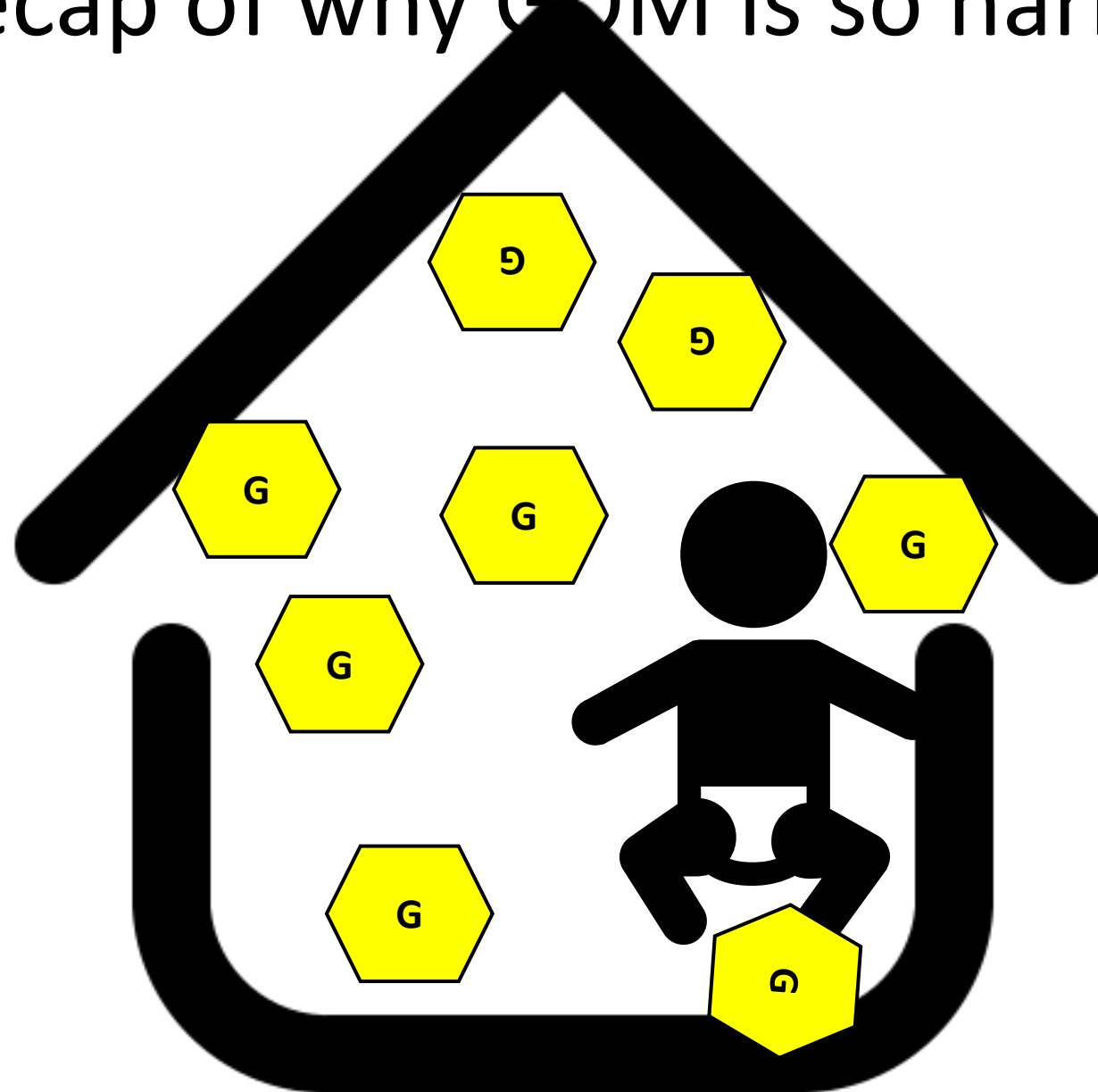
Quick Recap of why GDM is so harmful



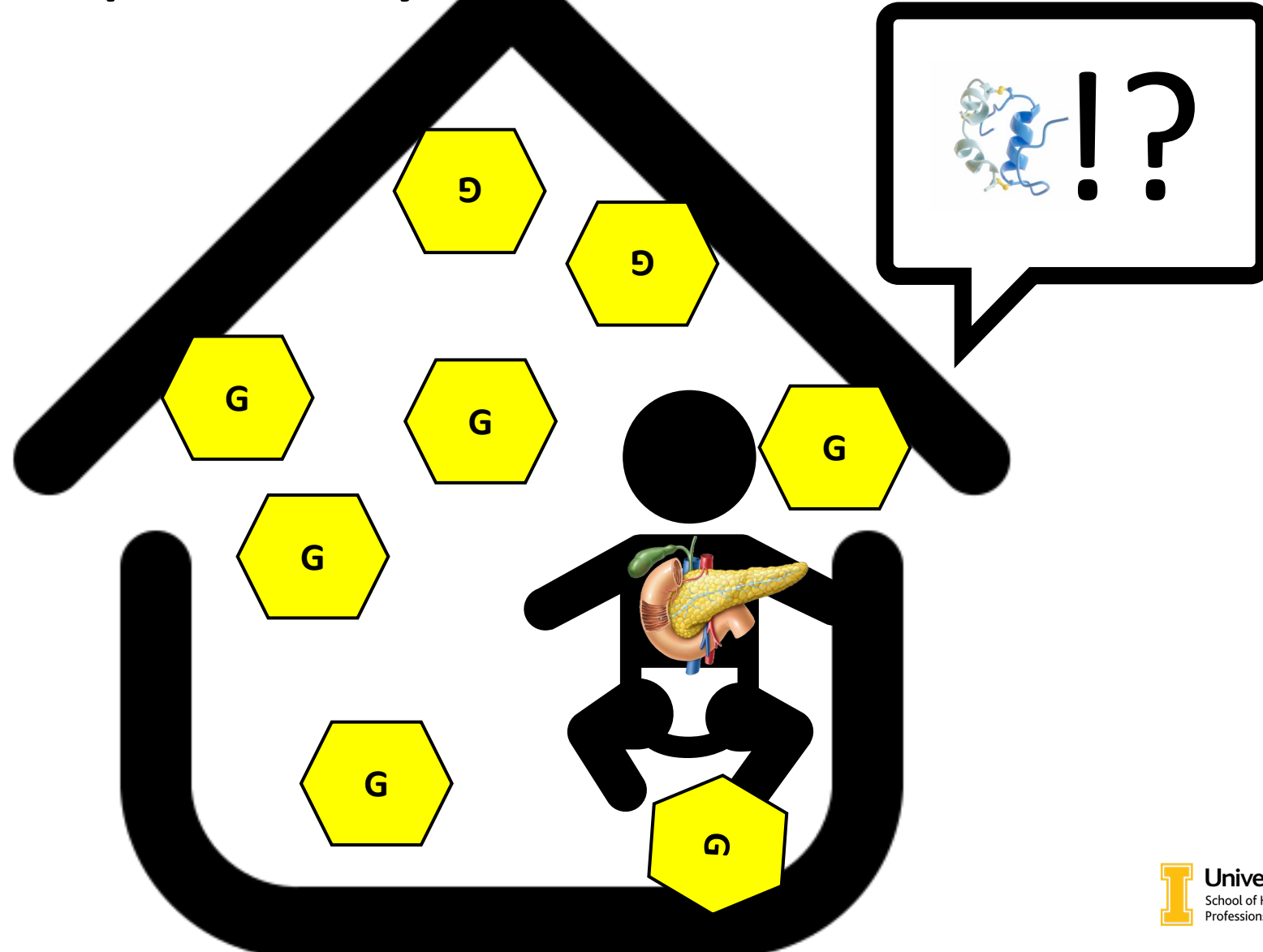
Quick Recap of why GDM is so harmful



Quick Recap of why GDM is so harmful



Quick Recap of why GDM is so harmful



Why insulin

- The problem is insulin resistance
 - Don't shame mom
- She is not making enough insulin
- Always effective
- Stays on mom's side of the placenta
- Has safety track record.
 - We don't do studies on pregnant mom
 - Literally generations of evidence



¿Qué hay de la metformina?

Volume 49, Issue
Supplement_1

January 2026



[Previous Article](#)

[Next Article](#)

[Article Contents](#)

Metformin

Metformin was associated with a lower risk of neonatal hypoglycemia and less maternal weight gain than insulin in systematic reviews and RCTs for GDM treatment, but treatment monotherapy failure occurred in 14–46% of individuals ([135,139–142](#)). A meta-analysis of 11 RCTs demonstrated that metformin treatment in pregnancy does not reduce the risk of GDM in high-risk individuals with obesity, polycystic ovary syndrome, or preexisting insulin resistance ([143](#)). RCTs of individuals with preexisting type 2 diabetes treated either with insulin alone or insulin plus metformin did not show differences in composite neonatal health outcomes between groups ([144,145](#)), and one of these also included individuals diagnosed with diabetes early in gestation ([145](#)). Neonatal birth weights were smaller in the metformin groups of these studies, but the metformin group experienced more drug intolerance in one study and there was a doubling of small-for-gestational-age neonates in the other ([144,145](#)). RCTs comparing metformin with other therapies for ovulation induction in individuals with polycystic ovary syndrome have not demonstrated benefit in preventing spontaneous abortion or GDM ([146](#)), and there is no evidence-based need to continue metformin in these individuals ([147–149](#)).

What about Metformin?

Volume 49, Issue
Supplement_1

January 2026



[Previous Article](#)

[Next Article](#)

[Article Contents](#)

Metformin

Metformin was associated with a lower risk of neonatal hypoglycemia and less maternal weight gain than insulin in systematic reviews and RCTs for GDM treatment, but treatment monotherapy failure occurred in 14–46% of individuals ([135,139–142](#)). A meta-analysis of 11 RCTs demonstrated that metformin treatment in pregnancy does not reduce the risk of GDM in high-risk individuals with obesity, polycystic ovary syndrome, or preexisting insulin resistance ([143](#)). RCTs of individuals with preexisting type 2 diabetes treated either with insulin alone or insulin plus metformin did not show differences in composite neonatal health outcomes between groups ([144,145](#)), and one of these also included individuals diagnosed with diabetes early in gestation ([145](#)). Neonatal birth weights were smaller in the metformin groups of these studies, but the metformin group experienced more drug intolerance in one study and there was a doubling of small-for-gestational-age neonates in the other ([144,145](#)). RCTs comparing metformin with other therapies for ovulation induction in individuals with polycystic ovary syndrome have not demonstrated benefit in preventing spontaneous abortion or GDM ([146](#)), and there is no evidence-based need to continue metformin in these individuals ([147–149](#)).

Metformin

- Metformin readily crosses the **placenta**
- Not preferred ≠ known to be harmful
- ...
- ...
- **ADA:** “insulin is preferred; metformin should not be first-line”
- **ACOG:** “insulin is the recommended medication when pharmacotherapy is needed”
- **SMFM:** “...Metformin is a reasonable first-line alternative to insulin”

Metformin (cont)

- Metformin
 - Silent hero, steady friend, preparation for what cyclospora feels like.
- Still has its place



The baby was born. Are we done?

- GDM often disappears because insulin resistance falls dramatically.
 - But... the diabetes is not gone
- The test everyone forgets = 4–12 weeks postpartum 2 hour OGTT
- A1c is a little less reliable!!
- Normal OGTT = done?



PCP Radar

- History of GDM $\rightarrow$ $\sim 10\times$ future T2DM risk
- Continue periodic diabetes screening
- Plan for future pregnancy
- Metformin?
- NNT = 6
- Future treatments?

