



White paper 001

The Glucose Goddess Method Pilot Experiment A survey-based analysis of the wellness impact of a 4-week glucose-steadying method.

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Postprandial hyperglycemia, defined as an elevation in blood glucose levels after a meal, is a significant risk factor for prediabetes and type 2 diabetes. Reducing postprandial hyperglycemia is crucial for the prevention, management, and potential remission of prediabetes and type 2 diabetes. Emerging science also indicates that reducing postprandial hyperglycemia is beneficial to overall health, including reducing inflammation, and improving sleep quality, fertility, cognitive decline, and more. Jessie Inchauspé developed a simple 4-week lifestyle adjustment called the Glucose Goddess Method, which involves implementing "hacks" (savory breakfast, vinegar, veggie starter, movement) to reduce postprandial hyperglycemia. This method has become popular worldwide, with individuals reporting improved health outcomes. In October 2022, a pilot experiment was conducted involving participants who followed the Glucose Goddess Method. The study aimed to analyze the effectiveness of the method and the self-reported improvement of physical and mental health parameters. 2,891 participants completed the 4-week method and shared their results on indicators such as energy, cravings, sleep, skin, and more. Overall, the Glucose Goddess Method presents a promising, low-effort and low-cost solution for reducing postprandial hyperglycemia and improving health outcomes.

Introduction

Conditions involving chronically elevated glycemic blood levels and insulin resistance, including prediabetes and diabetes type 2, have been on the rise. Currently, over 500 million adults live with diabetes worldwide, and another 500 million with prediabetes. This number is growing every year. An important risk factor for the development of such metabolic states involves postprandial hyperglycemia, which can be defined as blood sugar rising above its normal state after having a meal. The more postprandial hyperglycemia occurs, the more insulin resistance develops, and the more a person inches towards prediabetes. Reducing postprandial hyperglycemia is a cornerstone of prevention, management and potential remission of prediabetes and type 2 diabetes.

Studies have estimated that 80% of people without diabetes are likely to experience postprandial hyperglycemia with common everyday foods, such as breakfast cereal. This shift in perspective that not only people with (pre)diabetes experience high glycemic variability has led to extensive research in this field with promising results. And thus, reducing postprandial hyperglycemia became recognized as a way to prevent the onset of (pre)diabetes and was no longer solely seen as a measure to manage existing dysfunctional metabolic states.

High glycemic variability in people without diabetes has further impact on health as well: beyond increasing inflammation, glycation, and insulin resistance, it is also associated with reduced sleep quality, cravings, faster aging, disrupted sex hormones and reduced fertility, skin and heart conditions, cognitive decline and worse menopause symptoms, among others. Hyperglycaemia over time leads to serious damage to many of the body's systems, especially the nerves and blood vessels. Many factors influence postprandial blood glucose excursions, among which food composition and the sequence in which food is consumed are important factors. It is clear that reducing postprandial hyperglycemia is beneficial to people with prediabetes and type 2 diabetes, as well as to people without diabetes, as it can improve many areas of health.

Jessie Inchauspé - a French biochemist and bestselling author of *Glucose Revolution* - has developed simple lifestyle adjustments called "hacks" to reduce postprandial hyperglycemia. The hacks she proposes are all drawn from research studies in the field of glucose. The simplicity in which Jessie has designed these hacks has led to a big success worldwide. Many individuals, following these hacks, have reported being able to stabilize their postprandial glucose levels and improve their health. In 2022, Inchauspé designed a 4-week method ("The Glucose Goddess Method") based on the hacks outlined in her first book. We here aimed at analyzing the effect of the Method on a large range of individuals, and surveyed the improvement of physical and mental health parameters.

Methods

Experiment design

The experiment was conducted worldwide by recruiting participants online, through the instagram account @glucosegoddess. An instagram story was posted with a link to a form to complete if one wanted to take part. Participants completed a concise health and lifestyle questionnaire (**Supplementary Table 1**). Participants were ascertained with the following questions: “How often do you have cravings?”, “How steady is your energy throughout the day?”, among others. Participants were also asked for their motivation to follow the method, as well as their availability to start the method within the next week. Participants who responded positively to “Age < 20” or negatively to questions related to availability and informed consent, among others, were excluded. A total of 11,256 individuals filled in the Starting questionnaire. Participants provided informed consent prior to study participation.

Once enrolled, participants received a PDF with the details of the Method and had access to another instagram account (@glucosegoddessmethod) where they could interact with each other and watch daily videos. Participants received two emails a week: one contained the link to the weekly questionnaire-based survey, and the other was an email with tips as they went through the Method.

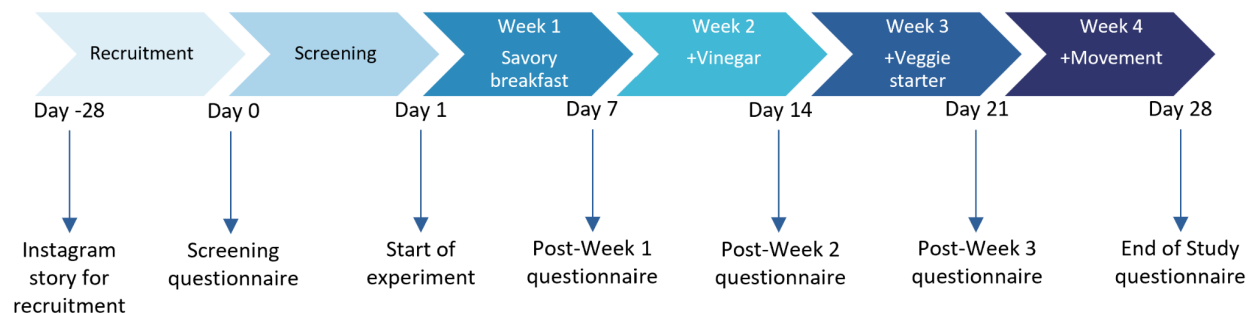


Figure 1. Experiment design

In the @glucosegoddessmethod instagram account, participants saw posts reminding them of which day they were on, and what the hacks to accomplish that day were. They also saw videos of Jessie giving tips (what to do if a craving hits, how to make a breakfast if you are vegan, etc...), witnessed Q&A in instagram stories, saw testimonials and photos of other participants' cooking. They were also encouraged and able to interact with each other in the post comments. Two participants created language groups (one in French, one in Spanish). Each week's aggregated survey results were shared on the account. The emails contained the same content.

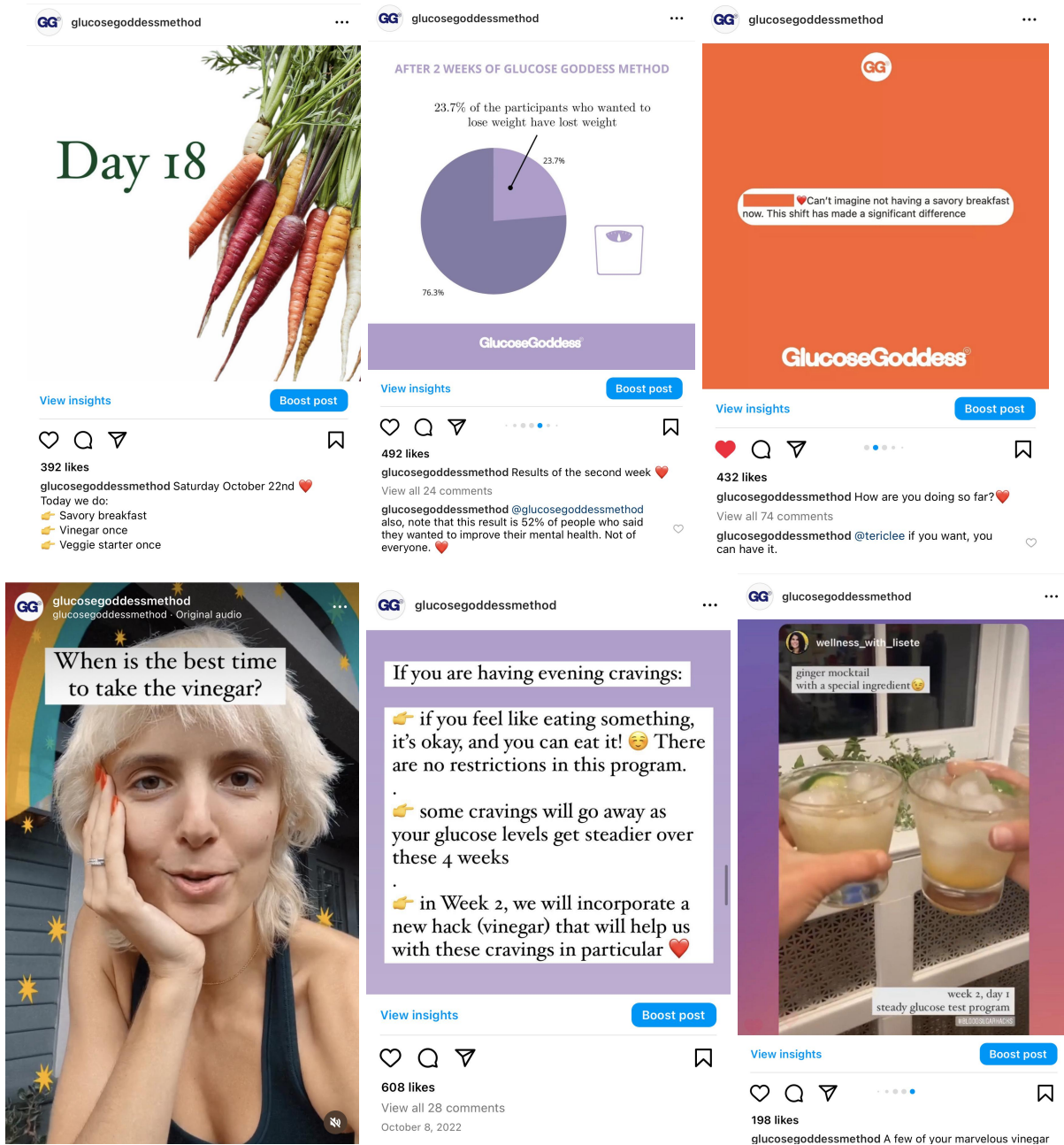


Figure 2. Examples of content on the @glucosegoddessmethod instagram account accompanying the participants

The Glucose Goddess Method

The Glucose Goddess Method introduced 4 glucose-stabilizing hacks to the participants over a 4-week period (Table 1). Each week a new hack was introduced to the participants. The hacks

included 1) savory breakfast, 2) vinegar once a day, 3) a vegetable starter once a day and 4) 10 minutes of moving after one meal a day.

Participants were asked to not alter their behaviour in any way apart from the addition of the hacks.

After each week, participants were asked to fill in a questionnaire comprising physical and mental health parameters.

Table 1. The Glucose Goddess Method time table.

Week 1	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
	Savory breakfast						
Week 2	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14
	Savory breakfast						
Week 3	Vinegar once a day						
	Day 15	Day 16	Day 17	Day 18	Day 19	Day 20	Day 21
	Savory breakfast						
	Vinegar once a day						
Week 4	Vegetable starter at least once a day						
	Day 22	Day 23	Day 24	Day 25	Day 26	Day 27	Day 28
	Savory breakfast						
	Vinegar once a day						
Vegetable starter at least once a day							
Movement after meals							

The participants received a PDF with 100 recipes to help them complete the hacks every week. They didn't need to follow the recipes if they didn't want to, and general guidelines to make their own were given.

Step one: Start your day with a savory breakfast. Eating something savory instead of sweet for breakfast can help reduce glucose spikes and curb cravings throughout the day. Savory breakfast options tend to be lower in simple carbohydrates and sugars than sweet options, which can lead to more stable blood sugar levels. Consuming high amounts of simple carbohydrates and sugars can cause a rapid increase in blood glucose levels, followed by a crash, which can lead to cravings for more sugary foods and a cycle of unstable glucose levels throughout the day. Consuming a breakfast high in protein and healthy fats, such as eggs and avocado, can help stabilize glucose levels and promote feelings of fullness, reducing the likelihood of cravings later in the day. Additionally, savory breakfast options tend to be higher in fiber, which can also help stabilize blood sugar levels and promote feelings of fullness.

Step two: Take a tablespoon of vinegar once a day. Vinegar has been shown to have several potential benefits for glucose management. Vinegar contains acetic acid, which can slow down the digestion of carbohydrates and prevent blood sugar spikes after meals. This is because

acetic acid inhibits the activity of enzymes that break down carbohydrates into simple sugars, which can then be absorbed into the bloodstream. By slowing down the digestion of carbohydrates, vinegar can also promote feelings of fullness, which can help prevent overeating and improve glucose control. Furthermore, vinegar has been shown to improve insulin sensitivity, which is a key factor in glucose management. Insulin is the hormone responsible for regulating glucose levels in the bloodstream, and insulin resistance can lead to high blood sugar levels and eventually type 2 diabetes. Studies have found that consuming vinegar can improve insulin sensitivity, leading to better glucose control and lower risk of diabetes.

Step three: Be sure to start each meal with a vegetable first. Vegetables are high in fiber, which can slow down the digestion and absorption of other foods in the meal, leading to more stable blood glucose levels. Eating vegetables first during a meal can help promote feelings of fullness, which can reduce the likelihood of overeating.

Step four: After each meal, be sure to move for at least 10 minutes. Movement can include a leisurely walk, gentle stretching, yoga, housework such as sweeping or doing the dishes, dancing to some music, or tending to your garden. When we eat a meal, our body digests and absorbs the nutrients from the food, which can cause a temporary increase in blood glucose levels. Physical activity after a meal can help reduce this increase in blood glucose levels by increasing the uptake of glucose by the muscles, rather than it remaining in the bloodstream.

The following participant characteristics are from the Screening survey.

Age

In the screening survey, information on each participant's age was collected. The age range of the participants was from 20 to 80 years old, with the most common age range being 30 to 40 (36%) (*Figure 3*).

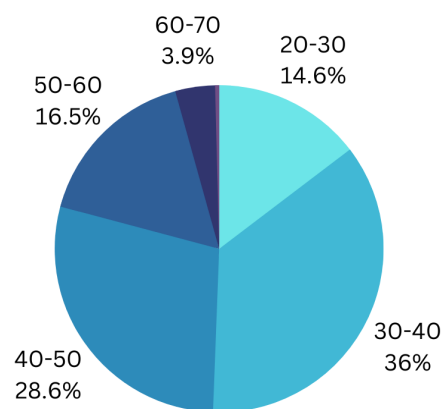


Figure 3. An overview of the participants' age ranges (n= 11,256).

Country of residence

Participants were based in 72 different countries. Most participants were residing in Europe (54.9%) and North America (33.09%) (*Figure 4*). For a detailed list of all countries see *Supplementary Table 2*.

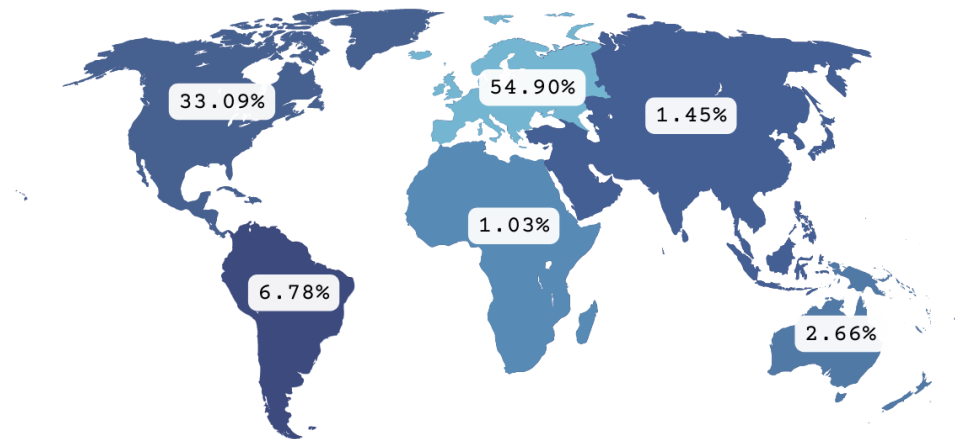


Figure 4. World map illustrating continent of residence of the participants.

Results

In this pilot experiment four hacks were selected from the Glucose Revolution book: 1) savory breakfast, 2) vinegar, 3) vegetable starter and 4) movement after eating. The hacks were carefully chosen as these were expected to have the greatest impact on improving glycemic balance generally. Participants were asked to incorporate one new hack each week for four weeks. At the end of the 4-week period, participants self-reported the improvement of physical and mental health parameters by means of a detailed questionnaire. 11,256 individuals enrolled in the pilot experiment and 2,891 participants completed the week 4 survey.

Adherence

Screening questionnaire: 11,256

Enrolled participants: 11,206

End of Week 1 survey completions: 4,448

End of Week 2 survey completions: 3,440

End of Week 3 survey completions: 2,580

End of Week 4 survey completions: 2,891*

* The participants received each week's survey even if they didn't complete the prior week's survey, which is why we are able to see higher Week 4 completion than Week 3 completions.

Week 4 results

At the end of the 4-week Glucose Goddess Method:

- 89% (2518/2839) of people have reduced their cravings
- 80% (2245/2806) of participants are less hungry
- 76% (2132/2806) of people have more energy
- 69% (1701/2472) of people are happier
- 59% (1241/2108) of people who were struggling with their mental health reported their mental health improved
- 58% (1462/2506) of people who wanted to sleep better are sleeping better
- 47% (940/2019) of people who had skin issues have seen improvements in their skin
- 41% (242/590) of people who wanted to improve their diabetes reported it improved
- 36% (506/1418) of people who were looking to improve their hormonal health have improved it

Dozens of women who weren't having their period anymore reported getting their periods back. And three women who were struggling to conceive for months got pregnant during the course of this pilot experiment.

Table 2. The Glucose Goddess Method Week 4 Results

Question	Response: % (N)
Since starting the program, have your cravings reduced?	Yes: 87.1% (2518) No: 3.5% (102) I'm not sure: 7.6% (219) I didn't have cravings to begin with: 1.8% (52)
Since starting the program, has your energy increased?	Yes: 73.7% (2132) No: 6.2% (179) I'm not sure: 17.1% (495) I didn't have energy issues to begin with: 2.9% (85)
Since starting the program, have your hunger levels reduced?	Yes: 77.7% (2245) No: 8.6% (248) I'm not sure: 10.8% (313) I wasn't hungry a lot to begin with: 2.9% (85)
Since starting the program, has your skin gotten clearer?	Yes: 32.5% (940) No: 15.9% (458) I'm not sure: 21.5% (621) I didn't have skin problems to begin with: 30.2% (872)

Since starting the program, have you lost <u>weight</u> ?	Yes: 34.1% (985) No: 43.6% (1261) I'm not sure: 22.3% (645)
Do you <i>*want*</i> to lose weight with this program?	Yes: 69.0% (1994) No: 31.0% (897)
Since starting the program, has your <u>mental health</u> improved?	Yes: 42.9% (1241) No: 7.0% (203) I'm not sure: 23.0% (664) Mental health was not something I was looking to improve: 27.1% (783)
Since starting the program, have you <u>slept</u> better?	Yes: 50.6% (1462) No: 15.8% (456) I'm not sure: 20.3% (588) I wasn't looking to improve my sleep: 13.3% (385)
Since starting the program, do you feel <u>happier</u> ?	Yes: 58.8% (1701) No: 6.2% (178) I'm not sure: 20.5% (593) I wasn't looking to feel happier: 14.5% (419)
If you were hoping to improve your <u>hormonal health</u> (polycystic ovarian syndrome, menopause symptoms...), have they improved since the beginning of the program?	Yes: 17.5% (506) No: 7.4% (213) I'm not sure: 24.2% (699) I wasn't looking to improve my hormonal health: 51.0% (1473)
If you were hoping to improve your <u>diabetes</u> (type 1 diabetes, prediabetes, type 2 diabetes, gestational diabetes, or others), have they improved since the beginning of the program?	Yes: 8.4% (242) No: 1.7% (49) I'm not sure: 10.3% (299) I wasn't looking to improve my diabetes: 79.6% (2301)
How diligently would you say that you've been following the program?	I've been doing the hacks every day. I didn't miss a single one: 13.9% (401) Doing mostly everything - I didn't do them a few times: 68.5% (1974) I'm doing the hacks about 50% of the time: 16.0% (460) I'm doing them once in a while when I think about it: 1.6% (46)
What was the <u>most difficult hack</u> for you?	Savoury breakfast: 9.5% (270) Vinegar: 22.6% (643) Veggie starter: 21.6% (609) Movement: 46.6% (1327)

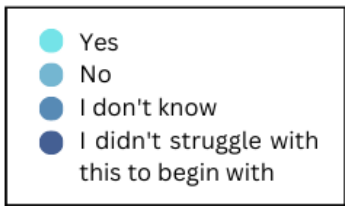
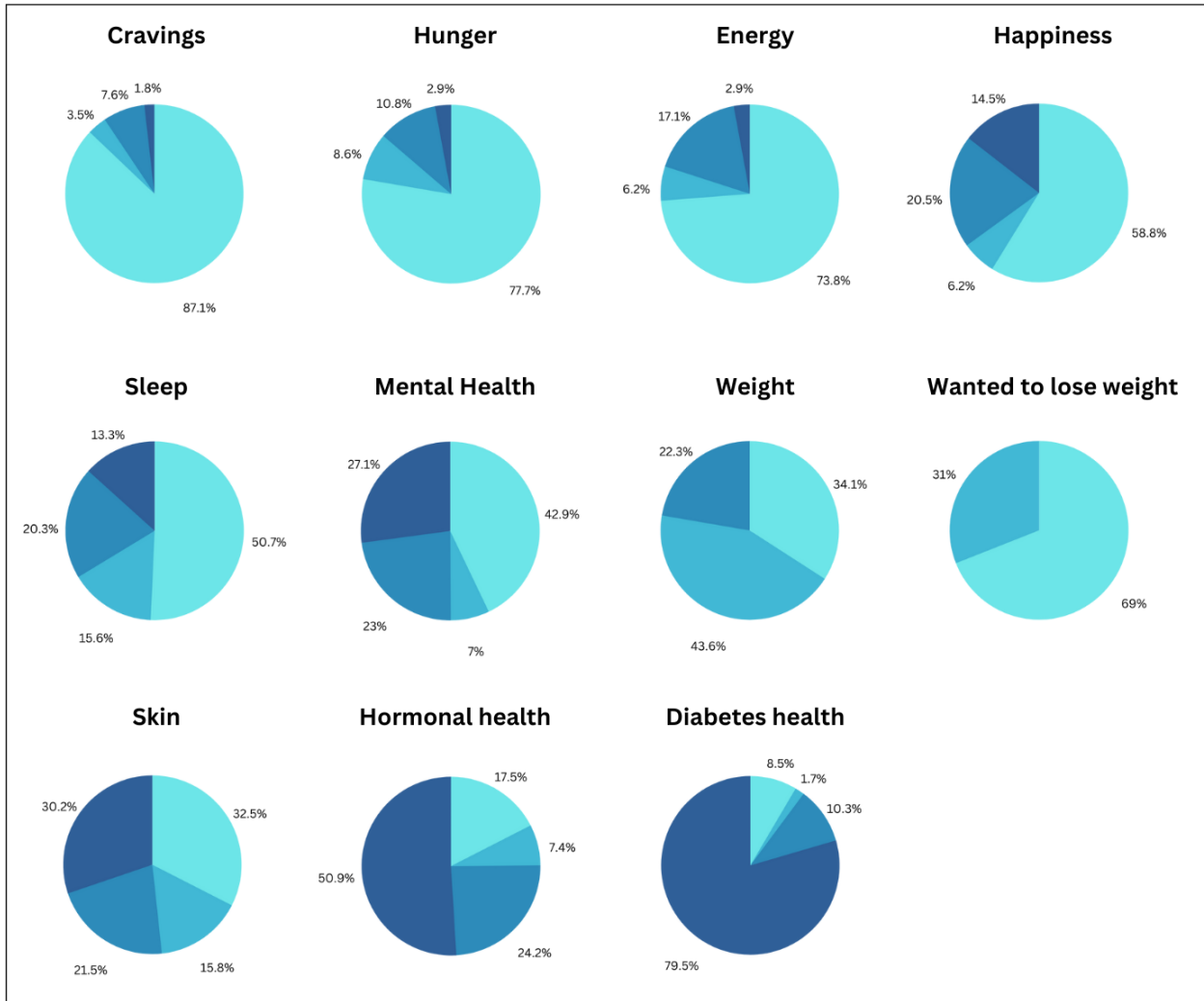


Figure 5. Pie charts representing answers to questions of week 4.

Discussion

The 4-week Glucose Goddess Method pilot experiment, which used self-reported, qualitative survey data, examined hacks to improve glucose levels with 2,891 participants finishing the final survey. This pilot experiment found that implementing simple strategies to manage glucose levels can lead to self-reported positive changes in various aspects of health and well-being. Participants reported reduced cravings, increased energy levels, better skin, improved mental health, and better sleep. Additionally, a substantial number of participants looking to improve their diabetes or hormonal health reported success after implementing the Glucose Goddess Method. These findings highlight the potential benefits of adopting healthy lifestyle habits to manage glucose levels, which can have a positive impact on overall health and quality of life.

Managing glucose levels is essential for overall health and well-being, but it can be challenging to incorporate new habits into a busy daily routine. Luckily, these four simple hacks can help manage glucose levels without requiring significant changes to your lifestyle. Step one of the Glucose Goddess Method recommends starting the day with a savory breakfast, instead of a sweet one, can help reduce cravings and prevent glucose spikes throughout the day. Step two, taking a daily tablespoon of vinegar has been shown to lower glucose levels, making it a simple yet effective tool for glucose management. Step three, adding a vegetable starter to every meal can provide beneficial fiber to line the intestinal tract, aid digestion and reduce postprandial hyperglycemia. Step four, moving for at least 10 minutes after each meal can help regulate glucose levels and improve overall health. The overall results of our pilot experiment do not come as a surprise as all hacks are science-backed, already proven in other studies.

The Glucose Goddess Method pilot experiment was a proof of concept study with a large sample size spanning most age groups and many ethnicity backgrounds. This type of study allowed for the evaluation of the effectiveness of four selected strategies from the Glucose Revolution book in a real-world setting. Participants were able to incorporate the hacks into their daily routines, making it a more practical and relevant approach to testing their effectiveness.

Our pilot experiment has some limitations which are discussed hereafter. Factors such as insulin resistance, diabetes type 1 or 2, BMI, stress levels, diet, gender, activity level, among others were not accounted for. Although the Glucose Goddess Method has improved at least one aspect of the participants' health, there might be some differences in intensity of the hacks between those groups.

The comparative effectiveness of the Glucose Goddess Method with respect to other lifestyle modifications, standard care, or other interventions remains unclear. Due to the lack of a control group, it is not appropriate to make definitive claims regarding the superiority of this intervention. Additionally, there was no measurement of blood glucose values of the participants to confirm that blood glucose levels were improved after the implementation of the four step method.

Rather, our findings suggest that this approach represents a feasible, non-restrictive, and easily-implementable option for glucose management that people can incorporate into their daily lives. This survey-based experiment demonstrated, via participant-reported outcomes, the benefits of applying the 4-week Method. These positive survey results pave the way for future studies to assess the effect of the Method on quantifiable measures such as continuous glucose monitoring.

Conclusion

In this pilot experiment, 2,891 participants completed the 4-week Glucose Goddess Method which included incorporating 1) a savory breakfast instead of a sweet one, 2) a tablespoon of vinegar a day, 3) a veggie starter once a day and 4) movement after one meal a day. This approach is non-restrictive and has been suggested to be easy to implement in people's daily life. By implementing four easy steps, individuals have reported a decrease in cravings, heightened energy levels, improved skin health, better mental well-being, enhanced sleep quality, improved diabetes and hormonal markers.

References

You can find additional references on www.glucosegoddess.com/science

Chen, Xi, et al. "Chronic physiologic hyperglycemia impairs insulin-mediated suppression of plasma glucagon concentration in healthy humans." *Metabolism* 142 (2023): 155512.

<https://www.sciencedirect.com/science/article/abs/pii/S0026049523001154>

[IDF Diabetes Atlas | Tenth Edition](https://diabetesatlas.org/) <https://diabetesatlas.org/>

Joana Araújo et al., "Prevalence of optimal metabolic health in American adults: National Health and Nutrition Examination Survey 2009–2016," *Metabolic syndrome and related disorders* 17, no. 1 (2019): 46-52, <https://pubmed.ncbi.nlm.nih.gov/30484738/>.

Heather Hall et al., "Glucotypes reveal new patterns of glucose dysregulation," *PLoS biology* 16, no. 7 (2018): e2005143, <https://pubmed.ncbi.nlm.nih.gov/30040822/>.

Benjamin Bikman, *Why We Get Sick: The Hidden Epidemic at the Root of Most Chronic Disease and How to Fight It* (New York: BenBella, 2020).

[Robert Lustig](#), *Metabolics: The Lure and the Lies of Processed Food, Nutrition, and Modern Medicine* (New York: Harper Wave, 2021).

[Global epidemiology of prediabetes - present and future perspectives - PMC \(nih.gov\)](#)

[Post-prandial hyperglycemia. post-prandial hyperglycemia and diabetes - PubMed \(nih.gov\)](#)

[Postprandial glycemic response in a non-diabetic adult population: the effect of nutrients is different between men and women - PMC \(nih.gov\)](#)

Savory breakfast:

Courtney R Chang et al., "Restricting carbohydrates at breakfast is sufficient to reduce 24-hour exposure to postprandial hyperglycemia and improve glycemic variability," *The American journal of clinical nutrition* 109, no. 5 (2019): 1302-1309, <https://academic.oup.com/ajcn/article/109/5/1302/5435774?login=true>.

· Kim J Shimy et al., "Effects of dietary carbohydrate content on circulating metabolic fuel availability in the postprandial state," *Journal of the Endocrine Society* 4, no. 7 (2020): bvaa062, <https://academic.oup.com/jes/article/4/7/bvaa062/5846215>.

· Chandler-Laney et al., "Return of hunger following a relatively high carbohydrate breakfast is associated with earlier recorded glucose peak and nadir," *Appetite* 80 (2014): 236-241, <https://www.sciencedirect.com/science/article/abs/pii/S0195666314002049>.

· Rachel Galioto et al., "The effects of breakfast and breakfast composition on cognition in adults," *Advances in nutrition* 7, no. 3 (2016): 576S-589S, <https://academic.oup.com/advances/article/7/3/576S/4558060>.

· Martha Nydia Ballesteros et al., "One egg per day improves inflammation when compared to an oatmeal-based breakfast without increasing other cardiometabolic risk factors in diabetic patients," *Nutrients* 7, no. 5 (2015): 3449-3463, <https://www.mdpi.com/2072-6643/7/5/3449>.

Vinegar:

Tomoo Kondo et al., "Vinegar intake reduces body weight, body fat mass, and serum triglyceride levels in obese Japanese subjects," *Bioscience, biotechnology, and biochemistry* 73, no. 8 (2009): 1837-1843, <https://www.tandfonline.com/doi/pdf/10.1271/bbb.90231>.

· Heitor O Santos et al., "Vinegar (acetic acid) intake on glucose metabolism: A narrative review," *Clinical nutrition ESPEN* 32 (2019): 1-7, https://www.researchgate.net/publication/333526775_Vinegar_acetic_acid_intake_on_glucose_metabolism_A_narrative_review.

· Solaleh Sadat Khezri et al., "Beneficial effects of Apple Cider Vinegar on weight management, Visceral Adiposity Index and lipid profile in overweight or obese subjects receiving restricted calorie diet: A randomized clinical trial," *Journal of functional foods* 43 (2018): 95-102, <https://www.sciencedirect.com/science/article/abs/pii/S1756464618300483>.

· Farideh Shishehbor et al., "Vinegar consumption can attenuate postprandial glucose and insulin responses; a systematic review and meta-analysis of clinical trials," *Diabetes research and clinical practice* 127 (2017): 1-9, https://www.researchgate.net/publication/314200733_Vinegar_consumption_can_attenuate_postprandial_glucose_and_insulin_responses_a_systematic_review_and_meta-analysis_of_clinical_trials

· Di Wu et al., "Intake of vinegar beverage is associated with restoration of ovulatory function in women with polycystic ovary syndrome," *The Tohoku journal of experimental medicine* 230, no. 1 (2013): 17-23, https://www.jstage.jst.go.jp/article/tjem/230/1/230_17/article-char/ja/.

· Panayota Mitrou et al., "Vinegar consumption increases insulin-stimulated glucose uptake by the forearm muscle in humans with type 2 diabetes," *Journal of diabetes research* 2015 (2015), <https://www.hindawi.com/journals/jdr/2015/175204/>.

· "Vinegar supplementation lowers glucose and insulin responses and increases satiety after a bread meal in healthy subjects," *European journal of clinical nutrition* 59, no. 9 (2005): 983-988, <https://www.nature.com/articles/1602197>

· F Brighenti et al., "Effect of neutralized and native vinegar on blood glucose and acetate responses to a mixed meal in healthy subjects," *European journal of clinical nutrition* 49, no. 4 (1995): 242-247, <https://pubmed.ncbi.nlm.nih.gov/7796781/>.

· Stavros Liatis et al., "Vinegar reduces postprandial hyperglycaemia in patients with type II diabetes when added to a high, but not to a low, glycaemic index meal," *European journal of clinical nutrition* 64, no. 7 (2010): 727-732, <https://www.nature.com/articles/ejcn201089>.

· Tomoo Kondo et al., "Vinegar intake reduces body weight, body fat mass, and serum triglyceride levels in obese Japanese subjects," *Bioscience, biotechnology, and biochemistry* 73, no. 8 (2009): 1837-1843, <https://www.tandfonline.com/doi/pdf/10.1271/bbb.90231>.

· Carol S Johnston et al., "Examination of the antiglycemic properties of vinegar in healthy adults," *Annals of nutrition and metabolism* 56, no. 1 (2010): 74-79, <https://www.karger.com/Article/Abstract/272133>.

· Carol S Johnston et al., "Preliminary evidence that regular vinegar ingestion favorably influences hemoglobin A1c values in individuals with type 2 diabetes mellitus," *Diabetes research and clinical practice* 84, no. 2 (2009): e15-e17, <https://www.sciencedirect.com/science/article/abs/pii/S0168822709000813>.

Vegetable starter:

Martin O Weickert et al., "Metabolic effects of dietary fiber consumption and prevention of diabetes," *The Journal of nutrition* 138, no. 3 (2008): 439-442, <https://academic.oup.com/jn/article/138/3/439/4670214>.

· "The effects of functional fiber on postprandial glycemia, energy intake, satiety, palatability and gastrointestinal wellbeing: a randomized crossover trial," *Nutrition journal* 13, no. 1 (2014): 1-9, <https://nutritionj.biomedcentral.com/articles/10.1186/1475-2891-13-76>.

· "Impact of nutrient type and sequence on glucose tolerance: Physiological insights and therapeutic implications," *Frontiers in endocrinology* 10 (2019): 144, <https://www.frontiersin.org/articles/10.3389/fendo.2019.00144/full#B58>.

Movement:

Erik A Richter et al., "Exercise, GLUT4, and skeletal muscle glucose uptake," *Physiological reviews* (2013), <https://journals.physiology.org/doi/full/10.1152/physrev.00038.2012?view=long&pmid=23899560>

· Andrew Borrer et al., "The effects of postprandial exercise on glucose control in individuals with type 2 diabetes: a systematic review," *Sports Medicine* 48, no. 6 (2018): 1479-1491, <https://link.springer.com/article/10.1007/s40279-018-0864-x>.

· G Messina et al., "Exercise causes muscle GLUT4 translocation in an insulin," *Biol Med* 1 (2015): 1-4, https://www.researchgate.net/profile/Fiorenzo_Moscatelli/publication/281774994_Exercise_Causes_Muscle_Glut4_Translocation_in_an_Insulin-Independent_Manner/links/55f7e0ee08aec948c474b805/Exercise-Causes-Muscle-GLUT4-Translocation-in-an-Insulin-Independent-Manner.pdf.

· Stephney Whillier, "Exercise and insulin resistance," *Advances in Experimental Medicine & Biology* 1228 (2020): 137-150, https://link.springer.com/chapter/10.1007/978-981-15-1792-1_9.

· Jason MR Gill., "Moderate exercise and post-prandial metabolism: issues of dose-response," *Journal of sports sciences* 20, no. 12 (2002): 961-967, <https://shapeamerica.tandfonline.com/doi/abs/10.1080/026404102321011715>.

· Sheri R Colberg et al., "Postprandial walking is better for lowering the glycemic effect of dinner than pre-dinner exercise in type 2 diabetic individuals," *Journal of the American Medical Directors Association* 10, no. 6 (2009): 394-397, <https://www.sciencedirect.com/science/article/abs/pii/S152586100900111X>.

· Timothy D Heden, "Postdinner resistance exercise improves postprandial risk factors more effectively than predinner resistance exercise in patients with type 2 diabetes," *Journal of Applied Physiology* 118, no. 5 (2015): 624-634, <https://journals.physiology.org/doi/full/10.1152/jappphysiol.00917.2014>.

· Sechang Oh et al., "Exercise reduces inflammation and oxidative stress in obesity-related liver diseases," *Medicine and science in sports and exercise* 45, no. 12 (2013): 2214-2222, <https://pubmed.ncbi.nlm.nih.gov/23698242/>.

- Andrew N Reynolds et al., "Advice to walk after meals is more effective for lowering postprandial glycaemia in type 2 diabetes mellitus than advice that does not specify timing: a randomised crossover study," *Diabetologia* 59, no. 12 (2016): 2572-2578, <https://link.springer.com/article/10.1007/s00125-016-4085-2>.
- Goto, Sataro, Hisashi Naito, Takao Kaneko, Hae Young Chung, and Zsolt Radak. "Hormetic effects of regular exercise in aging: correlation with oxidative stress." *Applied Physiology, Nutrition, and Metabolism* 32, no. 5 (2007): 948-953, <https://cdnsciencepub.com/doi/abs/10.1139/H07-092>.

Supplementary information

Supplementary Table 1: Questionnaire participant recruitment

Questions	Answers
<p>You asked, I listened!! ❤️ I'm working on a 4-week program to help you steady your glucose and feel better than ever. Each week, I will provide you with really easy recipes or guided hacks to add to your life. I'm looking for people to test the program, try the (very simple and quick to do) recipes it comes with, give me feedback, and tell me how it's working for them. Does that sound like something you want to do?</p>	<p>Yes / No</p>
<p>Are you willing to answer some questions at the end of each week to tell me about your experience?</p>	<p>Yes/No</p>
<p>Would you be ready to get started this coming Wednesday (October 5th), and follow the program for 4 weeks, until November 2nd?</p>	<p>Yes/No</p>
<p>Awesome. At the end of this survey, I will ask for your email and instagram account and will send you all the program content and information before Wednesday. Now, I'm going to ask you some questions to get a sense of how you are doing before starting the program.</p>	<p>Yes/No</p>
<p>Have you started applying my glucose hacks into your life already?</p>	<p>Yes/Not really / Not at all</p>
<p>On a scale of 1 (never) to 5 (all the time), how often do you have cravings?</p>	<p>1 (never) - 5 (all the time)</p>
<p>On a scale of 1 (not at all) to 5 (very), how steady is your energy throughout the day?</p>	<p>1 (not at all steady) - 5 (very steady)</p>
<p>On a scale of 1 (very unhappy) to 5 (very happy), how happy and hopeful are you, in general?</p>	<p>1 (very unhappy) - 5 (very happy)</p>
<p>What is motivating you to want to steady your glucose levels?</p>	<p>open answer</p>

Most of us have unsteady glucose levels, and this leads to many symptoms. By learning the hacks and applying them to your life, many things can get better, from skin, to sleep, to chronic conditions. Are you hoping to improve any particular aspects of your physical or mental health?	open answer
What country do you live in? (I ask because I want to get people from all over the world testing out the program 😊)	open answer
What's your age range?	<20; 20-30; 30-40; 40-50; 50-60; 60-70; 70-80
At the end of this program, I'd like to be able to share a summary of how people did on it. So I'd like to publicly say things like "xx% of participants reduced their cravings" or "20 participants in the study got their periods back while on the program". If you decide to participate in this 4-week program, you agree that I can count you in these high-level (and completely anonymous!) statistics. Are you comfortable with that?	Yes, I agree; I do not agree
What is your email address? (This is so I can send you PDFs with the recipes and workbook)	open answer
What is your instagram account name? (I will be sharing information on the program and answering questions via Instagram in a new dedicated account)	openanswer

Supplementary Table 2: Overview of country of residence of the participants (n= 72).

Country of Residence

Albania
Argentina
Armenia
Australia

Austria
Bahrain
Belgium
Bosnia and Herzegovina
Brazil
Bulgaria
Canada
Chile
Colombia
Croatia
Curacao
Czech Republic
Denmark
Dominican Republic
Dubai
England
Estonia
Finland
France
Georgia
Germany
Greece
Grenada
Guatemala
Hungary

Iceland
India
Ireland
Israel
Italy
Jordan
Kuwait
Latvia
Lithuania
Luxembourg
Malta
Martinique
Mexico
Morocco
Netherlands
New Zealand
Norway
Oman
Panama
Peru
Philippines
Poland
Portugal
Puerto rico
Romania

Russia
Sao Tome and Principe
Saudi Arabia
Scotland
Serbia
Singapore
Slovenia
South Africa
Spain
Sweden
Switzerland
Turkey
Ukraine
Uruguay
USA
Venezuela
Zambia
Zimbabwe