

“Plant-Based Nutrition for Diabetes: Evidence-Based Strategies for Better Management”

Webinar Questions Answered by Vandana Sheth, RDN, CDCES, FAND

Please note that these are brief answers to complex questions and are not meant as medical advice. For more complete information, please seek medical advice from your personal healthcare professional.

- What suggestions do you have to help our youth accept a healthier plant-based food strategy?

Start with familiar flavors and fun meal ideas—think tacos with lentil filling or pasta with veggie-packed sauce. Involve them in cooking and highlight performance benefits for sports, energy, and skin health.

- How would you suggest we explain how to measure plant protein foods in relation to carb counting?

Emphasize that many plant proteins like beans and lentils have both carbs and protein. Use tools like the Diabetes Plate Method and carb-counting apps to help balance portions.

- As so many people do not cook much, are there any meal delivery services with plant-based offerings that support this approach?

Yes, there are meal delivery services like Purple Carrot, MamaSezz, and Daily Harvest that offer plant-forward meals. Look for options with fiber, protein, and minimally added sugars.

- What do you suggest for people who have diabetes but also have very sensitive stomachs where too much fiber causes GI issues?

Gradually increase fiber, stay hydrated, and try cooked vs. raw veggies. Choose low-FODMAP fiber sources if needed and consider working with a dietitian.

- How do you sequence fiber first and carbs last at a meal when carbs are the source of fiber?

Start meals with high-fiber veggies or legumes, followed by protein, then starches. Mixing fiber-rich carbs with protein and fat can help reduce glucose spikes.

- What was the macronutrient breakdown for the whole, plant-based diet vs. the high-fat keto diet? I think this is highly relevant.

Plant-based diets typically range around 55–60% carbs, 15–20% protein, and 20–30% fat. Keto is high-fat (~70%), very low-carb (~5–10%), and moderate protein.

- Any comments on cooled then reheated starches- effect on glucose levels?

Yes, cooling and reheating increases resistant starch, which may reduce post-meal glucose spikes. It's a simple way to enhance glycemic control.

- Any recommendations for clients with gluten sensitivity when grains are restricted?

Gluten-free whole grains like quinoa, millet, buckwheat, and oats (certified gluten-free) are great plant-based options.

- Do you recommend pairing different plant proteins together to make them complete protein?

Not necessary at every meal. Eating a variety of plant proteins across the day provides all essential amino acids.

- Can you please expand on lentils containing 18 grams of protein vs. 1 gram of carb?

That's likely a misunderstanding—1 cup cooked lentils provides about 18g protein and 40g carbs (15g fiber). They're a balanced source of plant-based protein and complex carbs.

- How do you manage IBS while promoting plant-based foods? This is a common comorbidity, and many plant-based foods cause symptoms.

Start with low-FODMAP plant foods, cook veggies well, and avoid known triggers. Gradual fiber increases and personalization are key.

- What is the carb budget/meal you recommend for T1DM or T2DM using PPD?

Individual needs vary, but many aim for 30–60g carbs/meal for T2DM. Personalization based on blood sugars and activity is essential.

- What about Ghee and how much?

Ghee can be used in small amounts. While it's lactose-free, it's still a source of saturated fat—moderation is important for heart and metabolic health.

- Legumes are a challenge for many people due to gas and bloating. What do you recommend for those people in terms of protein?

Soak, rinse, and cook legumes well. Start with small portions. Alternatives include tofu, tempeh, and plant protein powders.

- Does blending leafy greens in a smoothie affect their nutritional impact in any way? So, is one cup of spinach raw in salad = 1 cup in a smoothie?

No major loss in nutrients. Blending breaks down fiber slightly but retains most vitamins and minerals.

- For patients also on blood thinners, how much or what level of chia, flax, or hemp is appropriate?

These are rich in omega-3s but may affect clotting in high amounts. Stick to 1–2 tablespoons/day and consult the healthcare team.

- What is the recommended fat intake? Saturated fat in particular.

Focus on unsaturated fats. Saturated fat should be <10% of total calories—ideally closer to 5–6% for those with heart risks.

- What percentage of carbs/protein/fat do you promote in general?

For most with diabetes: 45–55% carbs, 15–20% protein, and 25–35% fat—emphasizing quality over quantity.

- For clients who want to increase their plant intake but still maintain some animal protein intakes, what percentage of protein, or grams of protein, might they consider limiting animal protein intake to?

Aim for at least 50–75% of protein from plants. Keeping animal protein to 1–2 servings/day or ~15–30g/day works well for most.

- Any tips/suggestions for someone struggling with digesting high FODMAP foods who is trying to follow a plant-based diet (mushrooms, greens, legumes causing GI distress)?

Cook foods well, choose lower-FODMAP veggies (e.g., zucchini, carrots), and slowly increase fiber. Consider working with a dietitian trained in IBS/FODMAP.

- Are there similar benefits with hemp seeds (as compared to chia seeds)?

Yes—hemp seeds are rich in protein, omega-3s, and magnesium. They have less fiber than chia but are still nutrient-dense.

- Do you have any favorite cookbooks or websites for plant-based cooking?

Yes! *My Indian Table* (my cookbook), PCRM, Mastering Diabetes, and Forks Over Knives are great resources.

- There is no doubt about the benefits of plant-based eating, the only downside is the leucine content of plant-based protein. How do you approach this with your clients?

Encourage a variety of legumes, tofu, tempeh, and fortified plant proteins. Athletes or older adults may benefit from plant-based protein powders with added leucine.

- Would you recommend a plant-based diet to younger clients/children? If so, at what age is it recommended?

Yes, with proper planning, plant-based diets are appropriate for all life stages. Begin at any age with guidance to ensure nutrient adequacy.

- Are there a certain amount of anti-inflammatory spices, such as cinnamon, turmeric, and ginger that need to be consumed to see these impacts on insulin, blood sugar, and triglycerides?

Research suggests ~½–1 tsp/day of cinnamon, and 500–1000 mg/day of curcumin (active in turmeric). Effects are modest and part of an overall pattern.

- When you hit your protein goals with plant-based proteins, aren't we considering a big carbohydrate increase?

Not necessarily—fiber-rich carbs in legumes and whole grains offer steady energy and improved insulin sensitivity. Balance and distribution matter.

- I would love to know if there are good, easy-to-understand handouts for patients about resistant starches. Also, are there any recent studies you would suggest sharing with clients?

<https://pubmed.ncbi.nlm.nih.gov/38409604/>

<https://www.nature.com/articles/s42255-024-00988-y>

[https://journals.lww.com/co-](https://journals.lww.com/co-clinicalnutrition/fulltext/2024/07000/the_impact_of_slowly_digestible_and_resistant.6.asp)

[clinicalnutrition/fulltext/2024/07000/the impact of slowly digestible and resistant.6.asp](https://journals.lww.com/co-clinicalnutrition/fulltext/2024/07000/the_impact_of_slowly_digestible_and_resistant.6.asp)

<https://www.frontiersin.org/journals/nutrition/articles/10.3389/fnut.2024.1369950/full>

- What do you think about plant-based meats for an occasional 'meaty' dish?

Plant-based meats can be a helpful option in moderation—especially for those transitioning to a more plant-forward diet or craving familiar flavors. I recommend reading labels to choose products with wholesome ingredients, adequate protein, and lower sodium. They're not meant to replace whole plant foods but can absolutely fit into a balanced, flexible approach.

- What are the effects of resistant starch on blood sugar?

Resistant starch can improve insulin sensitivity and lower post-meal glucose levels. Sources include cooled potatoes, green bananas, and legumes.

- What is the ideal dose of fenugreek?

Studies show benefits at 5–25g/day of fenugreek seed powder. Start small and monitor for GI effects and blood sugar changes.

- Could you share your references for the recommendations you shared on cinnamon, turmeric, and ginger?

(Huang et al., Medicine, 2019)

- A 2019 meta-analysis found that ginger significantly reduces fasting blood glucose and HbA1c, making it a useful tool for long-term glycemic control.
- A 2022 review found cinnamon lowers triglycerides, total cholesterol, and LDL, supporting cardiovascular health (Kutbi et al., Crit Rev Food Sci Nutr, 2022).
- Meta-analyses of 13 studies indicate improved glucose metabolism and reduced insulin resistance.(cinnamon)
- *(Neelakantan et al., Nutr J, 2014)*
- A meta-analysis found fenugreek significantly lowers postprandial glucose levels, preventing sharp blood sugar spikes after meals

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- Is there a unique challenge to a plant-based diet with celiac disease?

Yes—many whole grains are off-limits. Focus on gluten-free whole grains, legumes, seeds, and label reading to avoid cross-contamination

- Are psyllium supplements (such as Metamucil) recommended if clients have difficulty consuming enough high fiber foods?

Yes, they can help. Choose sugar-free versions and use them alongside gradual increases in whole food sources of fiber.

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