

Type 2 Diabetes

Fact Sheet



What is Type 2 Diabetes?

Type 2 diabetes, accounting for over 90% of diabetes cases, is a condition in which your body struggles to effectively utilize energy from food. Your pancreas plays a crucial role by producing insulin, a hormone that facilitates the utilization of glucose by your cells. As time passes, your pancreas gradually produces less insulin, and your cells become resistant to its effects. Diet and lifestyle significantly affect the likelihood that type 2 diabetes will manifest and influence its course after diagnosis.

Underlying Mechanism

The condition starts with the build-up of lipid particles in muscle and liver cells, mainly from the diet. These lipids cause insulin resistance, reducing the ability of muscle and liver cells to respond to insulin and remove glucose from the blood.

Risk Factors for Type 2 Diabetes

Adults who are overweight (body mass index [BMI] ≥ 25 kg/m² or ≥ 23 kg/m² in Asian Americans) and have any of the following are at increased risk:

- Regular consumption of animal-based foods
- Lack of physical activity
- Having a first-degree relative with diabetes
- Belonging to a high-risk race/ethnicity (e.g., Black, Latino, Native American, Asian American, Pacific Islander)
- Being a woman who was previously diagnosed with gestational diabetes
- Hypertension $\geq 140/90$ mm Hg, or currently taking hypertension medication
- High triglyceride level (> 250 mg/dL)
- Women diagnosed with polycystic ovary syndrome
- A1C level $\geq 5.7\%$, impaired glucose tolerance, or impaired fasting glucose as indicated by previous tests
- Presence of other clinical conditions associated with insulin resistance
- History of cardiovascular disease
- Smoking

Evidence-Based Eating for Type 2 Diabetes

According to the American College of Lifestyle Medicine, remission of type 2 diabetes should be the clinical treatment goal and is facilitated with a plant-based diet that focuses on fruits, vegetables, whole grains, legumes, and nuts and seeds, while eliminating animal products, added fats, and sugar.

Numerous studies have shown that adopting a plant-based diet can have positive effects on type 2 diabetes. A study published in JAMA found that individuals with type 2 diabetes who followed a plant-based diet for 16 weeks experienced greater weight loss and improved insulin sensitivity compared to those following a conventional diabetes diet. Research published in the Journal of Geriatric Cardiology concluded that plant-based diets have a significant role in preventing and treating type 2 diabetes due to their positive effects on insulin sensitivity and weight management.

Benefits of a whole food, plant-based diet for individuals with type 2 diabetes:

Improved Insulin Sensitivity: Plant-based diets can enhance insulin sensitivity, which means your body can more effectively use insulin to regulate blood sugar levels. Improved insulin sensitivity can lead to better blood sugar control.

Weight Management: Plant-based diets are often lower in calories and saturated fats, making them conducive to weight loss/management. Losing excess weight is linked to better glycemic control and reduced risk of complications associated with type 2 diabetes.

Reduced Cardiovascular Risk: Plant-based diets are naturally low in saturated fats and cholesterol. They have been shown to lower blood pressure, reduce LDL cholesterol levels, and improve overall cardiovascular health, which is important for individuals with diabetes who are at higher risk of heart disease.

Blood Sugar Control: Plant-based diets are rich in dietary fiber, which helps slow down the digestion and absorption of carbohydrates. This leads to more gradual rises in blood sugar levels after meals, promoting better glycemic control.

Anti-Inflammatory Effects: Plant-based diets are rich in antioxidants and anti-inflammatory compounds. Chronic inflammation plays a role in the development of diabetes complications, and a diet that reduces inflammation can have a positive impact on managing the disease.

Dietary Considerations

Focus on Fiber

Strive to consume a minimum of 40 grams of dietary fiber daily by incorporating foods such as beans, vegetables, fruits, and whole grains like brown rice, barley, oats, and quinoa. When reading nutrition labels, look for products with at least 3 grams of fiber per serving, aiming for 10-15 grams of fiber per meal. Begin gradually to allow your body to adjust, as improved bowel habits are common. To reduce gassiness associated with beans, opt for smaller servings and ensure thorough cooking. If discomfort arises, remember that this concern tends to diminish with time.

Choose Foods with a Lower Glycemic Index

Understanding the glycemic index (GI) helps identify foods that impact blood sugar levels more than others. Foods with a high GI can also elevate triglyceride levels. Lower GI options include beans, oats, sweet potatoes, and surprisingly, wheat pasta. Lower GI breads like pumpernickel, rye, multigrain, sourdough, and tortillas can be chosen. Opt for lower GI cereals such as bran cereals, muesli, and rolled or steel-cut oats. Incorporate grains like barley, rice, millet, corn, and quinoa. To manage blood sugar, it's advisable to limit consumption of high GI foods like processed products with added sugar, white and wheat bread, cornflakes, and puffed rice cereals.

Limit Fats and Avoid Isolated Oil

While vegetable oils are a healthier alternative to animal fats, it's important to recognize that oil is not considered a whole plant food. All isolated fats and oils are calorie-dense, and nutrient-poor. It's advisable to avoid dishes with oily sauces, oil-based salad dressings, and fried foods. Moderation is recommended with olives, avocados, nuts, and nut butter. Practicing mindful label reading and opting for foods with no more than 2-3 grams of fat per serving is a beneficial approach.

Conclusion

A plant-based diet can dramatically improve the health of people with type2 diabetes. The American and Canadian Diabetes Associations, the American Association of Clinical Endocrinologists, and the American College of Endocrinology recommend a plant-based meal plan for people with type 2 diabetes.

If you're considering transitioning to a plant-based diet, consult with a registered dietitian who specializes in diabetes care to ensure that you're optimizing your nutritional intake.

Meal Suggestions

Breakfast

- Roasted sweet potatoes and chickpeas
- Cherry smoothie with unsweetened soy milk
- Overnight oats with blueberries
- Tofu scramble with vegetables

Lunch

- Buddha bowl with greens, quinoa, tofu, vegetables, tahini dressing
- Burrito bowl with black beans, vegetables, brown rice, plantains
- Soup: black bean, lentil and vegetable, ginger carrot serve with sourdough bread
- Hummus, vegetables, and sprouts with whole grain wrap and

Dinner

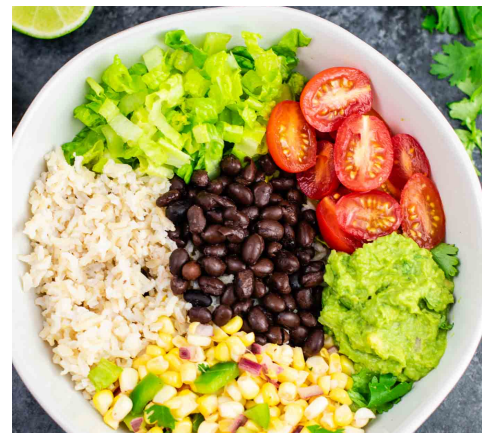
- Brown rice pasta marinara with vegetables
- Vegetable stir fry with tofu and low sodium soy sauce
- Fajitas with vegetables, beans, lime juice, avocado
- Chili with beans and vegetables

Snacks

- Baked chickpeas
- Frozen grapes, apple, plum
- Kale chips
- Air popped popcorn

Beverages

- Water infused with fruit/cucumbers/herbs
- Green tea
- Unsweetened plant-based milks



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