

Glycaemic index diet and diabetes

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Context

- As per a recent study, there is a strong relation between Glycaemic index diet and diabetes which needs to be taken care in order to regulate type 2 diabetes.

What is Glycaemic Index

- A **glycemic index (GI)** is what measures how soon the blood sugar rises, after eating the carbohydrates, compared to pure glucose, which is to say, pure sugar, which has a GI score of 100.
- The **Glycemic score** is devised on a scale of 0 to 100 correspondingly.
- Beans, white rice, white bread and pasta are foods with high glycemic index (room 70). and as a result, cause sudden increases in blood sugar levels.
- The food group of white bread, white rice, sugar-sweetened beverages, and a range of cereals are examples of these foods.
- The formulation of the food products, which contains a **low GI index** (55 or below), are slowly digested; thus, it gradually increases the blood sugar levels by time.
- Fruit, vegetables, whole grains, legumes, and nuts at this section provide such nutrients as vitamins, minerals, fibre, and carbohydrates.
- Realising the main role of glycemic index can be a key factor to control blood sugar levels for diabetes patients in particular.
- Processed foods and sugary foods typically have a high glycemic index, thus they cause a sharp rise to blood sugar.

- On the contrary, foods with a low glycemic index are often suggested as the blood sugar level rises slower and is less drastic.
- Besides this, one should note that the variation in **portion size**, general dietary balance overall, preparation of meal and the presence of fat and fibre are the other factors, which affect the rate of which carbohydrates are digested and are or can be absorbed, which in turn implies the response of blood sugar.

Diabetes

- Diabetes is a chronic disease characterised by elevated blood sugar levels with various types.
- **The type 1 diabetes** diagnosis happens when the immune system treats these cells which make the insulin as an enemy and destroys them, usually at a child or a teenager's age.
- **Type 2 diabetes** is the most common form of all types of diabetes and is often either the body not responding to insulin properly or sod insulin production. This is attributed to the basis being several aspects, including, but not limited to, obesity and inactivity.
- **Diabetes which occurs in the gestation period**, or gestational diabetes, occurs when the body fails to produce the sufficient amount of insulin to meet the additional demands.
- Treating diabetes involves an integrated strategy encompassing adapting to healthy lifestyles such as eating healthy, exercising consistently, shedding weight, and monitoring blood sugar levels. Insulin itself, as well as the oral drugs might be required to satisfactorily take care of blood sugar.
- Diabetes is manageable and can be prevented from the above problems such as heart disease, nerve damage, kidney disease, eye problems, and infections by the correct way of control.
- It is also worth mentioning regular medical check-ups, eye exams and light foot care in order to prevent or detect potential complications timely, that helps people with diabetes to live full lives despite health risks before remaining in control over it.

Correlation between Glycemic Index diet and Diabetes

- The relation between diet with high glycemic index and diabetes is important for the reason that it is linked to the blood sugar levels, which are crucial for those with diabetes.
- Applying and following the glycemic index diet that includes high-fibre fruits, non-starchy vegetables and whole grains as the main forms of carbohydrate can help to regulate blood sugar levels in diabetes.
- This happens in a steady way so that glucose level rises and it improves blood glucose level control to reduce chances of developing complications like heart problems.
- Nevertheless, consideration of portion sizes, dietary balance in general, and individual metabolic differences is all essential.
- One should work with healthcare specialists or dietitians to set up a diet plan that would ensure the best efficacy and would consider such additional factors as the use of drugs, an extent of activity, or any supplementary health issues.

Conclusion

- It is worth mentioning here that the correlation of a low glycemic index (GI) diet and diabetes needs to be taken into consideration so as to actually manage blood sugar.
- Low-GI foods should be emphasised for glycemic control and the prevention of extra complications.
- Along with the providers' healthcare staff recommendations, a single-person's dietary plan can become curated and full of the essential nutritional value which can help individuals prevent diabetes and ensure that they greatly improve their overall health.

Source: [The Hindu](#)

UPSC Mains Practice Question

Q.Discuss the significance of incorporating a glycemic index (GI) diet in managing diabetes, emphasizing its role in blood sugar control and reducing the risk of complications. [150 Words]