



Coping with Type-1 Diabetes

For Prelims: Type-1 Diabetes, ICMR, World Diabetes Day

For Mains: Diabetes, Healthcare, Initiatives to curb Diabetes, Government Policies & Interventions

Why in News?

Recently, [Indian Council of Medical Research \(ICMR\)](#) issued guidelines regarding diagnosis, treatment, and management for type-1 diabetes.

- This is the **first time the ICMR has issued guidelines** specifically for type 1 diabetes, which is rarer than type 2.

What do we Need to know about Diabetes?

- **About:** Diabetes is a [Non-Communicable Disease \(NCD\)](#) that occurs either when the pancreas

does not produce enough insulin (a hormone that regulates blood sugar, or glucose), or when the body cannot effectively use the insulin, it produces.

- **Types of Diabetes:**
 - **Type 1 Diabetes:**
 - It is also known as **juvenile diabetes** (as it mostly affects children of age 14-16 years), this type occurs when the body fails to produce sufficient insulin.
 - It is **predominantly diagnosed in children and adolescents**. Although the prevalence is less, it is much more severe than type 2.
 - **Type 2 Diabetes:**
 - It affects the **way the body uses insulin**. While the body still makes insulin.
 - Type 2 diabetes can **occur at any age, even during childhood**. However, this type of diabetes occurs most often in middle-aged and older people.
 - **Gestational Diabetes:** This type occurs in women during pregnancy when the body sometimes becomes less sensitive to insulin. Gestational diabetes does not occur in all women and usually resolves after giving birth.
- **Impacts of Diabetes:** It affects the **five major organs namely**, Kidney, Heart, Blood vessels, Nervous System, and Eyes (retina).
- **Factors Responsible:** Factors that lead to increase in diabetes are an unhealthy diet, lack of physical activity, harmful use of alcohol, overweight/obesity, tobacco use, etc.

How Rare is Type-1 Diabetes?

- Out of **10 lakh children and adolescents living with type 1 diabetes** in the world, India holds the highest numbers.
- **Out of 2.5 lakh people living with type 1 diabetes in India**, 90,000 to 1 lakh are under the age of 14 years.
- **Only 2% of all hospital cases of diabetes in the country are type 1** — but which is being diagnosed more frequently.

What Factors Exacerbate the Condition?

- **Genetic Factors:** It plays a role in determining whether a person will get type-1 diabetes. The risk of disease in a child is:
 - 3% when the mother has it
 - 5% when the father has it
 - 8% when a sibling has it.
- **Presence of Certain Genes:** It is also strongly associated with the disease. For example, the prevalence of genes called DR3-DQ2 and DR4-DQ8 is 30-40% in patients with type 1 diabetes as compared to 2.4% in the general population.
 - DR3- DQ2 and DR4-DQ8 means the patient is permissive for **celiac disease** and is capable of developing or having the disease.

What are the Treatments?

- **Glucose monitoring:** Continuous glucose monitoring devices can help monitor the blood glucose levels throughout 24 hours with the help of a sensor.
- **Artificial pancreas:** It can automatically deliver insulin when required.

What are Related Initiatives?

- **National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS):**
 - In order to prevent and control major NCDs, this **initiative was launched by India in 2010** with focus on strengthening infrastructure, human resource development, health promotion, early diagnosis, management and referral.
- **World Diabetes Day:**
 - It is observed on **14th November every year**. The 2022 campaign will focus on access to diabetes education. access to diabetes education.
- **Global Diabetes Compact:**
 - **WHO launched a Global Diabetes Compact** to better fight the disease while marking the centenary of the discovery of insulin.

[Source: IE](#)

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