

DIABETES IN CHILDREN

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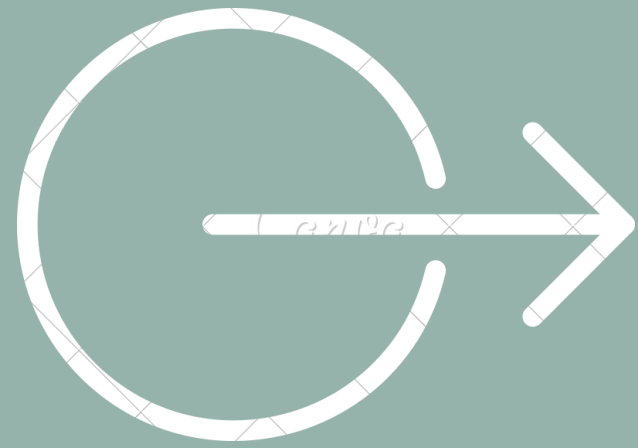
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OBJECTIVES



- **Definition of diabetes**
- **Classification of diabetes**
- **Describe how the diabetes is diagnosed in childhood**
- **How to diagnose of hypoglycemia and hyperglycemia in children**
- **How the diabetes is treatment**





INTRODUCTION

Diabetes is a disease that does not cause outward pain and has symptoms, such as extreme thirst, weight loss, etc. and these symptoms are noticed by the patient and the patient may live for a long time with the disease.

Statistics on diabetes

Diabetes is widely recognized as an emerging epidemic that has a cumulative impact on almost every country, age group, and across the world. According to the International Diabetes Federation, in 2015, approximately 415 million people were suffering from diabetes worldwide, and this number is expected to exceed 640 million by the year 2040 .

In 2015, approximately 5.0 million deaths were attributed to diabetes.



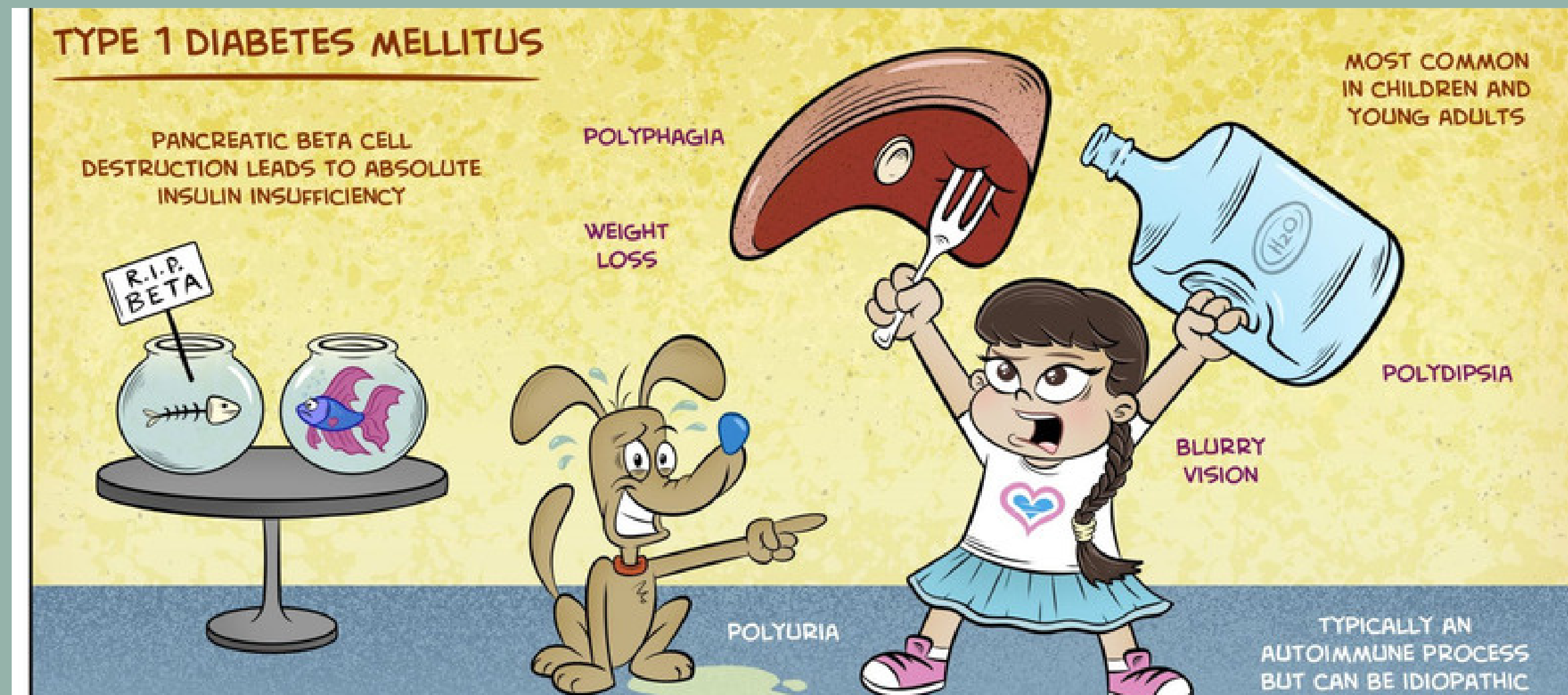


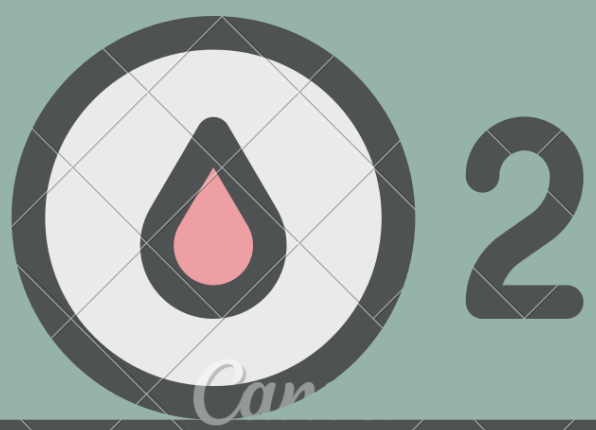
Diabetes mellitus : is a group of metabolic diseases characterized by chronic hyperglycemia resulting from defects in **insulin secretion, insulin action** or both



Classification of diabetes

Type 1 diabetes mellitus is a chronic disease characterized by insulin deficiency due to pancreatic β -cell loss and leads to hyperglycemia. Although the age of symptomatic onset is usually during childhood or adolescence.

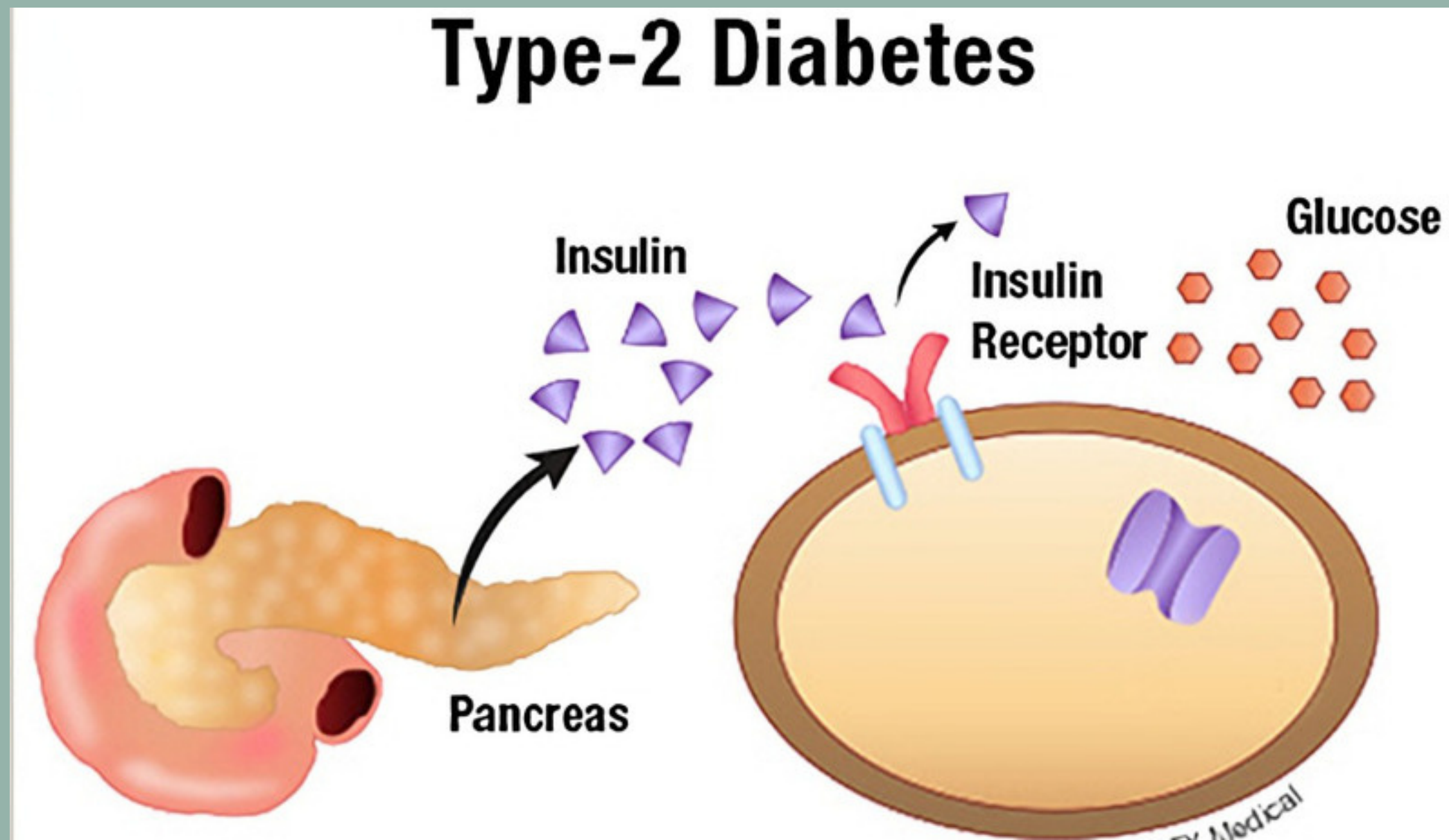




TYPE

Insulin is a hormone made by your pancreas that acts like a key to let blood sugar into the cells in your body for use as energy. If you have type 2 diabetes, cells don't respond normally to insulin; this is called insulin resistance.

High blood sugar is damaging to the body and can cause other serious health problems, such as **heart disease, vision loss, and kidney disease.**



Diagnostic of diabetes in childhood

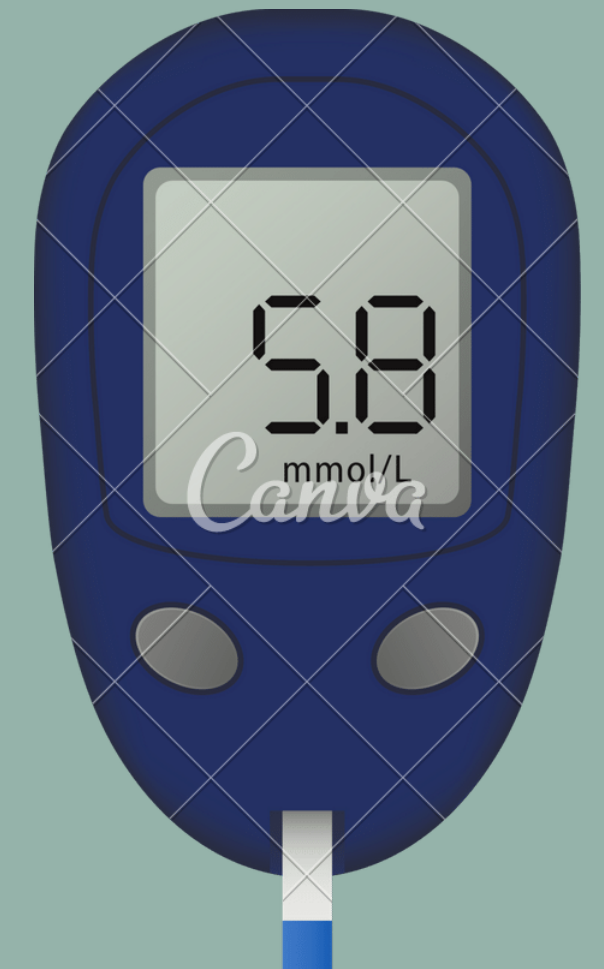
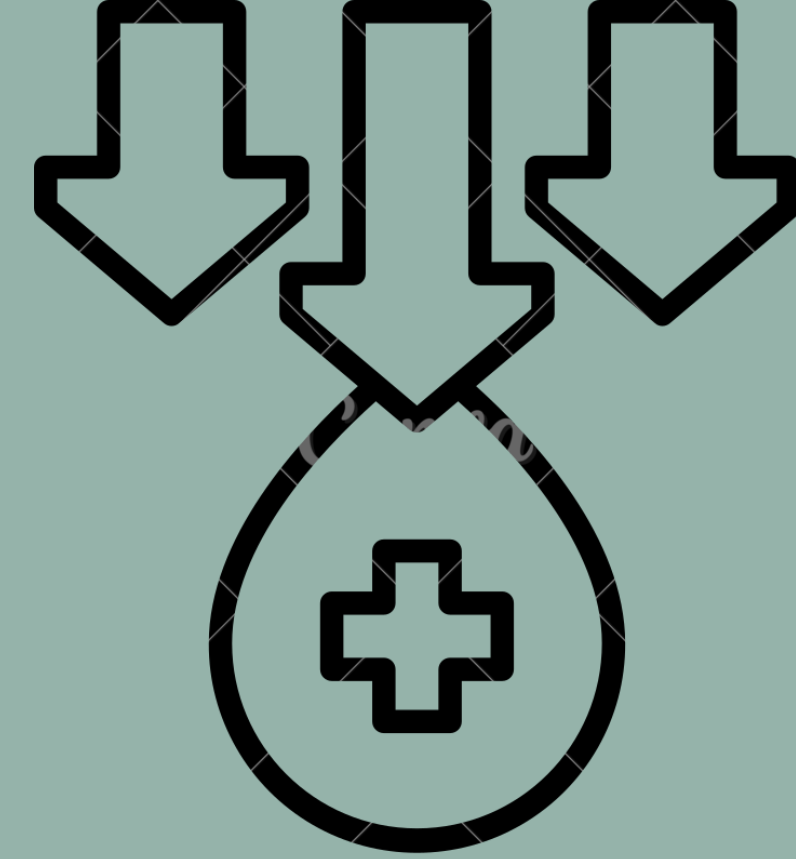
There are many blood tests designed to detect type 1 diabetes in children. The following tests are used to diagnose and monitor diabetes:

- Random blood sugar analysis.
- Glycated hemoglobin analysis.
- Fasting blood sugar analysis.



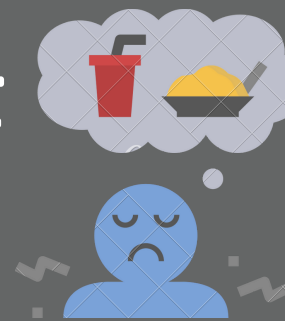
Diagnosis of hypoglycemia

is the result of a mismatch between insulin dose
food consumed, and recent exercise.
Additionally hypoglycemia can lead to
permanent sequelae and even death.



symptoms

Pallor
hunger



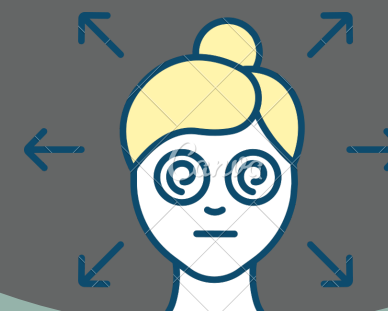
tremulousness
sweating



increased
heart rate



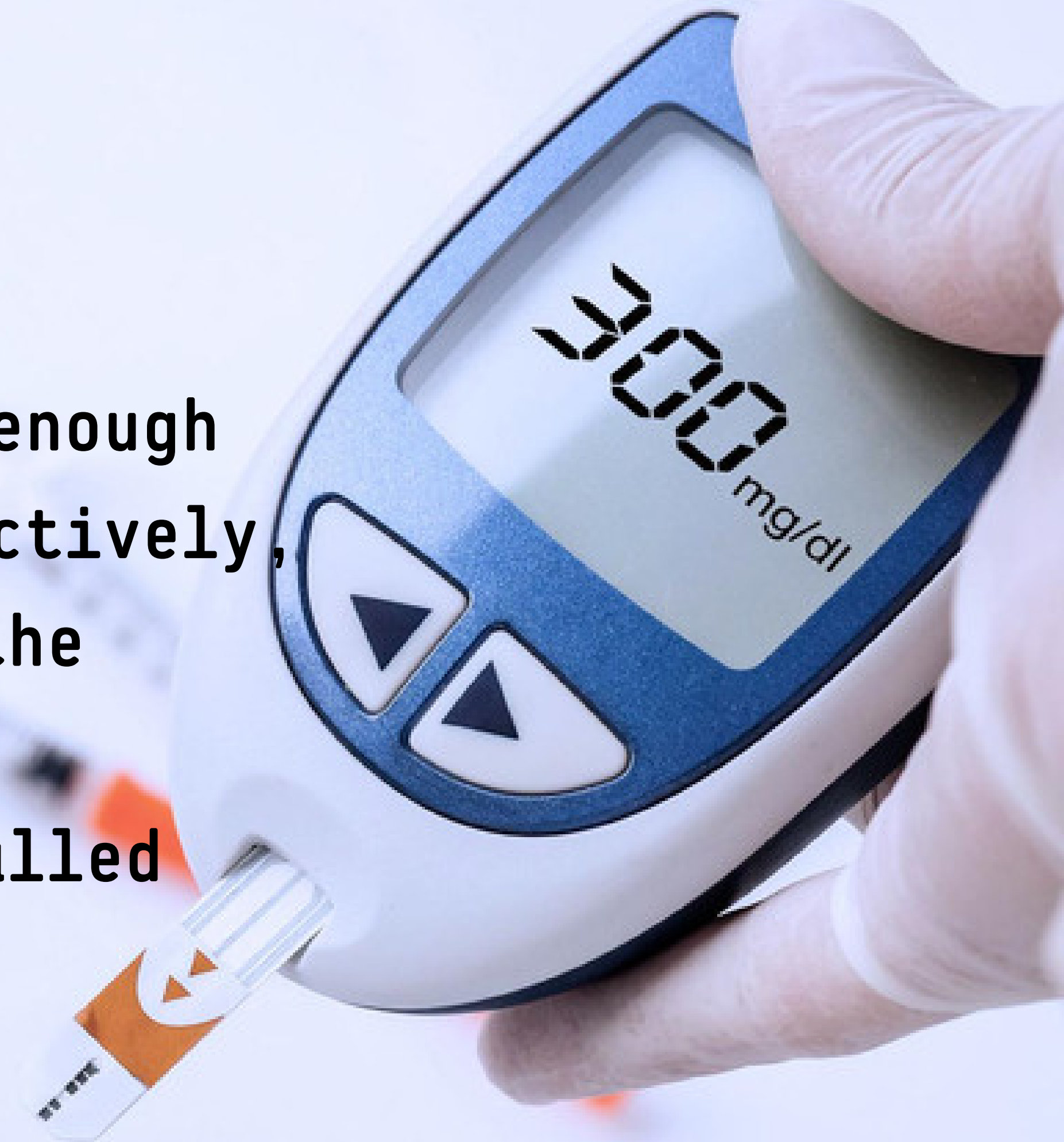
Difficulty
concentrating

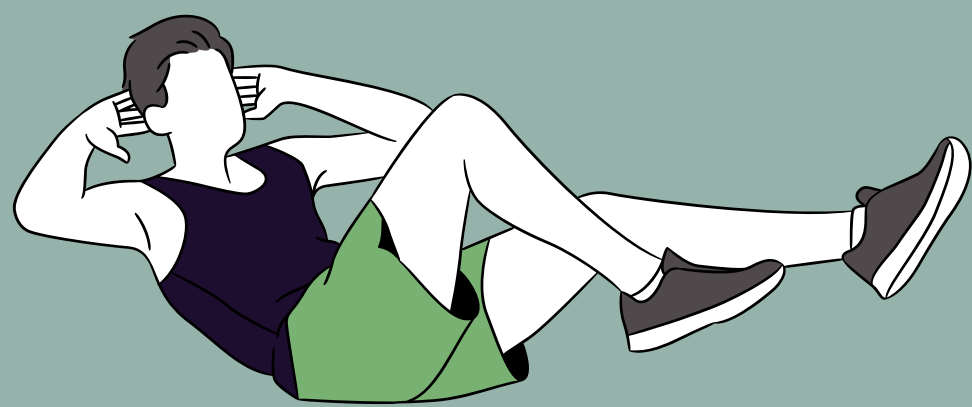


- **hyperglycemia**

When the body doesn't produce enough insulin or doesn't use it effectively, glucose or sugar builds up in the blood.

This spike in blood sugar is called hyperglycemia





What causes hyperglycemia or high glucose levels?



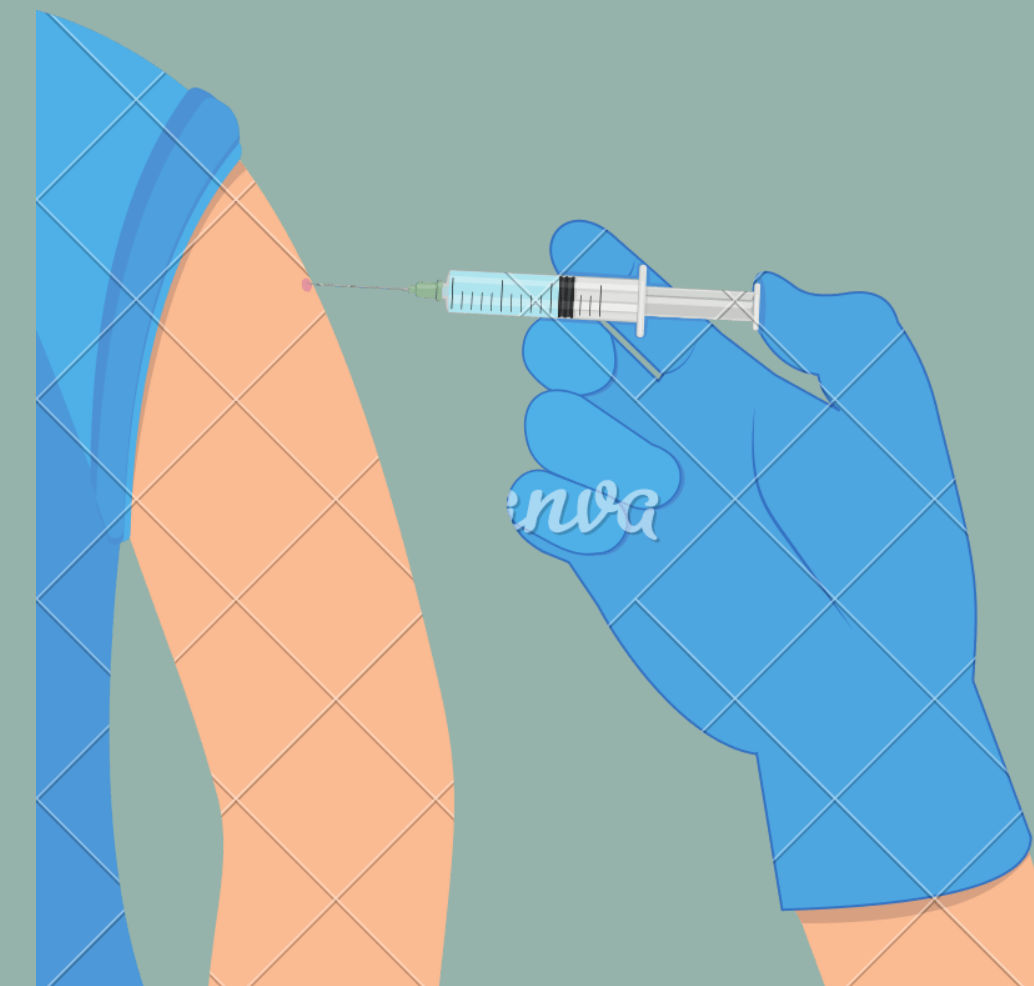
Diabetes is treatment

The treatment of diabetes in children varies according to its type:

- *Type 1*

treated with insulin injections, and the dose of insulin varies from patient to patient.

Fast-acting insulin and slow-acting insulin



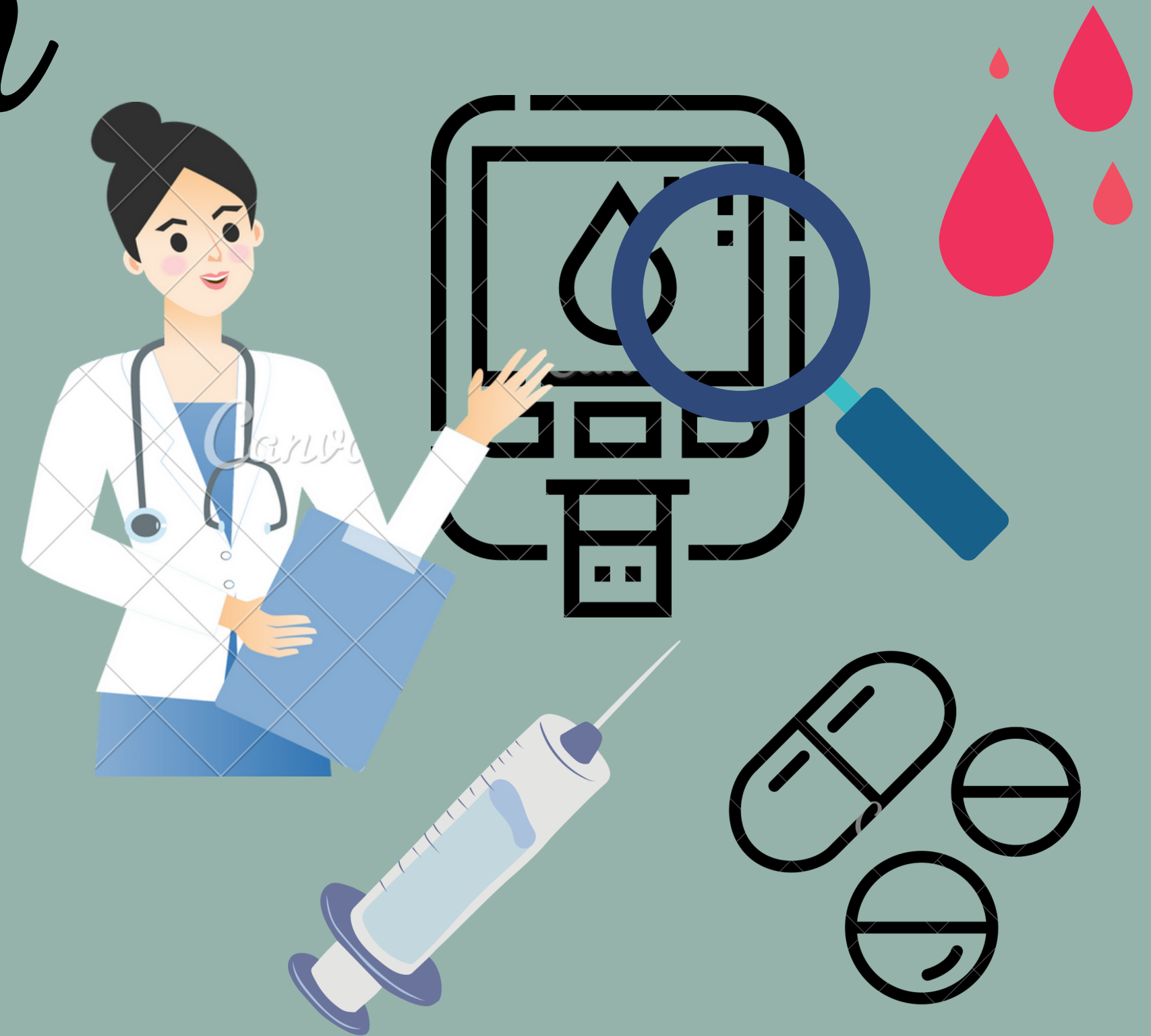
- *Type 2*

Controlling blood sugar levels in the early stages through lifestyle changes, losing excess weight, eating a healthy diet, and exercising



Conclusion

Diabetes mellitus become a common disease among children and become more serious if no initiatives are taken to control or overcome this problem. So, careful planning are important for the children's future.



Reference

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- Type 2 diabetes in children and adolescents. American Diabetes Association. *Pediatrics* 105: 671-680. \ 2006. Incidence and trends of childhood Type 1 diabetes worldwide 1990-1999. *Diabet Med* 23: 857-866. KOVATCHEV BP, COX DJ, FARHY LS, STRAUME M, GONDER-FREDERICK L, CLARKE WL. Episodes of severe hypoglycemia in type 1 diabetes are preceded and followed within 48 hours by measurable disturbances in blood glucose. *J Clin Endocrinol Metab* 2000; 85: 4287-4292.
- Onge ES, Miller SA, Motycka C, DeBerry A. A review of the treatment of type 2 diabetes in children. *J Pediatr Pharmacol Ther.* 2015;20:4-16.
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- International Diabetes Federation, *IDF Diabetes Atlas*, International Diabetes Federation, Brussels, Belgium, 7th edition, 2015.



THANK YOU

