CAUSES OF DIABETES

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Diabetes mellitus represents a set of autoimmune, metabolic and genetic disorders that share one major characteristic – hyperglycaemia. The recommended way of measuring plasma glucose and the threshold used to define what is normal or abnormal have gone through several iterations over the past few decades. These recommendations, and the current definitions of diabetes mellitus and intermediate states of hyperglycaemia.(A group of diseases that result in too much sugar in the blood (high blood glucose).)There different types of diabetes melilitus e.gType 1 diabetes. Type 1 diabetes is most commonly diagnosed in children and teenagers. It’s an autoimmune condition. When you have type 1 diabetes, your immune system attacks the cells in your pancreas responsible for making insulin.Type 2 diabetes. Type 2 diabetes happens when your body stops responding to the insulin your pancreas makes. Over time, your pancreas also stops producing enough insulin. It’s generally linked to a combination of genetic and lifestyle factors.Gestational diabetes. This type of diabetes is a response to the hormonal changes that happen during pregnancy. The hormones made in the placenta can lower your body’s sensitivity to insulin. This may result in high blood sugar during pregnancy, etc.

Destruction of insulin by infection

type 1 diabetes occurs when your immune system, the body’s system for fighting infection, attacks and destroys the insulin-producing beta cells of the pancreas, it is also caused by genes and environmental factors, such as viruses, that might trigger the disease to develop.( Yzydorczyk, U Simeoni - 2015 )

Overweight, obesity and physically inactive

The type 2 diabetes is caused by not being physically active , overweight or have obesity. Extra weight sometimes causes insulin resistance and is common in people with type 2 diabetes. The location of body fat also makes a differenceType 2 diabetes usually begins with insulin resistance, a condition in which muscle, liver, and fat cells do not use insulin well. As a result, your body needs more insulin to help glucose enter cells. At first, the pancreas makes more insulin to keep up with the added demand. Over time, the pancreas can’t make enough insulin, and blood glucose levels rise.. Extra belly fat is linked to insulin resistance, type 2 diabetes, and heart and blood vessel disease. This is the the greatest cause of of type 2 diabetes for all this triggers it od develop.It begins with insulin resistance, a condition in which muscle, liver, and fat cells do not use insulin well. As a result, your body needs more insulin to help glucose enter cells. At first, the pancreas makes more insulin to keep up with the added demand. Over time, the pancreas can’t make enough insulin, and blood glucose levels rise leading to development of this type of diabetes( .R Raghavan, f …, 2019 - )

Hormonal resistance

Hormonal resistance is another cause of diabetes e.g gestational diabetes,,the hormones produced by the placenta contribute to insulin resistance, which occurs in all women during late pregnancy. Most pregnant women can produce enough insulin to overcome insulin resistance, but some cannot. And it takes place when the pancreas can’t make enough insulin.As with type 2 diabetes, extra weight is linked to gestational diabetes. Women who are overweight or have obesity may already have insulin resistance when they become pregnant. Gaining too much weight during pregnancy may also be a factor.(, V Bourgeois… - Lupus, 1998 )

Family History and gens

Genes and family history is also the main cause of diabetes. Having a family history of diabetes makes it more likely that a woman will develop gestational diabetes, which suggests that genes play a role, for genes also explains why disorder occurs and they are always inherited from generation to generation this explains why certain family have history of diabetes.( N Friedman… - Family …, 2009 - academic.oup.co)

Gene mutation

Gene mutation causes diabetes e.gMonogenic diabetes is caused by mutations, or changes, in a single gene. These changes are usually passed through families, but sometimes the gene mutation happens on its own. Most of these gene mutations cause diabetes by making the pancreas less able to make insulin. The most common types of monogenic diabetes are neonatal diabetes and maturity-onset diabetes of the young . Neonatal diabetes occurs in the first 6 months of life. They can be diagnosed at adolescence or early adulthood, but sometimes the disease is not diagnosed until later in life

The gene mutation leads to a condition called cystic fibrosis which produces thick mucus that causes scarring in the pancreas. This scarring can prevent the pancreas from making enough insulin and also Hemochromatosis which causes the body to store too much iron. If the disease is not treated, iron can build up in and damage the pancreas and other organs.(NC Unwin… - Bmj, 2001 - bmj.com)

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