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Diabetes mellitus two types

Diabetes mellitus is a complex condition involving the body's ability to convert food into energy. The term originates from Greek and Latin words describing a process similar to siphoning or passing through. In 2021, approximately 529 million people worldwide, including 38.4 million in the U.S., were diagnosed with diabetes. When carbohydrates are consumed, they're converted into glucose, which is then transported to the bloodstream. The pancreas releases insulin, a hormone facilitating the uptake of glucose by cells for energy production. Untreated diabetes leads to an inability to utilize insulin effectively, resulting in excessive glucose levels in the blood and potentially life-threatening health complications. Unlike type 1 diabetes, there's no cure for diabetes; however, treatment and lifestyle modifications can significantly improve outcomes. Diabetes is categorized into different forms, primarily prediabetes and type 1 diabetes. Prediabetes is characterized by elevated blood sugar levels without meeting the criteria for diabetes diagnosis. This condition often lacks noticeable symptoms but affects over a third of U.S. residents, with approximately 90% remaining unaware. People with prediabetes might experience darkened skin, weight changes, or fatigue. In contrast, type 1 diabetes is an autoimmune condition where the body attacks the pancreas, disrupting insulin production. This type accounts for around 2 million cases globally, including approximately 304,000 children and teens in the U.S., often caused by genetic predisposition or pancreatic cell dysfunction. Type 1 diabetes symptoms typically develop rapidly, involving intense thirst, increased urination, blurred vision, fatigue, and weight loss. Regular exercise, a balanced diet, maintaining a healthy weight, stress management, and quitting smoking can help mitigate prediabetes risks and potentially reverse the condition. Medications like acarbose and metformin may be prescribed for those unable to follow lifestyle modifications or at high risk of developing type 2 diabetes. If you or your child experience symptoms like fruity-smelling breath, dry skin, nausea, difficulty breathing, confusion, vomiting, stomach pain, or being unable to focus, seek immediate medical help. Many people with type 1 diabetes develop health issues due to damage to small blood vessels in the eyes (diabetic retinopathy), nerves (diabetic neuropathy), and kidneys (diabetic nephropathy). They are also at a higher risk of heart disease and stroke. Doctors may use an RPG test to check your blood sugar levels when diagnosing type 1 diabetes, as well as an A1c blood test to estimate your blood sugar control over the past three months. Treatment for type 1 involves injecting insulin into fatty tissue under the skin using syringes, pens with prefilled cartridges, or pumps. Those with type 1 must make lifestyle changes, including regular blood sugar testing, careful meal planning, daily exercise, and taking insulin and other medications as needed. Type 2 diabetes is more common in children and teens due to increased obesity rates. Ninety percent of people with diabetes have type 2. When you have type 2, your pancreas produces some insulin, but it may not be enough or your body doesn't use it properly. Type 2 diabetes can cause serious health issues, especially in the tiny blood vessels in the kidneys, nerves, and eyes. It also raises the risk of heart disease and stroke. People with obesity have a higher risk of type 2 diabetes and related complications. Treatment for type 2 involves maintaining a healthy weight, eating right, exercising regularly, and possibly taking medication. Your doctor may perform an A1c test several times a year to monitor your blood sugar control. Pregnancy can cause insulin resistance in some women, leading to gestational diabetes, which is diagnosed in 2-10% of pregnancies through glucose challenge or oral glucose tolerance tests. Gestational diabetes increases the risk of developing type 2 diabetes and heart disease. People who have had gestational diabetes are 8-10 times more likely to develop type 2 diabetes compared to those without it, and they also face twice the risk of developing heart disease. If you've had gestational diabetes, regular testing is necessary every three years for life to monitor your condition. It's essential to control gestational diabetes to protect the baby's growth and development. High blood sugar levels can cause unusual weight gain before birth, breathing difficulties at birth, and a higher risk of obesity and diabetes later in life. Treatment typically involves careful meal planning, daily exercise, maintaining a healthy weight, and taking insulin if necessary. Rarely, diabetes is caused by genetic mutations that affect insulin production. This type of diabetes is called monogenic diabetes and can be mistaken for type 2 diabetes. In some cases, doctors may recommend genetic testing to confirm the diagnosis. Secondary diabetes occurs due to another primary condition, such as endocrine dysfunctions, pancreatic disorders, or polycystic ovary syndrome (PCOS). Treatment involves managing the underlying cause, making lifestyle changes, and taking insulin and other medications to control blood sugar levels. Type 1 and Type 2 Diabetes: Understanding the Differences Type 1 diabetes affects approximately 37 million people worldwide, while type 2 diabetes has a prevalence of around the same number. Type 1 diabetes occurs when the immune system mistakenly attacks the pancreas, resulting in its inability to produce insulin. In contrast, type 2 diabetes is characterized by the body's reduced responsiveness to insulin, leading to elevated blood sugar levels. While both conditions can cause serious health complications, such as heart disease and kidney damage, their symptoms differ significantly. Type 1 diabetes typically develops rapidly, often within days or weeks, whereas type 2 diabetes symptoms may take a year or more to appear. In people with type 1 diabetes, the body relies on insulin injections for survival, whereas those with type 2 diabetes only require medication when their pancreas is no longer producing enough insulin. The causes of diabetes vary depending on the type, often involving genetic, environmental, and lifestyle factors. However, all forms of diabetes lead to high blood sugar levels, which can result in severe health issues. Managing type 2 diabetes involves a combination of medication, healthy lifestyle changes, such as diet and exercise, and regular doctor check-ups. Diabetes mellitus types 1 and 2 differ significantly in terms of symptoms, causes, and treatment options. Type 1 diabetes often affects children or adolescents, while type 2 diabetes is more common among adults. Both conditions can lead to serious complications, including cardiovascular disease, kidney damage, vision loss, and nerve issues. Hyperglycemia is a medical condition where high blood sugar levels occur due to excessive glucose consumption or inability of the body to regulate glucose uptake. Individuals with hyperglycemia should focus on increasing their glucose intake followed by protein-rich food for symptom relief. Untreated, individuals may experience severe symptoms such as seizures, loss of consciousness, and comas. Hypoglycemia can be life-threatening, requiring immediate medical attention. Individuals with diabetes are advised to carry a medical ID to inform others in case of an emergency. Regular glucose level monitoring is crucial for detecting prediabetes or diabetes. Diagnosing diabetes involves various tests such as the A1C test, fasting plasma glucose test, and oral glucose tolerance test. Results indicate either diabetes or prediabetes. Individuals with family history or risk factors for type 2 diabetes should undergo regular screening. Home blood glucose meters allow individuals to monitor their levels at home, prompting evaluation by a doctor if irregular readings occur. Type 2 diabetes can be managed with lifestyle changes. Maintaining healthy habits from an early stage can help delay disease progression for people with Type 2 diabetes. While there is no cure, treatment and medication can help manage symptoms and prevent worsening of the condition. Certain genetic factors, environmental influences, and risk factors increase susceptibility to developing Type 2 diabetes. Genetic features and certain medical conditions can also contribute to its development. African Americans, Hispanic people, Native Americans, Asian Americans, Pacific Islanders, and others with a family history or obesity are more likely to develop Type 2 diabetes. Low levels of vitamin D may contribute to insulin sensitivity and glucose metabolism issues, increasing the risk of developing the condition. Gastric bypass surgery, lifestyle changes, and medication can lead to remission of Type 2 diabetes. Type 2 diabetes is a condition where the body doesn't produce enough insulin or has cells that don't respond to it properly. It typically develops gradually in adults but is increasingly affecting children due to lifestyle factors. Type 2 diabetes can be managed through lifestyle changes, medications, and sometimes insulin. If left untreated, both types of diabetes can cause serious complications. There are two main types: type 1, a lifelong condition where the immune system attacks insulin-producing cells; and type 2, where the body doesn't produce enough insulin or its cells don't respond to it. Type 2 is far more common, affecting over 90% of adults with diabetes in the UK. High blood sugar during pregnancy is known as gestational diabetes, which usually goes away after giving birth. Some people have high but not diagnostic blood sugar levels, known as non-diabetic hyperglycaemia or pre-diabetes. This condition increases the risk of developing type 2 diabetes, but lifestyle changes can reduce this risk. The NHS Diabetes Prevention Programme helps people make lasting lifestyle changes and has been shown to prevent type 2 diabetes. People with non-diabetic hyperglycaemia are recommended to have a blood test every year to monitor their sugar levels. Early diagnosis is crucial as untreated diabetes can lead to long-term health problems. Symptoms include excessive thirst, frequent urination, fatigue, weight loss, and blurred vision. Type 1 diabetes can develop quickly, while type 2 may not show symptoms for years. Insulin produced by the pancreas controls blood sugar levels. In diabetes, there's either insufficient insulin or it doesn't work properly, preventing glucose from being broken down into energy. People with risk factors for type 2 diabetes should take extra precautions to manage their health. They are more likely to develop type 2 diabetes if they have a family history, obesity, or a certain ethnicity. Maintaining a healthy weight through diet and exercise is crucial. Eating a balanced diet and getting regular exercise can help reduce the risk of developing type 2 diabetes. Quitting smoking and reducing alcohol consumption are also essential for overall health. Those diagnosed with type 1 diabetes need to take insulin injections for life, while those with type 2 diabetes may be able to manage their condition through lifestyle changes or medication. There are two primary forms of diabetes: Type 1 and Type 2. In Type 1 diabetes, the body cannot produce any insulin at all. In contrast, Type 2 diabetes is more prevalent and occurs when the body either fails to produce sufficient insulin or makes inadequate use of it. Both conditions are serious and warrant attention. Diabetes encompasses numerous subtypes, including gestational diabetes, MODY, LADA, and type 3c, among others. A common thread among these types is that they all result in elevated glucose levels in the blood, which can lead to various complications if left unchecked. The root cause of diabetes varies depending on the individual's circumstances. However, a crucial factor common to all forms of diabetes is the impaired ability to regulate blood glucose levels. This is primarily due to the body's inability to produce or effectively utilize insulin, a hormone produced by the pancreas that facilitates the entry of glucose into cells. The symptoms of diabetes can be diverse and may vary depending on the individual's condition. Common symptoms include increased thirst, fatigue, weight loss, genital issues, delayed wound healing, and blurred vision. Early diagnosis and treatment are essential to prevent complications associated with diabetes. Diagnosis typically involves a blood test, although some cases may go undiagnosed if symptoms are not apparent. Effective management of diabetes entails maintaining blood sugar levels within a targeted range through a combination of regular physical activity, healthy eating, and routine health checks. Some individuals may require insulin or other medications to regulate their condition. The journey of managing diabetes can be challenging, but numerous resources are available to support those living with the condition. This includes guidance on nutrition, emotional support, and advice on navigating everyday situations like driving. Managing Diabetes: Understanding Complications and Prevention Strategies Diabetes can affect almost every part of your body, from the brain to the feet, causing significant damage to organs like the heart, eyes, kidneys, and feet. However, with proper treatment and care, individuals can lead healthy lives. The risk of complications is reduced when one receives effective management of diabetes. Learning more about various types of complications and how to lower the risk of developing them is essential. Certain medical conditions, such as polycystic ovary syndrome (PCOS), increase the likelihood of developing diabetes. Additionally, several other conditions are linked to diabetes and should be recognized. Some individuals may have elevated blood sugar levels, but not high enough to be diagnosed with type 2 diabetes. This condition is known as prediabetes, and it poses a risk for developing type 2 diabetes. More information about prediabetes and strategies to reduce the risk of type 2 diabetes can be found here. A subset of people with type 2 diabetes may achieve remission by putting their diabetes into remission. This means that blood sugar levels remain healthy without medication, leading to a life-changing outcome for many individuals. Guidance and advice on diabetes remission have been compiled for those seeking more information. World-class research into diabetes has been funded over the past 80 years, enabling scientists to develop innovative solutions to improve the lives of millions living with the condition.