Postprandial Glucose Normal Range

Blood sugar level However, shortly after eating, the blood glucose level may rise, in non-diabetics The blood sugar level, blood sugar concentration, blood glucose level, or glycemia is the measure of glucose concentrated in the blood. carbohydrate load, human blood glucose levels tend to remain within the normal range. The body tightly regulates blood glucose levels as a part of metabolic homeostasis 72fd0e52ca

The following symptoms may be associated with acute or chronic hyperglycemia, with the first three composing the classic hyperglycemic triad: 72fd0e52ca == Testing methods == 72fd0e52ca Hyperinsulinism due to reduced insulin sensitivity is usually asymptomatic. In contrast, hyperinsulinemic hypoglycemia can produce any of the entire range of hypoglycemic symptoms, from shakiness and weakness, to seizures or coma. 72fd0e52ca While there are numerous theories surrounding this behavior, such as decreased blood flow to the brain, neurohormonal modulation of sleep through digestive coupled signaling, or vagal stimulation, very few have been explicitly tested. To date, human studies have loosely examined the behavioral characteristics of postprandial sleep, demonstrating potential shifts in EEG spectra and self-reported sleepiness. To date, the only clear animal models for examining the genetic and neuronal basis for this behavior are the fruit fly, the mouse, and the nematode Caenorhabditis elegans. 72fd0e52ca The condition is related to homeostatic systems used by the body to control the blood sugar level. It is described as a sense of tiredness, lethargy, irritation, or hangover, although the effects can be lessened if a lot of physical activity is undertaken in the first few hours after food consumption. 72fd0e52ca

Ambulatory glucose profile Since then, IDC has built the AGP into the internationally recognized standard for glucose pattern reporting. First developed by Drs. AGP provides both graphic and quantitative characterizations of daily glucose patterns. would overcome the episodic nature of SMBG, overnight glucose values, postprandial values and glucose levels during and after activity would be instantly Ambulatory glucose profile (AGP) is a single-page, standardized report for interpreting a patient's daily glucose and insulin patterns. The first version included a glucose median and inter-quartile ranges graphed as a 24-hour day. Mazze brought the original AGP to the International Diabetes Center (IDC) in the late 1980s. Roger Mazze and David Rodbard, with colleagues at the Albert Einstein College of Medicine in 1987, AGP was initially used for the representation of episodic self-monitored blood glucose (SMBG). Dr 72fd0e52ca

In 1988 the technology laboratory moved to the International Diabetes Center at Park Nicollet (IDC) in Minnesota... 72fd0e52ca == Signs and symptoms == 72fd0e52ca The exact cause of postprandial somnolence is unknown, but there are some scientific hypotheses: 72fd0e52ca For a 70 kg (154 lb) human, approximately four grams of dissolved glucose (also called "blood glucose") is maintained in the blood plasma at all times. Glucose that is not circulating in the blood is stored in skeletal muscle and liver cells in the form of glycogen; in fasting individuals, blood glucose is maintained at a constant level by releasing just enough glucose from these glycogen stores in the liver and skeletal muscle in order to maintain homeostasis. Glucose can be transported from the intestines or liver to other tissues in the body via the bloodstream. Cellular glucose uptake is primarily regulated by insulin, a hormone produced in the pancreas. Once inside the cell, the glucose can now act as an energy source as it undergoes the process of glycolysis. 72fd0e52ca

Hyperinsulinism Normal insulin secretion and blood levels are closely related to the level of glucose in Hyperinsulinism refers to an above normal level of insulin in the blood of a person or animal. above normal level of insulin in the blood of a person or animal. Hyperinsulinism can be associated with several types of medical problems, which can be roughly divided into two broad and largely non-overlapping categories: those tending toward reduced sensitivity to insulin and high blood glucose levels (hyperglycemia), and those tending toward excessive insulin secretion and low glucose levels (hypoglycemia). Normal insulin secretion and blood levels are closely related to the level of glucose in the blood, so that a given level of insulin can be normal for one blood glucose level but low or high for another 72fd0e52ca

== A transition to continuous glucose monitoring (CGM) == 72fd0e52ca The alleged mechanism for the feeling of a crash is correlated with an abnormally rapid rise in blood glucose after eating. This normally leads to insulin secretion (known as an insulin spike), which in turn initiates rapid glucose uptake by tissues, either storing it as glycogen or fat, or using it for energy production. The consequent fall in blood glucose is indicated as the reason for the "sugar crash". Another cause might be hysteresis effect of insulin action, i.e., the effect of insulin is still prominent even if both plasma glucose and insulin levels were already low, causing a... 72fd0e52ca In 1997, after reviewing 33 clinical studies performed over the previous decades, the FDA approved the claim that intake of at least 3 g of β-glucan from oats per day "as part of a diet low in saturated... 72fd0e52ca Hyperglycemia may be asymptomatic. Blood glucose levels can rise above normal and cause pathological and functional changes for significant periods without producing any permanent effects or symptoms. The degree of hyperglycemia can change over time depending on the metabolic cause, for example, impaired glucose tolerance or fasting glucose, and it can depend on treatment. 72fd0e52ca The most common clinical history in patients with glycogen storage disease type 0 (GSD-0) is that of an infant or child with symptomatic hypoglycemia or seizures that occur before breakfast or after an inadvertent fast. In affected infants, this event typically begins after they outgrow their nighttime feeds. In children, this event may occur during acute GI illness or periods of poor enteral intake. 72fd0e52ca In 1981, the idea of classifying carbohydrates according to their Glycemic Index was first published. Since then, many studies have been undertaken to determine the impact of altering the blood glucose-raising potential (glycemic challenge) of the diet on a wide range of short- and long-term health outcomes. However, evaluating the impact of a single dietary change on... 72fd0e52ca

Postprandial somnolence elegans. The exact cause of postprandial somnolence is unknown, but there are some scientific hypotheses: Increases in glucose concentration excite and induce Postprandial somnolence (colloquially known as food coma or after-meal dip) is a benign state of drowsiness or lassitude following a meal, a general state of sleepiness and low energy related to activation of the parasympathetic nervous system in response to mass in the gastrointestinal tract 72fd0e52ca

== History == 72fd0e52ca == Signs and symptoms == 72fd0e52ca == Physiology == 72fd0e52ca In humans, properly maintained glucose levels are necessary for normal function in a number of tissues, including the human brain, which consumes approximately 60% of blood glucose in fasting, sedentary individuals... 72fd0e52ca

Oat beta-glucan In the diet, β-glucans are a source of soluble, fermentable Oat β-glucans are water-soluble mixed-linkage β-glucans derived from the endosperm of oat kernels known for their dietary contribution as components of soluble fiber. hypoglycemic effect and lowered cholesterol levels, and a decrease in postprandial blood glucose levels. Due to their property to lower serum total cholesterol and low-density lipoprotein cholesterol, and potentially reduce the risk of cardiovascular diseases, oat β-glucans have been assigned a qualified health claim by the European Food Safety Authority and the US Food and Drug Administration 72fd0e52ca

Glucose test (FBS), fasting plasma glucose (FPG): 10–16 hours after eating glucose tolerance test: continuous testing postprandial glucose test (PC): 2 hours after Many types of glucose tests exist and they can be used to estimate blood sugar levels at a given time or, over a longer period of time, to obtain average levels or to see how fast the body is able to normalize changed glucose levels. In healthy people, these levels quickly return to normal via increased cellular glucose uptake which is primarily mediated by increase in blood insulin levels. Eating food for example leads to elevated blood sugar levels 72fd0e52ca

Tests that can be performed at home are used in blood glucose monitoring for illnesses that have already been diagnosed medically so that these illnesses can be maintained via medication and meal timing. Some... 72fd0e52ca Several tools have been developed to help quantify and communicate the effect of food on glycemic response. These include glycemic index (GI), glycemic load (GL) and glycemic glucose equivalents (GGE). A comparative glycemic response can also be determined, which compares the impact on blood glucose of one food to another based upon their total carbohydrate or total quantity. 72fd0e52ca CaptūrAGP is a registered trademark of the International Diabetes Center. The AGP, as it is known in the diabetes community, now includes several additional sections: glucose statistics, glucose profile graph, and either daily glucose pattern calendar images or insulin dosage graphs. 72fd0e52ca

Hyperglycemia 9 mmol/L (125 mg/dL) after fasting for 8 hours or 10 mmol/L (180 mg/dL) 2 hours after eating. Postprandial hyperglycemia (PPHG) is abnormal blood sugar elevation after eating (postprandial means after a meal). sugar level to below the normal range prompts a hunger response. [citation needed] Polydipsia and polyuria occur when blood glucose levels rise high enough Hyperglycemia is an unusually high amount of glucose in the blood. It is defined as blood glucose level exceeding 6 72fd0e52ca

Mild hypoglycemic episodes may be clinically... 72fd0e52ca

Reactive hypoglycemia It might be an "adrenergic postprandial syndrome" — blood glucose levels are normal, but the symptoms are Reactive hypoglycemia, postprandial hypoglycemia, or sugar crash is symptomatic hypoglycemia occurring within four hours after a high-carbohydrate meal in people with and without diabetes. The term is not necessarily a diagnosis since it requires an evaluation to determine the cause of the hypoglycemia. is called idiopathic postprandial syndrome 72fd0e52ca

== Signs and symptoms == 72fd0e52ca

Glycogen storage disease type 0 Although glycogen synthase deficiency does not result in storage of extra glycogen in the liver, it is often classified as a glycogen storage disease because it is another defect of glycogen storage and can cause similar problems. There are two isoforms (types) of glycogen synthase enzyme; GSY1 in muscle and GSY2 in the liver, each with a corresponding form of the disease. Conversely, feeding in these patients results in hyperglycemia and hyperlactatemia. Mutations in the liver isoform (GSY2), causes fasting hypoglycemia, high blood ketones, increased free fatty acids and low levels of alanine and lactate. postprandial hyperglycemia and glucosuria, in addition to increased blood lactate levels, because glycogen synthesis is limited, and excess glucose is Glycogen storage disease type 0 is a disease characterized by a deficiency in the glycogen synthase enzyme (GSY) 72fd0e52ca

Glycemic It is normal for blood glucose and insulin levels to rise after eating and The glycemic response (or glycaemic response) to a food or meal is the effect that food or meal has on blood sugar (glucose) levels after consumption. It is normal for blood glucose and insulin levels to rise after eating and then return to fasting levels over a short period of time. Glycemic management refers to the selection of foods to manage blood sugar levels. effect that food or meal has on blood sugar (glucose) levels after consumption. This is particularly so after consumption of meals rich in certain carbohydrates 72fd0e52ca

Glucose tests can reveal temporary/long-term hyperglycemia or hypoglycemia. These conditions may not have obvious symptoms and can damage organs in the long-term. Abnormally high/low levels, slow return to normal levels from either of these conditions and/or inability to normalize blood sugar levels means that the person being tested probably has some kind of medical condition like type 2 diabetes which is caused by cellular insensitivity to insulin. Glucose tests are thus often used to diagnose such conditions. 72fd0e52ca Oat products have been used for centuries for medicinal and cosmetic purposes; however, the specific role of β-glucan was not explored until the 20th century. β-glucans were first discovered in lichens, and shortly thereafter in barley. After joining Agriculture and Agri-Food Canada in 1969, Peter J Wood played an instrumental role in isolating and characterizing the structure and bioactive properties of oat β-glucan. A public interest in oat β-glucan arose after its cholesterol lowering effect was reported in 1984. 72fd0e52ca

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