

# High levels of albumin is a common complication of both type 1 and type 2 diabetes

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## Description

Glycated albumin is albumin that has been glycated (bonded to sugars). Albumin is the most common type of protein in the blood (approximately 80% of circulating protein) and is replaced by the body approximately every 20-25 days. Excessive glycation of albumin causes irreversible damage to organs and their vasculature. Although very low levels of protein in the urine may be normal, elevated albumin levels are an indicator of several indicators of chronic kidney disease (CKD), a common complication of type 1 and type 2 diabetes. Glycated albumin (GA) is a medium-term glycaemic control marker in diabetes and may be more sensitive to changes in plasma glucose than hemoglobin A1c. We investigated the position and number of fructosyl groups bound to albumin and which saccharification sites were measured by the enzymatic method of GA. Glycation involves the non-enzymatic addition of reducing sugars and/or their reactive breakdown products to amine groups of proteins. This process is facilitated by the presence of elevated blood glucose levels in diabetes and occurs with several proteins, including human serum albumin (HSA).

A glycated haemoglobin test measures the amount of glucose (sugar) in the blood. This test is often called A1c or HbA1c. This is a simple blood test used for: Prediabetes - Recognize and diagnose high sugar levels that can lead to diabetes, heart disease and stroke.

The A1c test is based on hemoglobin. Haemoglobin is the part of red blood cells that carries oxygen around the body. When there is glucose in the blood, it is saccharified (attached) to haemoglobin. The more glucose in the blood, the more sticky. And it can stay there for about three months, or as long as an average red blood cell lives. The A1c test measures the average amount of glucose bound to haemoglobin

over time. Therefore, the A1c test provides more information about blood sugar over a longer period of time than home monitoring.

If you have diabetes, you should take the A1c test 2-4 times a year to see how he is coping. Your health care team will recommend the exact frequency with which you should be tested. If you have not been diagnosed with diabetes, your healthcare provider may order an A1c test if you have symptoms of the condition. Some health care providers' offices have her A1c device that takes a small amount of blood from her fingertip (similar to a home blood sugar test) and provides results in just minutes. Other health care providers may order her A1c as a laboratory test at a clinic, hospital, or laboratory. Usually the test takes him less than 5 minutes and it often takes him a day or he two days to get the results. Blood tests are very common and carry no significant risks. You may feel a little pain or a small bruise when the needle is inserted.

There are different types of haemoglobin. The most common is haemoglobin A. However, there are different types of haemoglobin, called haemoglobin variants, depending on race and ethnicity. Haemoglobin variants do not increase diabetes risk, but may affect A1c outcome. Laboratories have several options for performing A1c testing using blood containing haemoglobin variants.

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## Conflict of interest

The author has nothing to disclose and also state no conflict of interest in the submission of this manuscript.

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