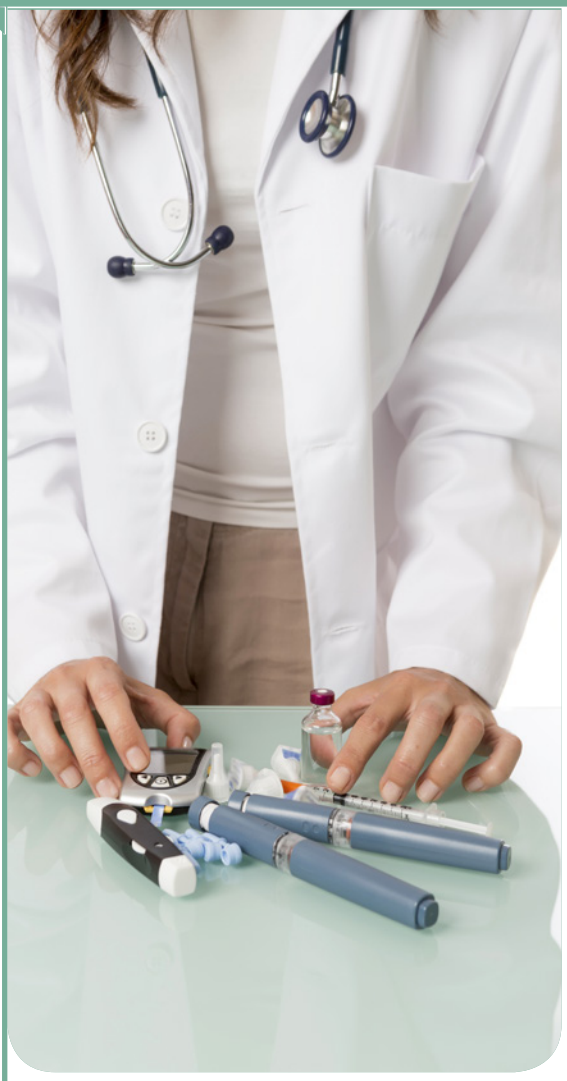
Sickle Cell Trait and Diabetes Tests: What Every Healthcare Provider Should Know



According to the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), the hemoglobin A1C assay may be unreliable for diagnosing and monitoring diabetes and prediabetes in individuals with sickle cell trait (SCT) or other hemoglobinopathies. In order to provide the best possible care for your patients, it is important to determine their SCT status and know whether the A1C test you normally use should be replaced or supplemented with a different test.

Can the hemoglobin A1C test identify SCT?

No. The hemoglobin A1C test is not designed to look for SCT, but some test methods for hemoglobin A1C might detect a "variant hemoglobin," which could in some cases be sickle hemoglobin. However, this result should not be considered a diagnostic test for SCT. SCT should be diagnosed only by using a test approved for hemoglobin identification.

Can an A1C test be used to monitor glycemic control in a person with SCT?

In persons with SCT, hemoglobin A1C might be falsely low or high when certain test methods are used to measure hemoglobin A1C. Therefore, for persons with SCT, a normal hemoglobin A1C might not provide assurance that diabetes is absent. Healthcare providers who obtain hemoglobin A1C tests on their patients with SCT should determine from the laboratory which test method was used in order to have confidence in their patients' hemoglobin A1C results. A list of the common methods used to measure hemoglobin A1C and whether they are reliable for persons with SCT (i.e., don't show interference from HbS) are found here (**http://www.ngsp.org/interf.asp**).

Where can I go to learn which tests to use to get accurate results for people with SCT or other hemoglobinopathies?

To learn which tests to use to get accurate glycemic control results please visit the website of either the National Glycohemoglobin Standardization Program (NGSP) (**http://www.ngsp.org/**) or the NIDDK (**http://www2.niddk.nih.gov/** or **http://www.diabetes.niddk.nih.gov/dm/pubs/hemovari-a1c/**).

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