AMERICAN ASSOCIATION OF CLINICAL ENDOCRINOLOGISTS/ AMERICAN COLLEGE OF ENDOCRINOLOGY STATEMENT ON THE USE OF HEMOGLOBIN A1c FOR THE DIAGNOSIS OF DIABETES

American Association of Clinical Endocrinologists Board of Directors and American College of Endocrinologists Board of Trustees

Abbreviations:
AACE = American Association of Clinical Endocrinologists; **A1C** = hemoglobin A1c; **ACE** = American College of Endocrinology

The American Association of Clinical Endocrinologists (AACE) and the American College of Endocrinology (ACE) have evaluated the role of hemoglobin A1c (A1C) for the diagnosis of type 2 diabetes (diabetes). The American Diabetes Association 2010 Clinical Practice Recommendations endorse the use of A1C of 6.5% or higher as the primary criterion for the diagnosis of diabetes (1).

The rationale for the use of A1C for diagnosis of diabetes is based on data showing that retinopathy occurs in individuals with an A1C ≥6.5% at approximately the same rate as in individuals who are diagnosed on the basis of the current fasting and postchallenge glucose criteria. A 10% risk for retinopathy has historically served as the benchmark for diagnosing the presence of diabetes (1).

The use of A1C for the diagnosis of diabetes has several advantages. Such testing does not require the patient to be fasting, can be done at any time that a clinical visit is scheduled, is simpler to perform than the 2-hour oral glucose tolerance test, and is less dependent on the patient's health status at the time a blood sample is obtained (1). Use of A1C ≥6.5%, however, identifies approximately 20% fewer people with diabetes than do existing criteria based on fasting plasma glucose and oral glucose tolerance tests. AACE/ACE support the recommendations of the American Diabetes Association for use of a confirmed A1C as an available option to diagnose diabetes, with the following recommendations (2,3):

1. A1C should be considered an additional optional diagnostic criterion, not the primary criterion for diagnosis of diabetes.
2. AACE/ACE suggest using traditional glucose criteria for diagnosis of diabetes when feasible.
3. A1C is not recommended for diagnosing type 1 diabetes.
4. A1C is not recommended for diagnosing gestational diabetes.
5. A1C may be misleading in several ethnic populations (for example, African American patients).
6. A1C may be misleading in the setting of various hemoglobinopathies, iron deficiency, hemolytic anemias, thalassemias, spherocytosis, and severe hepatic and renal disease.
7. AACE/ACE endorse the use of only standardized, validated assays for A1C testing.

AACE/ACE do not endorse A1C criteria for prediabetes or for those patients at risk for diabetes. AACE/ACE do support an A1C of 5.5% to 6.4% as a screening test for prediabetes if it leads to measurement of a fasting glucose level or performance of a glucose tolerance test for diagnosis.

This AACE/ACE position statement is based on data available as of February 2010 and may be amended as new data become available.

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DISCLOSURE

The authors have no multiplicity of interest to disclose.

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