



IMPACT OF HEMOGLOBIN VARIANTS ON HB A_{1c} INTERPRETATION: DO WE ASSUME TOO MUCH?

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TEST ANSWER FORM **CE**

CE Test on **IMPACT OF HEMOGLOBIN VARIANTS ON HB A_{1c} INTERPRETATION: DO WE ASSUME TOO MUCH?** June 2012

PLUS Glucose Meters: Where are they now? Where are they heading?
(This form may be photocopied; it is no longer valid for CEUs after December 31, 2013)

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1.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Circles must be filled in, or test will not be graded.

Shade circles like this: ☒ Not like this: ☐

P=Poor; E=Excellent

1. To what extent did the article focus on or clarify the objectives?

P ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 E

2. To what extent was the article well-organized and readable?

P ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 E

3. How will you use the CE units?

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☐ recertification
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CE QUESTIONS

- What percent of the world's population carries a hemoglobin variant?
 - 2%
 - 7%
 - 10%
 - 15%
- The most abundant form of hemoglobin is comprised of
 - 2 alpha and 2 gamma chains.
 - 2 alpha and 2 epsilon chains.
 - 2 alpha and 2 beta chains.
 - 2 zeta and 2 epsilon chains.
- The most common hemoglobin variants are
 - Hb S, E, C, D.
 - Hb S and C.
 - Hb A and S.
 - Hb S, C, E.
- A hemoglobin variant in the homozygous state is considered the trait; in the heterozygous form, it is considered the disease.
 - True
 - False
- Glycated hemoglobin is a measure of what substance during the RBC lifespan?
 - protein
 - oxygen
 - glucose
 - iron
- Some hemoglobin variants shorten the lifespan of the RBC.
 - True
 - False
- Name the pilot program whose goal is to gather data to determine prevalence of hemoglobinopathies.
 - CDC
 - RuSH
 - ADA
 - NIH
- The current most widely used index of average glycemia is
 - random glucose.
 - fasting glucose.
 - GTT.
 - Hb A_{1c}.
- Diabetes is a concern only for North America and Europe.
 - True
 - False
- Glycated hemoglobin levels may be determined by which method?
 - affinity chromatography
 - electrochemical analysis
 - colorimetric photometry
 - enzymatic absorption
- A country with a high prevalence of diabetes and hemoglobin variants is
 - Canada.
 - Australia.
 - India.
 - China.
- Hemoglobin S results from what substitution on the beta chain?
 - valine for glutamic acid
 - lysine for glutamic acid
 - leucine for valine
 - tyrosine for leucine
- The prevalence of Hemoglobin E is 30% in which part of the world?
 - North America
 - Africa
 - Southeast Asia
 - Middle East
- According to the data collected, the hemoglobin variant with the shortest RBC lifespan is
 - Hb A.
 - Hb C.
 - Hb D.
 - Hb E.
- Factors affecting the interpretation of Hb A_{1c} when hemoglobin variants are present include analytical interferences and RBC survival rate.
 - True
 - False
- Maintaining normal Hb A_{1c} levels in a diabetic patient can
 - not affect diabetic complications.
 - speed up diabetic complications.
 - slow down diabetic complications.
 - none of the above
- It is not necessary to consider methodology for measuring Hb A_{1c} in areas where hemoglobin variants are present.
 - True
 - False
- All hemoglobin variants are life-threatening.
 - True
 - False
- The formation of Hb A_{1c} occurs in the presence of circulating
 - free sugars.
 - free proteins.
 - globin chains.
 - enzymes.
- Interference factors associated with use of glucose meters include
 - improper sampling.
 - increased humidity.
 - maltose.
 - all of the above.