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Client Update Effective December 9, 2009

ESTIMATED AVERAGE GLUCOSE (eAG) To be reported with Hemoglobin A1c (A1c) results

Based on the recommendations of the American Diabetes Association, Salem Health Laboratories will report eAG with A1c results using the formula from the A1c-Derived Average Glucose (ADAG) study. This study involved 507 subjects with Type 1, Type 2 or no diabetes using 2700 glucose measurements per subject and monthly A1c measurements. It has proven to be a more reliable formula than those from previous studies that were more limited. International Diabetes Foundation, American Association of Clinical Chemistry, and the International Federation of Clinical Chemistry also endorse the use of eAG.

The benefit to the clinician is the ability to discuss glycemic control in units that are more meaningful to the patient and may lead to improved management of diabetes. eAG values will most likely be higher than the average glucose a patient may see on their meter. eAG reflects average glucose spanning all 24 hours instead of just prior to meals, as often reflected on the meter. Children and pregnant women were excluded from this study. Some ethnic groups may have been under-represented. Further studies may be warranted in these population groups.

Formula: $28.7 \times A1c - 46.7 = eAG$

<u>A1c%</u>	<u>eAG mg/dl</u>	<u>A1c</u>	<u>eAG mg/dl</u>
6	126	8.5	197
6.5	140	9	212
7	154	9.5	226
7.5	169	10.	240
8	183		

New Non-Diabetic A1c Reference Range

New Reference Range:

Non-Diabetic 4.0% - 6.0%

ADA-defined range for DCCT based assay

Old Reference Range:

Non-Diabetic 4.1% - 6.5%

NHANES III

As a medical laboratory, we strive to be the innovative leader of excellence in the delivery of timely and accurate information to the community we serve.

Our culture is one that fosters personal accountability, individual and collaborative ideas, and stewardship of resources.

Reference interval is for non-pregnant adults. Decreased red cell survival rates will influence A1c results as well as recent transfusions, anemia, uremia and some hemoglobin variants.

