

Legacy Laboratory Services

Legacy LabAlert

An Important Update from Legacy Laboratory Services

April 2021

UPDATE: Changes to Glucose Reference Intervals

Effective April 14, 2021, glucose reference intervals for patients greater than or equal to one month old will be updated to match fasting intervals recommended by the American Diabetes Association (Table 1).¹ The changes will affect the following glucose tests: Glucose (GLU LVL), Glucose Fasting (GLU FAST), Glucose POC, Glucose POCT, and Glucose POC-T. All panels containing these tests will also be updated.

LLS currently uses the glucose reference intervals provided in Tietz Fundamentals of Clinical Chemistry (Table 1).² Occasionally, the upper limit of the reference interval may miss flagging elevated glucose values that would fall into the category of impaired fasting glucose (IFG) based on American Diabetes Association (ADA) guidelines.¹ A medical decision point for diagnosing diabetes does not always correlate with the intervals seen in patients greater than 60 years old, as the natural ability to metabolize glucose shifts with age.² Based on provider feedback, LLS decided to adjust the reference intervals in order to flag any result greater than 99 mg/dL (Table 1).

TABLE 1: COMPARISON OF GLUCOSE REFERENCE INTERVALS –

Red font indicates reference interval changes.

AGE	CURRENT LLS REFERENCE INTERVALS (mg/dL)	NEW LLS REFERENCE INTERVALS (mg/dL)
	FASTING AND RANDOM	FASTING AND RANDOM
<1 day	40 - 60	40 - 60
1 - 30 days	50 - 80	50 - 80
1 - 11 months	60 - 100	60 - 99
1 - 59 years	74 - 100	74 - 99
60 - 89 years	82 - 115	82 - 99
≥90 years	75 - 121	75 - 99
Interpretive Statement (All results)	None	A normal fasting glucose concentration is less than 100 mg/dL. An impaired fasting glucose concentration is 100-125 mg/dL. A provisional diagnosis of diabetes mellitus can be made when a fasting glucose concentration is greater than 125 mg/dL.

REFERENCES:

- Standards of Care 2. Classification and Diagnosis of Diabetes: Standards of Medical Care in Diabetes – 2021, American Diabetes Association, Diabetes Care 2021 Jan; 44(Supplement 1): S15-S33. <https://doi.org/10.2337/dc21-S002>.
- Tietz Fundamentals of Clinical Chemistry, 6th edition, Saunders Co. 2008, p 849.

For additional information, please contact your account representative, client services or consult our website:

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