

Metabolic Dysglycemia Profile

Great Smokies Diagnostic LaboratorySM

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www.gsdl.com

Patient: **SAMPLE
PATIENT**

Order Number:

Completed:

Age: 77

Received:

Sex: F

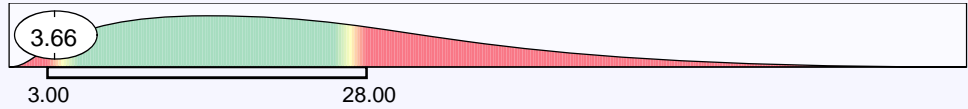
Collected:

MRN:

Glucose and Insulin

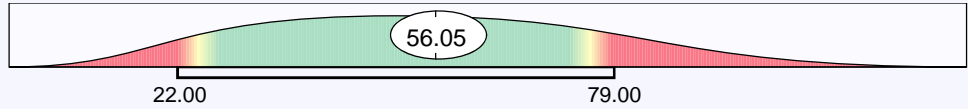
Insulin (fasting)

Ref Range
uIU/mL



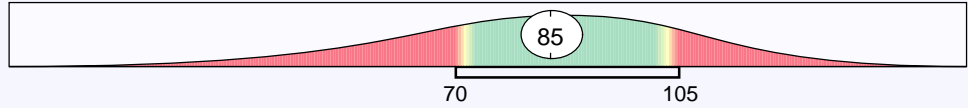
Insulin (2 hour)

Ref Range
uIU/mL



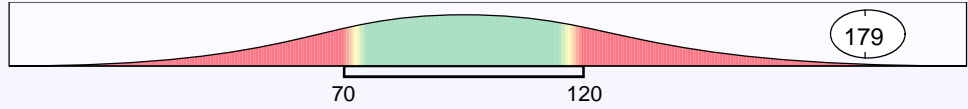
Glucose (fasting)

Ref Range
mg/dL



Glucose (2 hour)

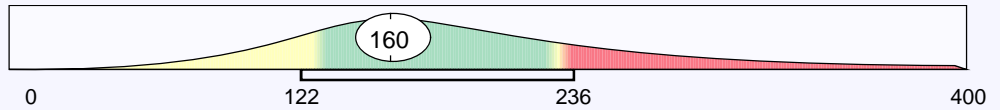
Ref Range
mg/dL



Glycosylation

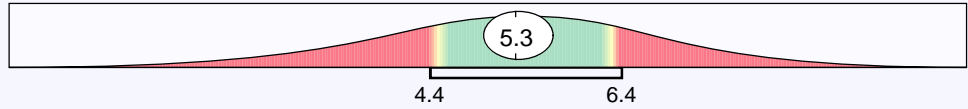
Fructosamine

Ref Range
umol/L



Hgb A1c

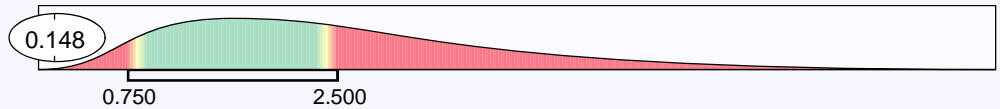
Ref Range
% A1c



Salivary DHEA and Cortisol

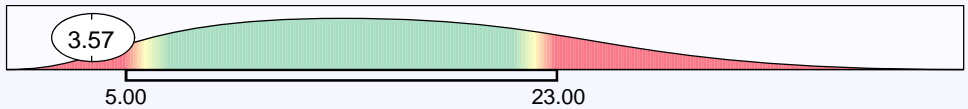
DHEA 8 AM

Ref Range
nmol/L



Cortisol 8 AM

Ref Range
nmol/L



IGF-1 (Somatomedin C)

Inside Range

Outside Range

Reference Range

IGF-1 (Somatomedin C)

127

78-258 ng/mL

This test has been developed and its performance characteristics determined by GSDL, Inc. It has not been cleared or approved by the U.S. Food and Drug Administration.

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Commentary

The 2-hr. post-challenge insulin was within the reference range. This is a good indicator of relatively normal insulin production post glucose loading. There may be circumstances in which insulin levels increase AFTER the 2-hour time period. This usually is accompanied by elevated 2 hr post-challenge glucose levels and reflects slow absorption of the glucose or some degree of insulin resistance.

The fasting glucose is within normal range. While this is a positive indicator, assessment of the 2-hour post-challenge glucose along with insulin, Hb A1C, and fructosamine will provide a comprehensive picture of blood glucose control over time.

2-hour post-challenge glucose in this range may indicate impaired glucose tolerance according to the W.H.O. With this documented assessment of the metabolic dysfunction, further evaluation and treatment is strongly indicated. Particularly important are the insulin levels and the amount of glycation products present. These can provide indications of the duration of the dysfunction and to what extent insulin resistance participates in the process.

The serum fructosamine is within the normal range which indicates that the average blood sugar over the previous 7-21 days has been relatively stable and without significant, sustained elevation.

These normal levels of glycated hemoglobin reflect a normal average blood sugar over the previous 21-60 days. HbA1C in the normal range also reflects minimal tendency for the formation of Advanced Glycosylated Endproducts (AGE's) which, if excessive, can lead to degenerative changes in vascular, nerve and connective tissue structures.

Depressed levels of DHEA have been linked with decreased muscle mass, chronic fatigue, decreased immune surveillance, and other chronic diseases. Elevated insulin levels have also been associated with decreased DHEA levels, therefore checking the fasting and 2 hour post-challenge insulin levels along with the IGF-1 may clarify this result as due to hyperinsulinemia or other hormonal processes.

Deficient cortisol levels may be due to adrenal fatigue, sluggish enzyme activity (21-hydroxylase or 11-Beta hydroxylase) or an excess of cortisol binding proteins. A diurnal cycle is evident with cortisol, so if the patient is on an altered day-night cycle, this could be a reason for a low morning cortisol as well.

IGF-1 levels for this patient are in the normal range for age & gender. IGF-1 levels are dependent upon adequate growth hormone output, proper concentration of the binding proteins and balanced levels of other hormones such as insulin, cortisol and DHEA.