

Client Notice:**Growth Hormone Suppression Test now available at LifeLabs****Summary**

Growth hormone (GH) suppression test will be available at LifeLabs effective October 4th, 2021, as an aid in the diagnosis of growth hormone excess. Health Care Providers can order the GH suppression test as a single test, which replaces the previously offered timed collection of growth hormone. The suppression test includes the measurement of glucose and growth hormone in a fasting serum sample, followed by the measurement of glucose and growth hormone in two additional samples collected 1 hour and 2 hours post the administration of a 75 g glucose drink. This test and its reporting are consistent with the clinical practice guidelines provided by the Endocrine Society.¹ This new offer does not impact the currently available IGF-1 and random growth hormone tests.

Clinical relevance:

Biochemical diagnosis of GH excess starts with the measurement of IGF-1. This is the recommended first line test and may be used to rule out acromegaly. For elevated or equivocal measurements of IGF-1, a growth hormone suppression test is recommended for confirmation of diagnosis. A nadir serum GH level <1 ug/L within 2 hours after 75 g oral glucose usually excludes the diagnosis of GH excess.¹

The measurement of a single random GH is not recommended due to the pulsatile nature of GH secretion.

What this means for you?

Following the Endocrine Society clinical practice guidelines, LifeLabs now offers the growth hormone suppression test. This replaces the previously offered timed collections of growth hormone. The test includes the following: measurement of GH and glucose in a fasting serum sample, followed by the administration of a 75 g glucose drink. Subsequently, GH and glucose measurements are made on the two additional serum samples collected 1 hour and 2 hours post glucose drink ingestion. The result report includes the required measurements along with an interpretive guide for glucose (for the diagnosis of diabetes as outlined by Diabetes Canada guidelines²) and an interpretive statement for growth hormone (based on the Endocrine Society Guidelines for acromegaly¹). The latter indicates the following:

“Hyperglycemia due to a 75 g dose of glucose suppresses growth hormone to <1 ug/L within 2 hours of glucose administration. Lack of GH suppression is consistent with a diagnosis of GH excess.”

No reference intervals will be provided for the growth hormone test results due to its pulsatile nature. A random growth hormone is still available to order if required.

Please see Test Information Directory for further details on ordering and reporting of GH suppression test:

https://tests.lifelabs.com/Chemistry/G/GROWTH_HORMONE_SUPPRESSION_TEST.aspx?s=1

We welcome your feedback!

Uvaraj Uddayasankar PhD FCACB

Clinical Biochemist

LifeLabs | 100 International Blvd. | Toronto, ON M9W 6J6

T 416-675-4530 Ext. 42211 | C 647-206-8463

E Uvaraj.uddayasankar@LifeLabs.com

References:

- 1) Katznelson, Laurence, Edward R. Laws Jr, Shlomo Melmed, Mark E. Molitch, Mohammad Hassan Murad, Andrea Utz, and John AH Wass. "Acromegaly: an endocrine society clinical practice guideline." *The Journal of Clinical Endocrinology & Metabolism* 99, no. 11 (2014): 3933-3951.
- 2) Punthakee, Zubin, Ronald Goldenberg, and Pamela Katz. "Definition, classification and diagnosis of diabetes, prediabetes and metabolic syndrome." *Canadian journal of diabetes* 42 (2018): S10-S15.