Journal of
Nutrition and Dietetic Practice

COMMENTARY ARTICLE

Using GH-Method: Math-Physical Medicine to Predict Fasting Plasma Glucose

Gerald C Hsu*

eclaire MD Foundation, USA

In 2010, Gerald fasting glucose was 185 mg/dL, daily glucose was 279 mg/dL, and A1C was 10%.

On 11/23/2016, Gerald noticed his Fasting Plasma Glucose (FPG) value was 158 mg/dL. He spent the next four months reading over one hundred papers and articles seeking the cause for his higher FPG. Gerald also examined correlations between FPG and three other possible influential factors, such as PPG, carbs/sugar intake, and exercise, but found their respective correlations were all low [1,2].

On 3/17/2017, he got an idea in his dream and then decided to examine the correlation between FPG and Weight. Based on data from 1/1/2014 to 3/16/2017, he found an 85% correlation between FPG and weight; therefore, he was able to identify Weight as the major cause of FPG.

Furthermore, using 1,825 days data (1/1/2014-12/31/2018), he re-examine the correlation between weight and FPG (Figure 1).

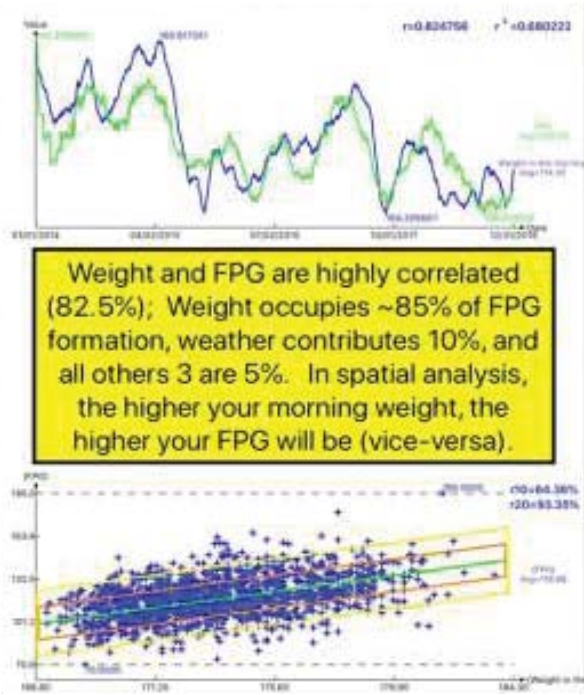

Figure 1: Correlation between Weight and Fasting Plasma Glucose (FPG).

In the time series diagram, there are six high peaks and six low troughs of Weight, and the FPG curve simultaneously followed the Weight curve like its twin. The correlation between Weight and FPG is very high (83%). In the spatial analysis diagram of BMI vs. FPG (without time factor), there is a "quasi-linear" equation existing between two coordinates of Weight and FPG: from point A (167, 100) to point B (184, 146) [3]. The stochastic (random) distribution of these data has 2 concentration bands stretched from the lower left corner toward the upper right corner. The +/- 10% (11.9 mg/dL) band along this linear equation covers 64% of total data and the +/- 20% (23.8mg/dL) band covers 93% of total data. Only the remaining 7% of total data are located outside of these bands which are "noises" created by other factors [4].

Gerald then developed a practical tool to predict each day's FPG value. This FPG prediction tool provides a linear accuracy rate of 99.99% and a correlation of 99.6% between predicted FPG and actual measured FPG (Figure 2). Gerald successfully reduced his averaged FPG to 119 mg/dL (with a weight reduction of 17 lbs).

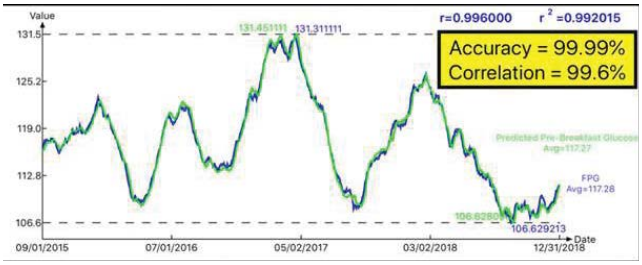

Figure 2: Fasting Plasma Glucose (FPG) prediction tool providing a linear accuracy rate of 99.99% and a correlation of 99.6% between predicted FPG and actual measured FPG.

Correspondence to: Gerald C Hsu, eclaire MD Foundation, USA, Email : g[DOT]hsu[AT]eclairemd[DOT]com, Tel +1-510-331-5000

Received: March 31, 2020; **Accepted:** April 07, 2020; **Published:** April 09, 2020

Reviewed by: Howatson M

References

1. Hsu Gerald C (2018) Using Math-Physical Medicine to Control T2D via Metabolism Monitoring and Glucose Predictions. *Journal of Endocrinology and Diabetes*, 1: 1-6. [View Article]
2. Hsu Gerald C (2018) Using Math-Physical Medicine to Analyze Metabolism and Improve Health Conditions. Video presented at the meeting of the 3rd International Conference on Endocrinology and Metabolic Syndrome 2018, Amsterdam, Netherlands. [View Article]
3. Hsu Gerald C (2018) Using Signal Processing Techniques to Predict PPG for T2D. *Int J Diabetes Metab Disord*, 3: 1-3. [View Article]
4. Hsu, Gerald C (2018) Using Math-Physical Medicine and Artificial Intelligence Technology to Manage Lifestyle and Control Metabolic Conditions of T2D. *International Journal of Diabetes & Its Complications* 2:1-7. [View Article]

Citation: Hsu GC (2020) Using GH-Method: Math-Physical Medicine to Predict Fasting Plasma Glucose. J Nutr Diet Pract 4: 001-002.