

The GH-Method

Health Improvements Using Summation of Metabolism Indexes of Four Different Time Periods in 9-Years (No. 225)

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Abbreviations: MI: metabolism index; GHSU: general health status unit

1. INTRODUCTION

In this research note, the author conducted an in-depth review of his data spanning an eight-year period from 2012 to 2019, with a particular focus on his performance in managing both disease control and lifestyle during four distinct time periods: 2014-2015, 2014-2018, 2015-2019, and 2018-2019.

2. METHODS

In 2014, the author harnessed advanced mathematical and finite-element modeling techniques of engineering to construct a mathematical model encompassing metabolic measurements. This model encompassed four categories related to disease control (outputs) and six categories relating to lifestyle management (inputs). Data collection commenced on 1/1/2012 and, to date, nearly 2 million data points have been amassed. These ten categories, each comprising approximately 500 detailed elements, were amalgamated into two new parameters: the metabolism index (MI), a daily score indicating the body's health status, and the general health status unit (GHSU), representing a 90-day moving average illustrating health trends.

Additionally, a pivotal "break-even line" was identified at 0.735 (73.5%) to demarcate the author's metabolic conditions as either healthy (below 0.735) or unhealthy (above 0.735).

The selection of four specific time periods was based on the following rationales:

Period A (2012-2014): During this period, the author's MI exceeded 73.5%, indicating an unhealthy status from 2012 through mid-2014.

Period B (2014-2019): The author transitioned to a state of healthiness toward the end of 2014, maintaining a MI below 73.5% until 2019.

Period C (2015-2019): He commenced the reduction of his diabetes medications in 2013 and ultimately discontinued them by the end of 2015.

Period D (2018-2019): These two years encompassed a demanding travel schedule, involving attendance at over 60 international medical conferences. His daily life routine, encompassing meals, sleep patterns, and stress levels, experienced disruptions and had implications for his health. Nevertheless, he continued to uphold his control over chronic diseases, just as before.

3. RESULTS

The author's initial research provides an overview of his metabolic conditions over the past eight years (2012-2019), including both the MI and GHSU, along with the specific MI measurement standards pertaining to the four distinct periods mentioned earlier. During the period of 2012-2014, both his MI

and GHSU exceeded 73.5%, indicating an unhealthy state. But, in the 2014-2019 period, they dropped below this threshold, signifying improved health. This significant improvement in his health in 2014 was attributed to his learned knowledge and persistent discipline.

Research tasks 2, 3, 4, and 5 delve into the details of the three primary categories within these four periods:

(1) Chronic disease conditions: This category includes M1 (obesity and weight), M2 (diabetes and glucose), M3 (hypertension and blood pressure), and M4 (hyperlipidemia and lipids).

(2) Lifestyle management details: It encompasses M5 (exercise with a target of 20,000 steps per day), M6 (water consumption at 3,000 cc per day), M7 (sleep comprising 9 elements), M8 (stress involving 34 elements), M9 (food quality and quantity with 22 elements), and M10 (daily life routines deemed crucial for disease control and longevity with 22 elements).

(3) MI and GHSU: Research task 6 presents numerical percentages representing M1 through M10 across these four periods. Notably, the red numbers of Period A (2012-2014) are incomplete due to missing data at the outset of this period. However, all the measured data from the other three periods exhibit a consistent trend of declining values from Periods B through D, indicating health improvements. Smaller numbers are generally associated with better results. For instance, M1 (morning weight) decreased from 183 lbs. (BMI 27.2) to 173 lbs. (BMI 25.5), and M2 (daily averaged glucose) dropped from 131 mg/dL to 116 mg/dL. Other numbers with lower percentages demonstrated improvement.

In the 7th research task, a bar chart visually summarizes the comparison of four disease conditions and six lifestyle management categories across these four periods. Typically, disease control exhibits more pronounced improvements than lifestyle management. Nonetheless, lifestyle management is the "root cause" of metabolic disorders, rendering it more critical but also more challenging to implement and maintain compared to merely addressing disease symptoms. It's vital to reiterate that all data

after 2014 pertains to the "no medications" category (Figures 1–5).

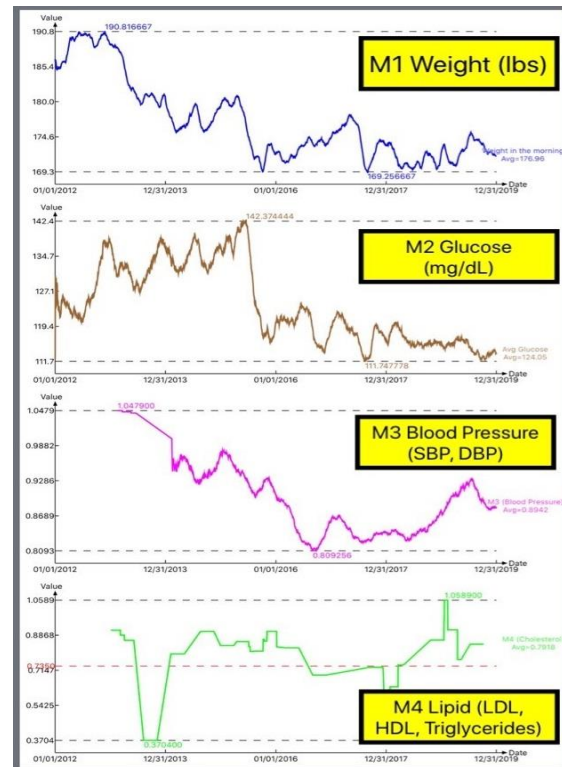


Figure 1: Four body output metabolism index: M1 weight, M2 glucose, M3 blood pressure, M4 lipid (2012-2019).

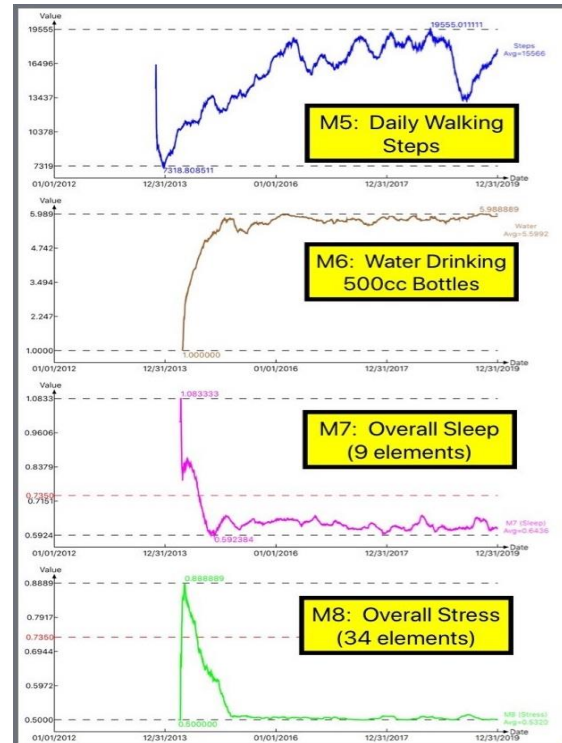


Figure 2: Body input metabolism index: M5 exercise, M6 water, M7 sleep, M8 stress (2012-2019).

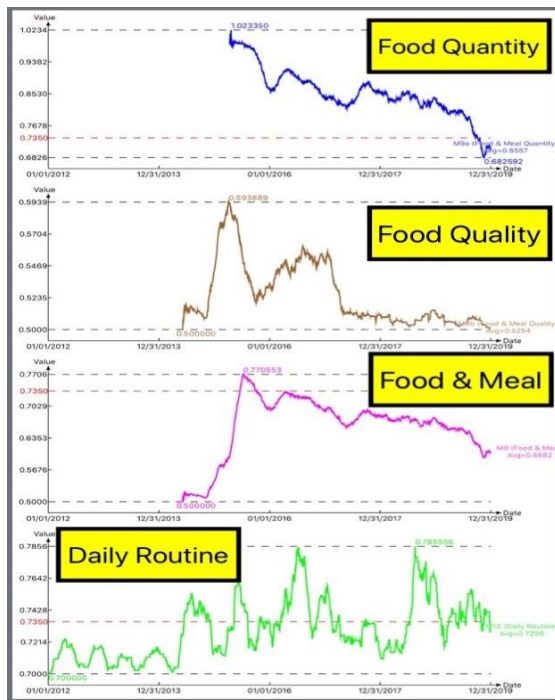


Figure 3: Body input MI: M9a food quantity, M9b food quality, M9 total food & meal, M10 daily routine (2012-2019).

Category	Worst Score	Best Score	Start MI Score	Start Satisfaction	End MI Score	End Satisfaction	Avg MI Score	Avg Satisfaction
Weight (M1)			190.8	112%	169.3	100%	177.0	104%
Glucose (M2)			142.4	119%	111.7	81%	124.1	100%
Blood Pressure (M3)			1.0479	105%	0.8093	81%	0.8942	89%
Lipid (M4)			1.0589	106%	0.3704	37%	0.7916	79%
Walking Steps (M5)	1.5	0.5	7319	113%	19555	52%	15666	72%
Water Bottles (M6)	1.5	0.7	1.0600	167%	5.5689	63%	5.5992	71%
Sleep (M7)	1.5	0.5	1.0833	108%	0.5924	59%	0.6436	64%
Stress (M8)	1.5	0.5	0.8889	89%	0.5371	53%	0.5320	53%
Food & Meal (M9)	1.5	0.5	0.7706	77%	0.5000	50%	0.6582	66%
Food Quantity (M9a)	1.5	0.5	1.0234	102%	0.6826	68%	0.8557	86%
Food Quality (M9b)	1.5	0.5	0.5939	59%	0.5000	50%	0.5144	53%
Daily Routine (M10)	1.5	0.7	0.7856	79%	0.7000	70%	0.7296	73%

Category	Worst Score	Best Score	Best Condition	From 2012, 13, 14 through 2019
Weight (M1)			Weight 170 lbs is 1.0	reduced from 191 lbs to 169 lbs
Glucose (M2)			120 mg/dL is 1.0	reduced from 142 mg/dL to 112 mg/dL
Blood Pressure (M3)			SBP/DBP is 120/80	reduced from 105% peak to 89% avg
Lipid (M4)			HDL/LDL/Trig = 40/130/150	reduced from 106% peak to 79% avg
Walking (M5)	1.5	0.5	20,000 steps / day	increased from 7,319 to 19,555 steps
Water (M6)	1.5	0.7	6 bottles or 3,000 / day	increased from 500 cc to 2,995 cc
Sleep (M7)	1.5	0.5	total of 9 elements	improved from 108% to 59%
Stress (M8)	1.5	0.5	total of 34 elements	improved from 89% to 53%
Food & Meal (M9)	1.5	0.5	50% quantity & 50% quality	no change over 2 different periods
Food Quantity (M9a)	1.5	0.5	normal food portion at 100%	reduced from 102% to 68%
Food Quality (M9b)	1.5	0.5	healthy & balanced meals	High quality meals (53%)
Daily Routine (M10)	1.5	0.7	regular routine life pattern	Maintain a regular life routine at 73%

Figure 4: MI (M1 through M10) satisfaction level (%) table.



Figure 5: Averaged MI (M1 through M10) satisfaction level (%) bar chart.

4. CONCLUSION

The extensive data analysis carried out during these period-based assessments relied on a sophisticated mathematical metabolic model. These analyses effectively illustrate the influence of lifestyle management on chronic disease control.