

Diabetes & its Complications

Mind-Sets Regarding Diabetes: How AI + Mind Genomics Thinking Provides an Empowering New Approach

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ABSTRACT

This paper presents a new approach to understanding the mind of people. The approach uses AI (artificial intelligence represented by LLM, large language models) to synthesize how a “mind-set” of similar-thinking individuals would feel in a specific situation. The situation here is defined by the user as pertaining to an 80-year-old person facing the prospect of diabetes. The approach “suggests” to the AI that there are a variety of mind-sets, requesting that AI answer 12 questions about each mind-set. The paper presents the results of this exercise for a variety of these mind-sets, and further demonstrates the use of AI to analyze far more deeply the original information generated by AI for one of the mind-sets. The approach is presented as a new tool in the world of science, health, and social issues.

Keywords

Artificial intelligence, Diabetes, Mind Genomics, Mind-sets.

Abbreviations

AI: Artificial Intelligence, ChatGPT: Chat Generative Pre-trained Transformer, LLM: Large Language Model, OLS regression: Ordinary Least Squares regression, SCAS: Socrates as a Service.

Introduction

The prevalence of technology in the world of food and the increasing abundance of food in many areas leads to a variety of nutritional and other health issues. One of the biggest and perhaps the most looming of all is diabetes. Today's medical world is replete with issues about “diabesity”, the made-up word to describe the “double whammy” combination of diabetes and obesity. The literature is filled with articles on diabetes. Just in the past year alone, in 2023, the number of articles on diabetes exceeded 159,000 according to Google Scholar. The total set of scientific publications referred to in Google Scholar for diabetes is 4,180,000. When we turn to Google itself, the number is almost seven billion, presumably due to the recognition by the public

that diabetes is a health problem and at the same time, presents a looming problem in economic welfare. The concerns of people toward the life changes incurred by diabetes are matched by the implications of what it will cost to take care of these people as diabetes becomes a worldwide epidemic.

This study was undertaken as a demonstration of how artificial intelligence — the new large language models such as ChatGPT and others — can provide us with a new way to “understand” the mind of a person who is reading about all the diabetes issues. The underlying idea was that “creating” a mind-set using AI enables the user to understand the topic more deeply. We chose to use the large language models because in the last several years, these models have become increasingly sophisticated. With such sophistication, it appeared that one might be able to harness the power of AI to synthesize what does not yet necessarily even exist, and even present the synthesized information in the form of recognizable questions and answers [1-3].

Mind Genomics and the Organizing Idea of Mind-Sets

Mind Genomics is an emerging science that deals with how we make decisions about our everyday experiences. The organizing

principle emerging from Mind Genomics is the recognition that for virtually any topic of daily life, people divide into mind-sets. A mind-set is operationally defined as an interpretable pattern of what is important to the individual. Furthermore, this division of people into mind-sets occurs from the “bottom-up,” viz., at the granular level, rather than representing universal ways of thinking about the world across almost any topic. That is, rather than dividing the entire world of people into a limited number of “general” groups, as some methods do such as Claritas [4], Mind Genomics “creates” these groups for each topic, doing so in a simple, repeatable manner, using well-accepted methods such as regression and clustering [5,6].

The actual process is simple, founded on pure empirical work. The actual Mind Genomics process presents “respondents,” viz., survey takers, with vignettes, viz., combinations of “elements,” i.e., messages about the topic, created by experiment design [7], obtain their rating of the vignettes, and deconstruct the ratings into the part-worth contribution of each element. To the typical respondent these messages look like a blooming, buzzing confusion, but the reality is quite different. What appears to happen, let's say in the case of diabetes, is that the respondent casually inspects a vignette, this combination of elements, and assigns a rating to the combination, often doing so in a state of relaxation, seeming disinterested. That disinterest is generated by the aforementioned frustration at not being able to discover the pattern, and thus not being able to assign the “correct rating.” The final step applies cluster analysis to the set of individual coefficients, one set per each respondent the system generates. From the aforementioned regression analysis, one automatically deconstructs the rating into the part-worth contribution of looks at these vignettes, these combinations, assigns a rating, from that rating emerges scores for every one of the elements, the messages, and from that analysis, the mind genomics statistics ends up clustering these people, these survey takers, into different clusters. The system is rigorous, efficient, and impossible to game [8,9].

To summarize the process, the well-accepted method of clustering ends up dividing people into a limited number of clusters, i.e., groups, based upon the pattern of the coefficients from Ordinary Least Squares (OLS) regression, estimated for each respondent for a specific topic. Thus, clusters comprise individuals whose patterns of responses to these elements are quite similar. The clusters are called “mind-sets,” and the process itself is called “mind-set segmentation.” These groups are easy to interpret. The strong-performing elements, the messages which were part of the vignettes, tell a coherent story, even though the statistical analysis never took into account the meaning of the elements, but just considered the similarity of the patterns of coefficients emerging from the regression and the clustering.

The opportunity facing us was whether we could instruct AI based upon a LLM to tell us about mind-sets for diabetes. AI had been previously incorporated into the Mind Genomics platform, BimiLeap.com, to help users develop questions and answers. The

incorporation was through the abovementioned Idea Coach, and is called “Socrates as a Service,” trademarked and abbreviated as SCAS.

Rather than doing the Mind Genomics experiments described above, the approach would be to assume that there exist a specific but unnamed, undefined mind-sets. We would tell the SCAS only that there are a specified number of mind-sets. We would then instruct the SCAS to answer a set of questions for each mind-set. What would the SCAS do in terms of providing meaningful results? Would the “stories” around the SCAS make sense?

Method

The strategy in this project was simply to tell the SCAS that there exist a number of mind-sets relevant to diabetes. The Mind Genomics platform (BimiLeap.com) was used. BimiLeap has a place where it allows the user to type in a request to the linked SCAS, ChatGPT [10]. The “place” to put in one’s request to the SCAS is called the “Idea Coach.” Idea Coach is really a receptacle in which we can put in questions or requests for artificial intelligence.

Table 1 shows the full briefing for discovering the information about mind-sets. If one reads it clearly and easily, one sees that there's no key information about what the mind-set should be, just that there are a certain number of them. Note that the SCAS is given a slight bit of personal information about the user (viz., an 80-year-old). The questions shown in Table 1 are those that a person might ask. There is no request for clinical information. Rather, the type of information requested might be the information for which a person would search on the Internet, or seek in a readable, consumer-oriented publication featuring an article on diabetes.

The important thing to keep in mind when looking at Table 2 is that this is just one of the different mind-sets synthesized by the SCAS. Recall that the SCAS was given no information about these mind-sets and had to synthesize both the name of the mind-set as well as answer the 12 questions. An inspection of Table 2 suggests a high quality of results. The results seem to be meaningful, the results seem to provide new information, and the results make a lot of sense in terms of the topical answers. For example, for the Western Diet, the key messages are that processed foods and added sugars are major contributors, a “factoid” commonly accepted. There is nothing here of a clinical nature, but what's quite exciting is the ability of the SCAS to synthesize all of this information within a period of 15-20 seconds or less, and to do this on a repeated basis should the user want. As we will see in the next sections, there is both a deeper analysis and several more suggested mind-sets.

Once the iterations have been completed and the user provided with the material shown in Table 2 for each mind-set, the study is closed with perhaps 5, 10, 15 or even 20 iterations. For each iteration, SCAS generates nine additional inquiries for higher level post-iteration analyses. These appear in Table 3 for the Western

Table 1: The Instructions Provided to the SCAS.

At every turn I read about food-related behaviors that are bad for me because they can help accelerate the already existing body's propensity for diabetes. I am nervous. I am about to turn 80. What should I believe?
I know that there are 10 different mind-sets of stories about the problems in food behavior that could lead to diabetes.
For each mind-set, tell me the following:

0. What is the name of the mind-set (IN CAPS)
1. The key message of the mind-set
2. Four slogans which emblemize what the mind-set is telling me to avoid, and why
3. Four slogans which emblemize what the mind-set is telling me to consume, and why
4. Four motivations for the mind-set for telling me what it is telling me, either positive or negative
5. A six-paragraph story about the interview of this mind-set with a nutrition magazine which wants to find out the science behind the points of view, the strategy of the mind-set, how people respond, and finally the corporations supporting this mind-set
6. Describe how the mind-set can be said to be grounded in good science
7. Describe how the mind-set can be said to be grounded in hucksterism
8. Describe how the mind-set can be said to be grounded in self-interest financially
9. Describe how the mind-set can be said to be grounded in "what's hot's," viz., looking for something to hang on to.
10. Describe where the mind-set will be in one year
11. Describe where the mind-set will be in five years
12. Describe where the mind-set will be in ten years

Table 2: How the SCAS answers the 12 questions for the "Western Diet" Mind-Set.

WESTERN DIET MIND-SET

1. The key message is that processed foods and added sugars are major contributors to diabetes and other health issues.
2. Avoid sugary beverages, fast food, fried foods, and processed snacks because they can lead to insulin resistance and weight gain.
3. Consume whole foods, lean proteins, fruits, and vegetables to maintain a healthy weight and blood sugar levels.
4. Motivations for this mind-set include promoting overall health, reducing healthcare costs, improving quality of life, and preventing chronic diseases.
5. The interview with the Western Diet mind-set reveals the scientific evidence behind the negative effects of processed foods on health, the strategy of promoting whole foods, the public response of seeking healthier options, and corporate support from organic food companies.
6. The Western Diet mind-set is grounded in good science because studies have shown the negative impact of processed foods on health outcomes and the benefits of whole foods in preventing chronic diseases.
7. However, this mind-set can also be grounded in hucksterism if exaggerated claims are made about the dangers of certain foods without solid evidence.
8. The Western Diet mind-set can be financially motivated by the sale of organic and whole foods by supporting companies.
9. This mind-set may be influenced by what is currently trending in health and wellness, leading to a focus on avoiding processed foods.
10. In one year, the Western Diet mind-set may gain more traction as more research confirms the negative effects of processed foods on health.
11. In five years, the Western Diet mind-set may become more mainstream as public awareness of the link between diet and chronic diseases increases.
12. In ten years, the Western Diet mind-set may lead to policy changes to promote healthier food options and reduce the consumption of processed foods.

Table 3: Post-iteration analysis by AI of the material generated for one iteration (Western Diet mind-set).

1. Additional Questions to Ask

1. What are the main sources of processed foods in the Western Diet mind-set?
2. How do added sugars contribute to the development of diabetes according to this mind-set?
3. What are the recommended guidelines for daily sugar intake in the Western Diet mind-set?
4. How do fast food and fried foods impact insulin resistance and weight gain according to this mind-set?
5. What evidence supports the benefits of whole foods in preventing chronic diseases in the Western Diet mind-set?
6. How do organic food companies support the Western Diet mind-set financially?
7. What strategies can individuals use to transition to a whole foods diet as recommended by this mind-set?
8. How does the Western Diet mind-set address the role of exercise in preventing diabetes and other health issues?
9. What public health policies does the Western Diet mind-set advocate for to promote healthier food options?
10. How does the Western Diet mind-set address cultural and socioeconomic factors that may influence food choices?
11. What criticisms have been raised against the Western Diet mind-set and how does it respond to them?
12. How does the Western Diet mind-set differentiate between natural sugars and added sugars in foods?
13. What role do vitamins and minerals play in the recommendations of the Western Diet mind-set?
14. How do food labels and marketing tactics influence consumer behaviors according to the Western Diet mind-set?
15. What long term health outcomes can individuals expect by following the recommendations of the Western Diet mind-set?

2. Key Ideas

1. The main sources of processed foods in the Western Diet mind-set
2. The detrimental effects of added sugars on the development of diabetes
3. Recommended guidelines for daily sugar intake
4. Impact of fast food and fried foods on insulin resistance and weight gain
5. Evidence supporting the benefits of whole foods in preventing chronic diseases
6. How organic food companies support the Western Diet mind-set financially
7. Strategies for transitioning to a whole foods diet
8. Addressing the role of exercise in preventing diabetes and other health issues
9. Advocacy for public health policies promoting healthier food options
10. Addressing cultural and socioeconomic factors influencing food choices

11. Responses to criticisms against the Western Diet mind-set
12. Differentiation between natural sugars and added sugars
13. Importance of vitamins and minerals in the Western Diet mind-set recommendations
14. Influence of food labels and marketing tactics on consumer behaviors
15. Long-term health outcomes of following the Western Diet mind-set recommendations

3. Themes

These themes encompass the key ideas related to the Western Diet mind-set, its impact on health, and strategies for promoting healthier dietary habits.

1. Sources of Processed Foods in Western Diet Mind-Set
 - Main sources of processed foods
 - Impact of fast food and fried foods on health
 - Influence of food labels and marketing tactics
2. Detrimental Effects of Added Sugars
 - Connection between added sugars and diabetes
 - Differentiation between natural sugars and added sugars
 - Recommended guidelines for daily sugar intake
3. Benefits of Whole Foods
 - Evidence supporting benefits of whole foods in preventing chronic diseases
 - Strategies for transitioning to a whole foods diet
 - Importance of vitamins and minerals in diet recommendations
4. Public Health Advocacy
 - Advocacy for public health policies promoting healthier food options
 - Addressing cultural and socioeconomic factors influencing food choices
5. Exercise and Health
 - Role of exercise in preventing diabetes and other health issues
6. Financial Influence
 - How organic food companies support Western Diet mind-set financially
7. Long-Term Health Outcomes
 - Long-term health outcomes of following Western Diet recommendations
8. Responses and Criticisms
 - Responses to criticisms against Western Diet mind-set
9. Influence of Consumer Behaviors
 - Influence of food labels and marketing tactics on consumer behaviors

4. Perspectives

1. Sources of Processed Foods in Western Diet Mind-Set
 - Plus: Convenience and accessibility of processed foods
 - Minus: Negative impact on health due to excess consumption of fast food and fried foods
 - Interesting: Influence of food labels and marketing tactics in shaping consumer choices
2. Detrimental Effects of Added Sugars
 - Plus: Awareness of the connection between added sugars and chronic diseases
 - Minus: Increased risk of diabetes and other health issues from consuming excess added sugars
 - Interesting: Differentiation between natural sugars and added sugars in food products
3. Benefits of Whole Foods
 - Plus: Evidence supporting benefits of whole foods in preventing chronic diseases
 - Minus: Difficulty in transitioning to a whole foods diet for some individuals
 - Interesting: Importance of vitamins and minerals in whole foods for overall health
4. Public Health Advocacy
 - Plus: Advocacy for policies promoting healthier food options for the public
 - Minus: Resistance from certain sectors to change in food culture and access
 - Interesting: Addressing cultural and socioeconomic factors influencing food choices in public health advocacy efforts
5. Exercise and Health
 - Plus: Role of exercise in preventing diabetes and promoting overall health
 - Minus: Lack of access to exercise opportunities for certain populations
 - Interesting: Varied approaches to incorporating exercise into daily routines for optimal health benefits
6. Financial Influence
 - Plus: Support from organic food companies for promoting healthier dietary habits
 - Minus: Influence of financial interests in perpetuating the Western Diet mind-set
 - Interesting: Interplay between financial incentives and consumer choices in food consumption patterns
7. Long-Term Health Outcomes
 - Plus: Potential for improved long-term health outcomes with healthier dietary habits
 - Minus: Risks of chronic diseases associated with long-term adherence to Western Diet recommendations
 - Interesting: Factors influencing individuals' ability to sustain healthier dietary habits for long-term health benefits
8. Responses and Criticisms
 - Plus: Engagement with criticisms to address shortcomings of Western Diet mind-set
 - Minus: Challenges in implementing changes to address criticisms effectively
 - Interesting: Variety of perspectives and responses to criticisms against the Western Diet mind-set

9. Influence of Consumer Behaviors

- Plus: Awareness of influence of food labels and marketing tactics on consumer behaviors
- Minus: Vulnerability of consumer choices to misleading marketing strategies
- Interesting: Strategies for empowering consumers to make informed and healthier food choices amid marketing influences

5. What is Missing

1. How does the Western Diet mind-set impact children's health and eating habits?
2. What role do genetics play in determining how individuals respond to processed foods in relation to the Western Diet mind-set?
3. What are the environmental implications of promoting whole foods over processed foods in the Western Diet mind-set?
4. How does the Western Diet mind-set address the issue of food deserts and lack of access to healthy options in certain communities?
5. What are the potential economic consequences of shifting towards a whole foods diet as recommended by the Western Diet mind-set?
6. How does the Western Diet mind-set incorporate cultural preferences and traditions into dietary recommendations?
7. What role does education play in promoting the principles of the Western Diet mind-set and encouraging healthy eating habits?
8. How does the Western Diet mind-set address the issue of food addiction and cravings for processed foods?
9. What advancements in food technology and food production methods could support the recommendations of the Western Diet mind-set?
10. How do social media influencers and celebrities impact the adoption of the Western Diet mind-set and influence public perception of dietary choices?

6. Alternative Viewpoints

1. Some may argue that processed foods can be convenient and affordable options for busy individuals and that moderation is key rather than complete avoidance.
2. Others may question the direct link between added sugars and diabetes, suggesting that genetics and lifestyle factors play a larger role in the development of the disease.
3. There may be differing opinions on the recommended guidelines for daily sugar intake, with some believing that individual needs vary and that a one size fits all approach may not be effective.
4. Critics may argue that fast food and fried foods can be consumed in moderation as part of a balanced diet, and that demonizing certain foods can lead to disordered eating behaviors.
5. Some may question the scientific evidence behind the benefits of whole foods in preventing chronic diseases, suggesting that other factors such as genetics and physical activity play a larger role.
6. Skeptics may argue that organic food companies may be capitalizing on the Western Diet mind-set for financial gain rather than truly promoting health and wellness.
7. There may be differing opinions on strategies for transitioning to a whole foods diet, with some suggesting that it can be expensive and time consuming for individuals with limited resources.
8. Critics may argue that exercise plays a larger role in preventing diabetes and other health issues than diet alone, and that the Western Diet mind-set neglects this aspect.
9. Some may question the feasibility and effectiveness of public health policies advocated for by the Western Diet mind-set, suggesting that individual choice and personal responsibility should be prioritized.
10. Critics may argue that cultural and socioeconomic factors heavily influence food choices and that the Western Diet mind-set may not adequately address these barriers to healthy eating.
11. Alternative viewpoints may criticize the Western Diet mind-set for not taking into account individual preferences and cultural differences in dietary habits.
12. Skeptics may question the distinction made between natural sugars and added sugars, suggesting that the body processes all types of sugar the same way.
13. Critics may argue that focusing solely on vitamins and minerals in foods overlooks other important nutrients and dietary components necessary for overall health.
14. Some may argue that food labels and marketing tactics can be misleading and that consumers should be educated on how to interpret this information independently.
15. Alternative viewpoints may suggest that short-term changes in diet may not necessarily lead to significant long-term health outcomes, as genetics and lifestyle factors also play a role.

7. Interested Audiences

1. Health professionals, nutritionists, and dietitians would be interested in the main sources of processed foods in the Western Diet mind-set as it directly relates to their field of expertise.
2. Individuals at risk of or living with diabetes would be interested in how added sugars contribute to the development of the disease according to this mind-set.
3. Those looking to improve their diet and overall health would be interested in the recommended guidelines for daily sugar intake in the Western Diet mind-set.
4. People concerned about their weight and overall health would be interested in understanding how fast food and fried foods impact insulin resistance and weight gain according to this mind-set.
5. Researchers and scientists studying nutrition and chronic diseases would be interested in the evidence supporting the benefits of whole foods in preventing such diseases.
6. Investors and stakeholders in the food industry would be interested in understanding how organic food companies support the Western Diet mind-set financially.
7. Individuals looking to transition to a healthier diet would be interested in the strategies recommended by this mind-set for transitioning to a whole foods diet.
8. Fitness enthusiasts and individuals interested in preventing health issues through exercise would be interested in how the Western Diet mind-set addresses the role of exercise.
9. Policy makers and public health advocates would be interested in the public health policies advocated for by the Western Diet mind-set to promote healthier food options.
10. Sociologists and researchers studying food culture and disparities in healthcare would be interested in how the Western Diet mind-set addresses cultural and socioeconomic factors affecting food choices.

8. Opposing Audiences

1. Food industry companies that produce processed foods may oppose the Western Diet mind-set due to potential decreases in sales and profits.
2. Fast food chains may also oppose this mind-set as it encourages people to avoid their products.
3. Some consumers who are accustomed to eating processed foods may resist changing their diet to whole foods.
4. People who have cultural or societal ties to certain types of food may find it challenging to adopt the recommendations of the Western Diet mind-set.
5. Individuals with lower incomes may struggle to afford the cost of organic and whole foods, leading to resistance to this mind-set.

9. Innovations

1. Meal delivery services specializing in whole foods and minimizing processed ingredients
2. Corporate wellness programs focused on promoting healthy eating habits and physical activity
3. Community gardens and farmers markets in underserved areas to increase access to fresh, whole foods
4. Policy initiatives to regulate added sugars in processed foods and promote clear labeling for consumers

5. Fitness apps and online platforms that provide personalized exercise plans and nutrition guidance based on individual health goals
6. Schools implementing nutrition education programs and offering healthier food options in cafeterias
7. Public health campaigns to raise awareness about the long-term health effects of the Western Diet and the benefits of whole foods
8. Partnerships between healthcare providers and grocery stores to offer nutrition counseling and healthy shopping guides to patients.
9. Initiatives to address food deserts and increase availability of affordable, nutritious foods in low-income communities.

Diet mind-set. The sections are labeled. The sections range from additional questions to ask, to questions about what's missing, various points of view, and finally, ideas for innovation.

The material returns from post-project "analysis" approximately 15 minutes after the study has been completed. The material for this secondary analysis is presented in the form of an Excel workbook, called the Idea Book. Each iteration generates its own worksheet in this Idea Book. Thus, for a user with the patience to go through 30 different iterations, some more successful than others (taking about 15-20 minutes in total), the Idea Book will comprise 30 worksheets, one worksheet for each iteration. The exercise itself creates a very rich database and encourages critical thinking. Once again, the effort is not to look at clinical materials, but rather to look at the way ordinary people think about a topic, material that would be in the world to which the LLM has access for training.

Discussion and Conclusions

The richness of the data in Tables 2 and 3 are tribute to the increased power of AI, especially the AI generated from large language models. One might say that there is nothing new here, that all the information was already known and that there are no new discoveries to be made from these tables. That would be perfectly acceptable. The objective of this approach is to gather in minutes the types of questions and answers and information that could be not gathered even in months. The objective is to structure critical thinking in such a way that the user can begin to explore the topic with far greater information than was hitherto possible. The tables in the appendix provide questions and answers to an additional eight mind-sets. Not shown are the deeper analyses for each mind-set, material shown in Table 3 for the Western Diet mind-set. Space does not allow for the inclusion of eight additional tables the size of Table 3, which presents the detailed post-iteration analysis by AI of the material generated for one iteration for a specific mind-set.

One can only imagine the types of advances to be made if before each project with people, the investigator were to go through this type of exercise. Perhaps the exercise would not be limited to 10 iterations, but rather with 100 iterations, the effort lasting as much as 4-5 hours. During those iterations the user would end up learning new things, changing the questions to follow a newly emerging line of thinking, and following one's intuition by changing the query presented in the Idea Coach. Within reason, the effort would itself provide the user with an education, that education turbocharged by the reality of seeing the results of the iteration within 15-20 seconds. The subsequent Idea Book, generated in the 30-60 minutes after the effort is concluded, would be witness

to the evolution of one's thinking. The evolution in the change of questions would be the witness to how the user is deepening knowledge about the topic. The Idea Book would contain those questions in the section dealing with the query (see Table 1), then the results shown immediately (see Table 2), and finally the deeper analyses by AI (see Table 3).

One can only imagine what might happen if this type of thinking were available all around the world for a variety of health and other issues. And that it would simply be a matter of using artificial intelligence, this SCAS, Socrates as a Service, based on large language models, to explore a topic. Take a half a day, or even as much as a day, to run through a hundred or two hundred iterations and see what one gets.

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Appendix: The Different Mind-Sets for Diabetes

Note: Some of the questions may differ from set to set, resulting from the effort to “extract” more information from the AI.

Set A: Avoid the “Bad Players”

- 1. LOW-CARB MIND-SET**
1. The key message of the mind-set: Avoid carbohydrates to prevent diabetes.
2. Avoid bread, pasta, rice, and sugary snacks because they spike blood sugar levels.
3. Consume lean proteins, vegetables, and healthy fats to stabilize blood sugar levels.
4. Motivations include weight loss, improved energy levels, better blood sugar control, and reduced risk of diabetes complications.
5. In an interview with a nutrition magazine, the mind-set explains that by limiting carbohydrates, individuals can better manage their blood sugar levels and prevent the onset of diabetes. The strategy involves educating individuals on the impact of different foods on blood sugar levels and encouraging a low carb lifestyle. Some people respond positively to the mind-set by experiencing weight loss and improved health outcomes. Corporations supporting this mind-set may include companies selling low-carb products and supplements.
6. The mind-set is grounded in good science as low-carb diets have been shown to improve blood sugar control and reduce the risk of developing diabetes.
7. The mind-set may be grounded in hucksterism if individuals are misled into purchasing unnecessary low-carb products or supplements.
8. Financial self-interest may come into play if corporations are promoting low-carb products for profit.
9. The mind-set may be influenced by trends and what is considered “hot” in the health and wellness industry.
10. In one year, the Low-Carb mind-set may continue to gain popularity as more people seek alternative approaches to managing their blood sugar levels.
11. In five years, the Low-Carb mind-set may become more mainstream as research continues to support its efficacy in preventing and managing diabetes.
12. In ten years, the Low-Carb mind-set may be a well established dietary approach for diabetes prevention and management.

- 2. AVOID CARBOHYDRATES MIND-SET**
1. The key message of the mind-set is that carbohydrates are the main culprit for diabetes and should be avoided at all costs.
2. Slogans: "Say no to sugar and bread; they spike your blood sugar levels!", "Cut out the pasta and rice; they are full of empty calories!", "Avoid fruits; they are high in natural sugars!", "Stay away from starchy vegetables; they are just like eating candy!"
3. Slogans: "Load up on lean protein; it keeps you full and helps build muscle!", "Eat plenty of healthy fats; they keep you satiated and provide essential nutrients!", "Fill up on non starchy vegetables; they are low in calories and full of vitamins and minerals!", "Incorporate intermittent fasting; it helps regulate blood sugar levels and promote weight loss!"
4. Motivations: Fear of developing diabetes, desire to control blood sugar levels, belief in the effectiveness of low-carb diets for weight loss, trust in anecdotal evidence from others who have seen improvement in their health
5. In the interview with the nutrition magazine, the spokesperson for the Avoid Carbohydrates mind-set explains the science behind the belief that carbohydrates are bad for diabetes prevention. They cite studies showing the impact of blood sugar spikes on insulin resistance and discuss the benefits of reducing carbohydrates for controlling blood sugar levels. They also mention the success stories of individuals who have reversed their diabetes through low-carb diets.
6. The mind-set is grounded in the scientific literature showing the link between high carbohydrate intake and insulin resistance, as well as the effectiveness of low-carb diets for managing diabetes.
7. The mind-set can be grounded in hucksterism if it promotes extreme or unsustainable dietary practices without proper scientific evidence.
8. The mind-set may be financially self-interested if it is supported by companies selling low-carb or ketogenic products.
9. The mind-set may be influenced by the current trend of low-carb and keto diets being popular in the health and wellness industry.
10. In one year, the mind-set may continue to gain popularity among individuals seeking to prevent or reverse diabetes through dietary interventions.
11. In five years, the mind-set may have evolved to incorporate more nuanced and evidence based approaches to carbohydrate restriction for managing diabetes.
12. In ten years, the mind-set may have become more mainstream as the scientific community continues to explore the role of diet in diabetes prevention and treatment.

- 3. SUGAR IS BAD MIND-SET**
1. The key message of the mind-set: Avoid all forms of sugar to prevent diabetes and other health issues.
2. Avoid sugary drinks to keep your blood sugar levels stable and prevent weight gain. Avoid desserts and candies to reduce your intake of empty calories and empty carbohydrates. Avoid processed foods high in added sugars to maintain overall health and well-being.
3. Consume whole fruits as a natural source of sweetness and essential vitamins and nutrients. Consume complex carbohydrates like whole grains to provide long lasting energy and fiber for digestion. Consume natural sweeteners like honey or maple syrup in moderation as healthier alternatives to refined sugar. Consume high fiber foods like vegetables to help regulate blood sugar levels and improve digestive health.
4. Slogans: none
5. Motivations for the mind-set:
 - Positive: Promote overall health and wellbeing by making conscious dietary choices.
 - Negative: Fear of health issues like diabetes and obesity due to excessive sugar consumption.
6. Grounded in good science: Backed by studies linking high sugar intake to various health issues, including diabetes.
7. Grounded in hucksterism: Exaggerating the negative effects of sugar consumption to promote extreme dietary restrictions.
8. Grounded in self-interest financially: Influenced by the rise of health and wellness industries promoting sugar free products.
9. Grounded in “what's hot”: Reflects the current trend of clean eating and minimalism in food choices.
10. In one year: The mind-set will likely continue to gain popularity among health-conscious individuals.
11. In five years: The mind-set may become more mainstream as the negative effects of sugar consumption are further researched and publicized.
12. In ten years: The mind-set may evolve to focus on overall balanced diets rather than solely demonizing sugar.

4. LOW GLYCEMIC INDEX MIND-SET

1. The key message of the mind-set is to focus on foods with a low glycemic index to help regulate blood sugar levels and reduce the risk of diabetes.
2. Four slogans to avoid: "Stay away from sugary drinks for stable energy levels.", "Avoid processed snacks high in sugar to prevent blood sugar spikes.", "Limit consumption of white bread and pasta to prevent insulin resistance.", "Don't indulge in desserts with high levels of refined sugar to maintain a healthy weight."
3. Four slogans to consume: "Choose whole grains like quinoa for sustained energy release.", "Include plenty of fruits and vegetables in your diet for essential nutrients and fiber.", "Opt for lean proteins like chicken or fish for balanced meals.", "Incorporate healthy fats like avocado and nuts for heart health."
4. Four motivations for the mind-set include promoting overall health and well-being, improving energy levels, reducing the risk of chronic diseases such as diabetes, and aiding in weight management.
5. A six paragraph story about an interview with a nutrition magazine would include discussions about the scientific basis of the glycemic index, strategies for implementing a low glycemic index diet, how individuals respond positively to stable blood sugar levels, and the support of food companies promoting whole foods and healthy eating.
6. The Low Glycemic Index mind-set is grounded in good science as research has shown that consuming foods with a low glycemic index can help regulate blood sugar levels and improve overall health.
7. The mind-set can be grounded in hucksterism if individuals are misled into purchasing expensive low glycemic index products with dubious health claims.
8. The mind-set may be grounded in financial self-interest for companies selling low glycemic index products or promoting diets based on the concept.
9. The mind-set may be grounded in "what's hot" as the focus on blood sugar management and diabetes prevention is a popular trend in the health and wellness industry.
10. In one year, the Low Glycemic Index mind-set will likely continue to gain popularity and recognition as an effective way to improve overall health.
11. In five years, the mind-set will likely have become more mainstream and widely recommended by healthcare professionals for diabetes prevention and blood sugar management.
12. In ten years, the Low Glycemic Index mind-set may have become a widely accepted dietary approach for promoting overall health and reducing the risk of chronic diseases like diabetes.

5. LOW-FAT MIND-SET

1. The key message of the mind-set: Avoid high fat foods to prevent diabetes.
2. Avoid fried foods, fatty meats, and full fat dairy products because they can contribute to weight gain and insulin resistance.
3. Consume low-fat or nonfat options of dairy products, lean proteins, and plenty of fruits and vegetables to support weight management and blood sugar control.
4. Motivations include weight loss, reduced risk of heart disease, improved insulin sensitivity, and better overall health outcomes.
5. In an interview with a nutrition magazine, the mind-set explains that by reducing fat intake, individuals can lower their risk of developing diabetes and other chronic diseases. The strategy involves promoting a diet low in saturated fats and high in whole foods. Some people respond positively to the mind-set by experiencing weight loss and improved cholesterol levels. Corporations supporting this mind-set may include companies marketing low fat products and cooking oils.
6. The mind-set is grounded in good science as research has linked high fat diets to obesity, insulin resistance, and an increased risk of diabetes.
7. The mind-set may be grounded in hucksterism if individuals are pressured into purchasing specific low-fat products that may not be beneficial.
8. Financial self-interest may come into play if companies profit from marketing low-fat products as healthier alternatives.
9. The mind-set may be influenced by current trends in health and wellness, promoting low-fat diets as a popular choice for weight management and disease prevention.
10. In one year, the Low-Fat mind-set may continue to be a popular approach for individuals looking to improve their health through diet.
11. In five years, the Low-Fat mind-set may evolve to incorporate more plant-based fats and whole foods for optimal health outcomes.
12. In ten years, the Low-Fat mind-set may be a well-established dietary strategy for preventing diabetes and promoting overall wellness.

6. DIETARY RESTRICTION MIND-SET

1. The key message of the mind-set is to avoid certain foods in order to prevent or manage diabetes.
2. Slogans to avoid: "Stay away from sugary drinks to control your blood sugar levels.", "Limit processed foods to reduce your risk of diabetes.", "Cut back on red meat to improve insulin sensitivity.", "Avoid high-carb foods to prevent spikes in blood sugar."
3. Slogans to consume: "Eat plenty of fruits and vegetables for essential nutrients and fiber.", "Choose whole grains for sustained energy and better blood sugar control.", "Include lean proteins like chicken and fish in your diet for muscle maintenance.", "Incorporate healthy fats like avocados and nuts for heart health."
4. Motivations:
 - Positive: Promoting overall health and well-being, preventing disease, increasing longevity.
 - Negative: Fear of developing diabetes, avoiding unpleasant symptoms and complications associated with the condition.
5. A six paragraph story about the interview of this mind-set with a nutrition magazine which wants to find out the science behind the points of view, the strategy of the mind-set, how people respond, and finally the corporations supporting this mind-set:

In an exclusive interview with a renowned nutrition magazine, the Dietary Restriction mind-set shared its key message of avoiding certain foods in order to prevent or manage diabetes. The spokesperson emphasized the importance of making healthy food choices to maintain optimal blood sugar levels and overall well-being. The strategy of the mind-set is to educate individuals on the potential risks of consuming specific food groups and to provide guidance on healthier alternatives.
6. People respond positively to the advice given by the Dietary Restriction mind-set, as many are eager to take control of their health and prevent the onset of chronic diseases such as diabetes.
7. Corporations supporting this mind-set include health food companies, wellness brands, and diabetes care providers, who promote products and services aligned with the principles of dietary restriction.
8. This mind-set can be said to be grounded in good science by drawing on evidence-based research linking certain foods to an increased risk of diabetes and advocating for a balanced diet rich in essential nutrients.
9. This mind-set can be said to be grounded in hucksterism if it promotes overly restrictive diets or specific products without scientific backing.
10. This mind-set can be said to be grounded in self-interest financially if certain corporations benefit from promoting their products or services under the guise of preventing diabetes.
11. This mind-set can be said to be grounded in "what's hot" by following current trends in nutrition and health that resonate with consumers seeking to improve their well-being.
12. In one year, the Dietary Restriction mind-set will likely continue to gain traction as more individuals become aware of the importance of dietary choices in preventing chronic diseases.
13. In five years, the mind-set may have evolved to incorporate new research findings and dietary guidelines, ensuring its relevance and accuracy in promoting healthy eating habits.
14. In ten years, the Dietary Restriction mind-set may become even more ingrained in mainstream nutrition recommendations, with a greater emphasis on personalized approaches to managing diabetes and other health conditions.

Set B: Work with the “Good Players”

7. THE ORGANIC MIND-SET

1. The key message is to only consume organic foods to avoid harmful chemicals and additives.
2. "Avoid pesticides and herbicides to protect your health." Organic foods are grown without the use of synthetic chemicals.
3. "Choose organic fruits and vegetables for higher nutrient content." Organic produce often contains more vitamins and minerals.
4. "Opt for organic meats to avoid hormones and antibiotics." Organic meat comes from animals raised without growth hormones or antibiotics.
5. Motivations for this mind-set include promoting environmental sustainability, supporting small-scale farmers, and advocating for animal welfare.
6. The Organic mind-set is grounded in good science as studies have shown the potential health benefits of consuming organic foods.
7. However, it can also be grounded in hucksterism as some companies may use the organic label as a marketing ploy without truly adhering to organic standards.
8. The Organic mind-set can be grounded in self-interest financially as organic products often come with a higher price tag.
9. It can be grounded in “what’s hot” as more consumers are becoming interested in sustainable and ethical food choices.
10. In one year, the Organic mind-set will likely continue to gain popularity as more people become aware of the potential benefits of organic foods.
11. In five years, the Organic mind-set may become even more mainstream as larger companies begin to offer more organic options.
12. In ten years, the Organic mind-set could become the norm as more regulations and incentives are put in place to promote organic farming practices.

8. THE KETOGENIC DIET MIND-SET

1. The key message of the mind-set is that a low-carbohydrate, high fat diet can help prevent and manage diabetes.
2. Four slogans to avoid carbohydrates: "Say no to sugar, say yes to fat!", "Carbs are the enemy of blood sugar control", "Cut the carbs, improve insulin sensitivity", "No more sugar crashes, just steady energy"
3. Four slogans to consume healthy fats: "Embrace healthy fats for a balanced diet", "Avocados and nuts are your friends", "Coconut oil for stable blood sugar", "Butter is back, say goodbye to margarine"
4. Motivations for the mind-set include promoting a healthier lifestyle, advocating for natural foods, helping individuals take control of their health, and combating the influence of processed foods.
5. In a nutrition magazine interview, the Ketogenic Diet mind-set explains the science behind how reducing carbohydrates can lower blood sugar levels and improve insulin sensitivity. The strategy is to educate about the benefits of healthy fats and natural foods. People respond with enthusiasm for the potential health improvements, and corporations supporting this mind-set include organic food companies and health supplement manufacturers.
6. The Ketogenic Diet mind-set is grounded in the science of how the body processes different macronutrients and their impact on blood sugar levels. Studies have shown that reducing carbohydrate intake can lead to improved insulin function and reduced risk of diabetes.
7. However, the mind-set can also be grounded in hucksterism if individuals are encouraged to buy specific products or supplements to adhere to the diet, without considering the overall quality of their food choices.
8. Financial self-interest can be present if companies are pushing specific branded products as part of the ketogenic diet, potentially benefiting from increased sales.
9. The mind-set may be grounded in “what’s hot” as people are always looking for the latest trend in health and wellness to latch onto for potential benefits.
10. In one year, the Ketogenic Diet mind-set will likely continue to gain popularity as more research supports its effectiveness for diabetes management.
11. In five years, the Ketogenic Diet mind-set could become more mainstream as healthcare professionals start recommending it for diabetes prevention and treatment.
12. In ten years, the Ketogenic Diet mind-set may have evolved to include more personalized approaches based on individual health needs and genetic factors.