

Nutrition, Diabetes and AI-driven Simulation of Mind Genomics Results: A New Way to Accelerate the Learning of 'Softer Skills' in Medicine

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ABSTRACT

This backgrounder brings together two complementary systems, AI for rapid scientific synthesis and Mind Genomics for mapping everyday thinking, to create a practical learning tool for understanding nutrition, obesity, and diabetes. Scientific evidence shows that global obesity and diabetes continue to rise because of powerful environmental, dietary, and behavioral forces, whereas behavioral research shows that people interpret health information through distinct mind sets that shape their decisions. The AI/Mind Genomics Training Backgrounder integrates these two streams by summarizing validated scientific findings and identifying the specific messages that motivate different groups of people. The method uses structured experimental designs, individual level regression, and clustering to reveal mind sets that respond differently to risk based, convenience based, or family centered messages. The resulting system helps students, professionals, and the public learn quickly, accurately, and personally, moving from facts to understanding and from understanding to action. This approach supports tailored communication, more effective interventions, and a deeper appreciation of how scientific evidence and human decision making interact. The backgrounder therefore offers a new model for health education that respects both scientific rigor and human diversity.

KEYWORDS

Mind Genomics, Health Decision-Making, Behavioral Nutrition, Obesity and Diabetes Prevention, Personalized Health Communication.

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Introduction

The story of nutrition, obesity, and diabetes now defines everyday life for hundreds of millions of people worldwide. We see childhood and adult obesity rising together, with more than one billion people already living with obesity, and many more with overweight, in every region of the world [1,2]. Careful analyses of thousands of population studies show obesity rates in children,

adolescents, and adults increasing steadily since 1990, with no sign of an easy, automatic reversal [1]. Global observatories now track these numbers the way weather services track storms, because obesity already drives heart disease, certain cancers, joint problems, and of course diabetes [2]. At the same time, diabetes has become one of the defining chronic diseases of our century, affecting about one in nine adults and projected to rise strongly in coming decades [3]. This combination of rising obesity and

rising diabetes stretches health systems, drains family finances, and shapes how communities must plan food, transport, and care for the next generation [2,3]. We need to understand this topic in a disciplined, structured way so that facts, not slogans, guide what we do next.

The tight links among what we eat, how our bodies store energy, and who develops diabetes emerge clearly when we follow people over time. Long-term studies of large groups of adults show that diets high in refined grains, sugary drinks, and certain fats, combined with low physical activity, sharply increase the risk of type 2 diabetes [4]. When the same studies track people who eat more whole grains, vegetables, fruits, nuts, and healthy fats, and who move more in daily life, they see much lower diabetes risk, even in those with a family history [4,5]. Clinical trials then go one step further by taking people already at high risk for diabetes and testing whether structured changes in eating and exercise can delay or prevent the disease [6]. These trials show that simple, realistic changes in weight, food patterns, and daily walking can cut diabetes risk dramatically, often more than *expensive* medicines in the early stages [6]. They also remind us that weight alone tells only part of the story, because patterns of fat distribution, muscle, and behavior all matter together [5]. For children and adolescents, the same patterns start early, as everyday food and activity habits shape the road toward health or toward obesity and later diabetes [5]. When we understand these connections in a clear, evidence-based way, we can design messages, environments, and policies that help ordinary people make better choices without blame or confusion.

To move from knowing the numbers to changing real lives, we must understand how people actually think about nutrition, obesity, and diabetes. Mind Genomics offers a practical experimental approach that treats ideas like stimuli, mixes them systematically, and measures how everyday people respond to short, simple messages about food, weight, and health [7,8]. In a typical Mind Genomics study, each person evaluates small vignettes, each vignette a different combination of ideas about eating, activity, family, and risk, allowing rapid estimation of which specific messages truly motivate action [7]. Analyses then uncover distinct “mind-sets,” groups of people who react in different, but internally consistent, ways to the same facts, so that what inspires one group may leave another group cold [7,9]. Recent work shows that even a high school student can use this method, combined with artificial intelligence, to study communication styles about child obesity in low-income communities and to build tools that assign new people to these mind-sets quickly [9]. Other studies extend the same logic to “diabetes” patients in hospital wards, where Mind Genomics and AI together map how patients think and feel about weight, food, and their care, helping nurses learn which messages fit each type of patient best [8]. These efforts support a new kind of “exploration backgrounder,” a living knowledge system that uses AI and Mind Genomics to organize facts, segment audiences, and continuously test which messages work for which mind-set. When we apply this disciplined experimentation to nutrition, obesity, and diabetes, we move from one-size-fits-all advice to tailored, fast-learning communication that can scale to populations whereas staying personal.

The AI/Mind Genomics Training Backgrounder for Understanding Nutrition, Obesity, and Diabetes

The AI/Mind Genomics Training Backgrounder becomes valuable because it brings together two powerful ways of learning about nutrition, obesity, and diabetes in a single, easy-to-use resource. It gathers the best available scientific facts about global obesity and diabetes trends and presents them clearly so that students, professionals, and the public can understand the scale of the problem without confusion or technical barriers [1]. It then adds the Mind Genomics approach, which studies how ordinary people think about food, weight, and health in their daily lives, revealing the decision patterns that shape real-world behavior [7]. This combination helps readers see both the “big numbers” and the “everyday thinking,” which together explain why obesity and diabetes continue to rise even when information is widely available. It also helps people understand that facts alone rarely change behavior, because people respond to messages differently depending on their mind-set, experiences, and motivations [7]. The backgrounder therefore acts as a bridge between scientific evidence and human decision-making, giving learners a structured way to become “up to date” quickly and accurately. By integrating AI-generated summaries with Mind Genomics segmentation, the backgrounder becomes a practical tool for anyone who wants to understand this complex topic in a disciplined, evidence-based way.

The AI/Mind Genomics Training Backgrounder helps readers learn how global nutrition patterns have shifted toward higher consumption of refined grains, added sugars, and ultra-processed foods, which strongly influence obesity and diabetes risk. It summarizes decades of epidemiological research showing that dietary transitions in many countries have moved populations toward energy-dense, nutrient-poor foods that promote weight gain and metabolic disease [10]. It also explains how these dietary shifts interact with reduced physical activity and changing food environments, creating conditions where obesity becomes increasingly common across age groups [5]. The Mind Genomics component then shows how people interpret messages about food, health, and risk, revealing that different groups respond to different explanations and motivations even when the scientific facts are identical [5]. This helps learners understand why public health messages often fail when they assume that everyone thinks the same way about nutrition. The backgrounder therefore teaches that effective communication must combine accurate facts with an understanding of how people make everyday food decisions. By presenting both the scientific evidence and the mind-set patterns, the backgrounder gives readers a complete picture of how nutrition shapes obesity and diabetes worldwide.

The AI/Mind Genomics Training Backgrounder teaches readers how diabetes develops, why it is increasing, and which prevention strategies have the strongest scientific support. It summarizes large cohort studies showing that diets high in whole grains, vegetables, fruits, and healthy fats reduce the risk of type 2 diabetes, whereas diets high in sugary beverages and refined carbohydrates increase it [11]. It also presents evidence from randomized clinical trials demonstrating that structured lifestyle changes—especially modest weight loss and increased physical activity—can significantly delay or prevent the onset of diabetes in high-risk individuals [6]. The Mind Genomics component adds insight into how people interpret

messages about risk, lifestyle change, and personal responsibility, revealing that different mind-sets respond to different types of encouragement or explanation. This helps learners understand why some people act on prevention advice whereas others ignore it, even when the information is clear and accurate. The backgrounder therefore teaches that diabetes prevention requires both strong scientific evidence and communication tailored to how different groups think and decide. By combining these two perspectives, the backgrounder gives readers a practical understanding of how diabetes risk can be reduced at both individual and population levels.

The AI/Mind Genomics Training Backgrounder teaches readers how different groups of people think about nutrition, obesity, and diabetes, and why these differences matter for communication and policy. It explains how Mind Genomics experiments create short vignettes that mix ideas about food, health, risk, and motivation, allowing researchers to measure which messages resonate with which groups [9]. It then shows how these data reveal distinct mind-sets, each with its own pattern of responses, preferences, and sensitivities, even when all participants read the same information [9]. The backgrounder also demonstrates how AI can classify new individuals into these mind-sets quickly, making it possible to tailor messages in real time for education, clinical care, or public health communication [8]. This helps learners understand that effective communication requires matching the right message to the right mind-set rather than assuming that one message works for everyone. The backgrounder therefore teaches that segmentation

is essential for improving how people understand and act on information about nutrition, obesity, and diabetes. By combining AI's speed with Mind Genomics' precision, the backgrounder gives readers a practical model for designing communication that fits the way people actually think.

A demonstration ‘synthetic respondent’ study combining AI and Mind Genomics

A Mind Genomics study becomes essential for the topic of nutrition, obesity, and diabetes because it reveals how ordinary people think about food, weight, and health in ways that traditional scientific summaries cannot capture. Scientific evidence shows that obesity and diabetes rise because of complex interactions among diet, environment, and behavior, yet people interpret these issues through personal beliefs, habits, and emotional reactions that shape their daily choices [5]. Mind Genomics allows researchers to test many small ideas about nutrition and health in short vignettes, revealing which specific messages motivate different groups of people to pay attention or take action [7]. This approach helps us understand why some individuals respond strongly to messages about risk, whereas others respond only to messages about convenience, family, or immediate benefits [7]. The method also identifies distinct mind-sets, each with its own pattern of reactions, allowing communication to be tailored rather than delivered as one-size-fits-all advice [5]. When combined with AI, the system becomes even more powerful because AI can summarize scientific facts quickly whereas Mind Genomics reveals how people think

Table 1: Four Mind Genomics questions, each with four answers, each answer followed by a possible rationale.

<p>QUESTION 1 — “What information about nutrition feels most important to you?” Rationale: This question identifies which types of nutrition messages people consider meaningful, because different individuals prioritize different aspects of food and health.</p> <p>Answers</p> <p>Q1A1 IMPORTANT: “Knowing which foods help prevent weight gain.” (Rationale: Many people want simple, actionable guidance.)</p> <p>Q1A2 IMPORTANT: “Understanding how sugar affects long term health.” (Rationale: Sugar intake strongly influences obesity and diabetes risk.)</p> <p>Q1A3 IMPORTANT: “Learning how whole foods support energy and mood.” (Rationale: People often connect food choices with daily functioning.)</p> <p>Q1A4 IMPORTANT: “Seeing examples of balanced meals that are easy to prepare.” (Rationale: Practicality often determines whether advice is followed.)</p> <p>QUESTION 2 — “What concerns you most about obesity?” Rationale: This question uncovers emotional and cognitive drivers behind how people perceive obesity and its consequences.</p> <p>Answers</p> <p>Q2A1 CONCERNING: “The increased risk of diabetes and heart disease.” (Rationale: These are well documented medical risks.)</p> <p>Q2A2 CONCERNING: “The difficulty of losing weight once it is gained.” (Rationale: Weight loss maintenance is scientifically challenging.)</p> <p>Q2A3 CONCERNING: “The impact on daily energy and mobility.” (Rationale: Many people feel the effects in everyday life.)</p> <p>Q2A4 CONCERNING: “The rising rates of obesity in children.” (Rationale: Childhood obesity is a major global concern.)</p> <p>QUESTION 3 — “What motivates you most to prevent diabetes?” Rationale: This question identifies the motivational levers that influence preventive behavior.</p> <p>Answers</p> <p>Q3A1 MOTIVATING: “Avoiding long term health complications.” (Rationale: Complications are a major driver of prevention.)</p> <p>Q3A2 MOTIVATING: “Keeping my family healthy by setting a good example.” (Rationale: Family motivation is powerful in health behavior.)</p> <p>Q3A3 MOTIVATING: “Feeling more energetic and in control of my life.” (Rationale: Immediate benefits often outweigh long term ones.)</p> <p>Q3A4 MOTIVATING: “Reducing medical costs in the future.” (Rationale: Diabetes is expensive to manage.)</p> <p>QUESTION 4 — “What kind of support helps you make healthier choices?” Rationale: This question identifies the types of assistance people find most useful in changing behavior.</p> <p>Answers</p> <p>Q4A1 SUPPORTS HEALTHIER CHOICES: “Clear, simple steps I can follow every day.” (Rationale: Simplicity increases adherence.)</p> <p>Q4A2 SUPPORTS HEALTHIER CHOICES: “Encouragement from family or friends.” (Rationale: Social support improves outcomes.)</p> <p>Q4A3 SUPPORTS HEALTHIER CHOICES: “Tools that track my food and activity.” (Rationale: Tracking increases awareness and accountability.)</p> <p>Q4A4 SUPPORTS HEALTHIER CHOICES: “Messages that explain why small changes matter.” (Rationale: People need to understand the value of incremental progress.)</p>
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about those facts in everyday life. Together, these tools create a training backgrounder that helps students, professionals, and the public understand both the scientific evidence and the human decision-making process.

To implement this approach, a Mind Genomics framework was constructed consisting of four questions related to nutrition, obesity, and diabetes, each question accompanied by four answer elements and a brief rationale explaining why that element was included. This structure defines the message space to be tested, ensuring coverage of informational, emotional, motivational, and support-related aspects of health decision-making. Table 1 presents these four questions, their corresponding answer elements, and the underlying rationales, forming the foundation for the subsequent experimental combinations and simulated respondent analysis.

Together, the four questions and their associated answer elements define the experimental design used in this demonstration study. Each respondent is exposed to systematically varied combinations of these elements, allowing the isolation of the independent contribution of each idea to overall response. Rather than asking participants to evaluate single statements in isolation, the Mind Genomics approach evaluates how multiple ideas operate together, reflecting the way people naturally process information about nutrition, obesity, and diabetes in everyday decision-making.

To demonstrate this process, responses were generated using AI-based synthetic respondents, preserving the experimental structure of a traditional Mind Genomics study while enabling rapid exploration of response patterns. The resulting coefficients quantify the relative strength of each message element across the Total Panel and across alternative mind-set solutions, providing a clear, interpretable picture of how different themes resonate with different groups.

The outcomes of this simulated experiment are presented in Table 2, which summarizes the performance of each element for the Total Panel as well as for two- and three-mind-set solutions derived from

the response patterns.

Based on the element-level results shown in Table 2, the analysis moves beyond individual message performance to understand how people organize their thinking about nutrition, obesity, and diabetes. While Table 2 shows how each message element performs numerically across different mind-set solutions, these numbers become meaningful only when they are interpreted together.

In the Mind Genomics approach, mind-sets are derived by examining patterns of strong and weak responses across multiple elements, rather than focusing on single statements in isolation. Elements that tend to perform well together reveal a shared way of thinking, reflecting common priorities, concerns, and motivations. This process makes it possible to identify groups of individuals who interpret health information in similar ways, even if they differ in demographic characteristics.

Table 3 presents these results in the form of mind-set profiles. Each profile summarizes the dominant themes that characterize a specific way of thinking about nutrition, obesity, and diabetes, such as emphasis on health risks, preference for practical and convenient actions, or motivation driven by family considerations. By translating numerical coefficients into clear narrative descriptions, Table 3 provides an interpretable and actionable framework that can be used to guide targeted communication, education, and training efforts.

Based on the element-level findings from the Mind Genomics analysis, three distinct mind-sets were identified (Table 3). Each mind-set represents a coherent way in which people think about nutrition, obesity, and diabetes, reflecting consistent patterns in how different message elements influence attention and motivation. In this way, the mind-set profiles translate statistical results into meaningful descriptions of how different groups interpret and respond to health-related information.

Table 2: Simulated data table.

Question + Answer (full text)	Total Panel	MS 1 of 2 Health-Risk Responders	MS 2 of 2 Practical-Action Responders	MS 1 of 3 Risk-Focused	MS 2 of 3 Convenience-Driven	MS 3 of 3 Family-Motivated
Base Size	100	55	45	34	33	33
Q1A1 Knowing which foods prevent weight gain	18	22	14	24	12	16
Q1A2 Understanding how sugar affects long-term health	21	27	13	26	14	18
Q1A3 Learning how whole foods support energy and mood	14	12	17	10	20	15
Q1A4 Seeing examples of balanced meals easy to prepare	16	11	22	9	23	17
Q2A1 Increased risk of diabetes and heart disease	20	26	12	27	11	18
Q2A2 Difficulty of losing weight once gained	13	10	17	8	19	14
Q2A3 Impact on daily energy and mobility	17	14	20	12	22	16
Q2A4 Rising rates of childhood obesity	15	18	11	20	9	17
Q3A1 Avoiding long-term complications	19	25	12	26	10	17
Q3A2 Setting a good example for family	14	11	18	9	14	23
Q3A3 Feeling more energetic and in control	16	13	19	11	21	15
Q3A4 Reducing future medical costs	12	9	16	8	17	13
Q4A1 Clear, simple daily steps	17	12	23	10	24	16
Q4A2 Encouragement from family or friends	15	10	20	8	15	25
Q4A3 Tools that track food and activity	14	11	18	9	19	14
Q4A4 Messages explaining why small changes matter	18	22	13	24	12	17

While these mind-set profiles are useful for understanding the data, their practical value lies in the ability to identify which mind-set a new individual belongs to. The Mind Genomics approach addresses this need by using a short classification method, often referred to as a Personal Viewpoint Identifier (PVI). A PVI is a brief set of carefully selected statements that capture the key differences among mind-sets and allow individuals to be classified based on their pattern of responses.

In this demonstration study, a simplified version of this approach

was used. Rather than employing a full PVI with multiple questions, four representative elements were selected and evaluated using an agree/disagree format. Although a larger number of items can improve precision, this four-item structure is sufficient to illustrate the core idea of mind-set assignment in a clear and transparent way. As shown in Table 4, the pattern of agreement across these four elements allows a new person to be assigned to the mind-set that best matches their way of thinking, providing a practical link between experimental findings and real-world communication, education, and training applications.

Total Panel

Messages about sugar and long-term health score highest overall.
Risk based messages outperform convenience or family messages.
People respond strongly to clear explanations rather than emotional appeals.
Simple steps and balanced meal examples remain consistently effective.
Prevention messages emphasizing complications outperform those about costs.

Mind Set 1 of 3 — Risk Focused

Highest scores for risk, complications, and childhood obesity.
Prevention messages dominate.
Convenience messages score low.
Family messages score low.
This group wants evidence and warnings.

Mind Set 1 responds most strongly to messages that highlight danger, long term harm, and medical consequences, showing a consistent pattern of attention to risk across all questions. These individuals react sharply to statements about sugar's long term effects, the increased risk of diabetes and heart disease, and the importance of avoiding complications, indicating that they process health information through a lens of threat and prevention. They show lower interest in convenience based or family centered messages, suggesting that emotional or practical appeals do not override their focus on medical outcomes. Their pattern suggests that they want clear, authoritative explanations that connect specific behaviors to specific risks, because they use risk information to guide decisions. Communication for this group should emphasize evidence, consequences, and the scientific basis for recommendations, delivered in a direct and unambiguous style. This mind set benefits from messages that quantify risk, describe mechanisms, and explain why certain behaviors matter for long term health. When addressed with precise, fact based communication, this group becomes highly engaged and motivated to act

Mind Set 2 of 3 — Convenience Driven

Highest scores for easy meals and simple steps.
Strong response to tools and tracking.
Risk messages score low.
Family messages score moderate.
This group wants effort-saving solutions.

Mind Set 2 responds most strongly to messages that make healthy behavior feel easy, manageable, and practical, showing a consistent preference for simplicity and effort saving solutions. These individuals react strongly to examples of balanced meals, clear daily steps, and tools that track food and activity, indicating that they prioritize convenience over risk or emotion. They show lower interest in long term complications or family centered messages, suggesting that distant outcomes or emotional appeals do not influence their decisions as strongly as immediate practicality. Their pattern suggests that they want guidance that fits into daily routines without requiring major lifestyle changes or complex planning. Communication for this group should emphasize ease, speed, and small steps that produce noticeable benefits, delivered in a straightforward and supportive style. This mind set benefits from messages that highlight “doable today” actions, simple substitutions, and tools that reduce cognitive load. When addressed with practical, low effort solutions, this group becomes highly receptive and willing to adopt healthier behaviors.

Mind Set 3 of 3 — Family Motivated

Highest scores for family encouragement and setting a good example.
Strong response to childhood obesity messages.
Practical messages score moderate.
Risk messages score moderate.
This group wants family-centered communication.

Mind Set 3 responds most strongly to messages that connect nutrition, obesity, and diabetes to family well being, showing a consistent pattern of motivation rooted in relationships and responsibility. These individuals react strongly to statements about setting a good example, receiving encouragement from family, and concerns about childhood obesity, indicating that they interpret health information through a social and emotional lens. They show moderate interest in risk based or convenience based messages, suggesting that these themes matter only when connected to family outcomes. Their pattern suggests that they want communication that emphasizes shared goals, family routines, and the impact of health choices on loved ones. Messages for this group should highlight how small changes support children, partners, and household stability, delivered in a warm and supportive style. This mind set benefits from stories, examples, and guidance that frame health as a collective effort rather than an individual task. When addressed with family centered communication, this group becomes highly motivated to act and sustain healthier behaviors.

How to assign a new person to one of the mind-sets.

We use four elements, each rated Agree / Disagree:

1. "Understanding how sugar affects long term health matters to me."
2. "Seeing examples of balanced meals helps me make better choices."
3. "Avoiding long term complications motivates me."
4. "Encouragement from family helps me stay on track."

Assignment Logic

If they agree with 1 and 3 → Risk Focused / Health Risk Responders

If they agree with 2 and 3 → Practical Action Responders / Convenience Driven

If they agree with 4 → Family Motivated

If mixed, then assign based on the strongest pair of agreements

Why this is valuable

Assigning a new person to a mind set allows educators, clinicians, and communicators to deliver tailored messages that match how the person actually thinks, increasing the likelihood of engagement, understanding, and behavior change.

Discussion and Conclusion

The central lesson from this work is that understanding nutrition, obesity, and diabetes requires combining scientific facts with a clear picture of how people think and decide in everyday life. Scientific evidence shows that obesity and diabetes rise because of powerful environmental, dietary, and behavioral forces that shape population health across decades, yet individuals respond to these forces through personal beliefs and habits that often differ sharply from scientific expectations [5]. Mind Genomics helps us see these differences by revealing the specific messages that resonate with different mind-sets, showing that people do not react uniformly even when they read the same information [7]. This approach becomes especially important because traditional public health communication often assumes that one message fits all, even though evidence shows that tailored communication improves understanding and engagement [12]. When we combine AI's ability to summarize complex scientific findings with Mind Genomics' ability to map human decision patterns, we create a system that supports rapid learning for students, professionals, and the public. This system helps people understand not only what the science says but also how different groups interpret that science, which is essential for designing effective interventions. The result is a practical framework that respects both the rigor of scientific evidence and the reality of human diversity in thinking and behavior.

The emergence of distinct mind-sets in this study demonstrates that people process information about nutrition, obesity, and diabetes in patterned and predictable ways that differ meaningfully across groups. Research shows that individuals vary widely in their motivations, emotional responses, and cognitive styles, which explains why some people respond strongly to risk-based messages whereas others respond only to practical or family-centered messages [13]. Mind Genomics captures these differences by estimating the impact of each idea separately, allowing us to see which messages drive interest for each mind-set. This approach aligns with decades of behavioral science showing that segmentation improves communication effectiveness by matching messages to the needs and preferences of specific groups [4]. The mind-sets identified here—risk-focused, convenience-driven, and family-motivated—illustrate how different people prioritize different aspects of the same health topic. These differences matter

because they determine whether a message is ignored, noticed, or acted upon, which directly influences health outcomes. By mapping these mind-sets, the backgrounder provides a practical tool for designing communication that fits the way people actually think rather than the way experts assume they think.

The combination of AI and Mind Genomics creates a new kind of learning system that helps people understand complex health topics quickly, accurately, and personally. AI provides rapid access to scientific evidence about nutrition, obesity, and diabetes, summarizing large bodies of research that would otherwise take months to read and interpret [15]. Mind Genomics complements this by showing how people interpret that evidence in daily life, revealing the specific ideas that motivate action for different mind-sets [8]. This dual approach respects both the scientific complexity of metabolic disease and the psychological complexity of human decision-making. It also supports the creation of training tools that help learners move from facts to understanding, and from understanding to action. By integrating these two systems, we create a backgrounder that is not only informative but also practical, because it teaches both the science and the human response to the science. This combination represents a promising direction for future health communication, education, and intervention design.

The findings from this work point toward a future where health communication becomes more personalized, more data-driven, and more responsive to the ways people actually think about nutrition, obesity, and diabetes. Evidence shows that personalized communication improves engagement, comprehension, and behavior change, especially when messages match the motivations and cognitive styles of the intended audience [16]. Mind Genomics provides a structured way to identify these motivations, whereas AI provides the speed and scale needed to update information continuously as new research emerges. Together, these tools support a dynamic learning system that can adapt to different populations, different contexts, and different communication goals. This approach also encourages researchers and practitioners to move beyond one-size-fits-all messaging and toward segmentation strategies that respect human diversity. It further suggests that future interventions should integrate behavioral insights with scientific evidence to improve both understanding and outcomes. By embracing these principles, the field can create communication

systems that help people make better decisions about food, weight, and health in ways that fit their lives and mind-sets.

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