Technical Paper on health benefits of Good Idea Drinks
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May 2018

Good Idea Drinks: Making the Solution the Solution

I. Overview

The project's aim is to explain the ways Good Idea Drinks promote health. In other words the project draws on the broad array of research which demonstrates that this innovative beverage solution is a health solution for dysmetabolism.

Good Idea drinks are a beverage with "metabolic leverage." The idea behind Good Idea is to innovate a solution for better health and a treatment for dysmetabolism. Good Idea's "metabolic leverage" begins by recreating the soda-drinking experience and using natural flavors without sweeteners. Good Idea doesn't stop there. It sets a benchmark for what beverage purveyors offer, by adding mineral chromium and amino acids to further support metabolism. This technical paper explains the rationale for the four components of Good Idea's "metabolic leverage."

1. Drinking a beverage is an experience that begins even before the beverage is held to the mouth and consumed. It engages all the senses in a manner which is highly studied by the beverage industry for purposes of marketplace advantage. Good Idea reproduces the soda drinking experience with a product that uses these to create a healthful substitute.

2. Good Idea is flavored naturally and without sweeteners. The health importance of avoiding caloric beverages is well-established. Untoward metabolic effects of artificial ingredients such as sweeteners, flavors and dyes are more recently characterized. Natural flavors are bioactive in metabolic processes.

3. The term "mineral water" has come to mean water with sodium ions. Good Idea broadens the definition. It is the first soda beverage to add mineral chromium for metabolic benefit. In the setting of chromium deficiency, adding chromium to water can be expected to improve the taste/desirability and aid insulin signaling.

4. Good Idea includes amino acids in order to improve the metabolic response to an upcoming meal. Here the primary aim of amino acids is not correction of dietary insufficiency but timely information to coordinate metabolic processes such as secretion of stomach acid, insulin release and satiety signaling.

Good Idea leverages recent research findings. To create its entrepreneurial solution, Good Idea draws on emerging science across many fields. These fields are diverse and include the oral microbiome, analytical chemistry technologies, marketing psychology, new medical therapies, genome wide

association studies known as GWAS, regenerative medicine and human anthropology. With technologies not possible as recently as a decade ago, Good Idea has developed a treatment for health challenges of our time.

II. Defining the problem

What's the problem for which Good Idea offers a solution? The problem is the metabolic dysfunction which leads to declining health and the loss of vitality.

The problem is serious. It's more advanced than we sometimes appreciate, when viewed at the population level [1]. It's now observed in mortality statistics. The U.S. has measured a decrease in life expectancy for 2 consecutive years [2].

The problem is a familiar one. I say familiar because most papers on the topic characterize the problem. Scientific research identifies more causes and ever-growing complexity. Papers continue to publish more diagnoses for the shortening lifespan.

The problem may be simpler than we make it. The problem facing us is reminiscent of the observations of the medieval Franciscan friar William of Occam. Occam taught philosophy, stating not to multiply things unnecessarily. A single unifying explanation is more likely to be correct. When his students of theology provided too many explanations, Occam said his razor of logic would shave the theory off. Now known as Occam's Razor, this concept has been applied to medicine and public health. The diagnosis of dysmetabolism provides a single unifying explanation for many of the chronic diseases of our time.

III. Why healthful substitutes are a good idea

Good Idea has many health benefits, the simplest and most straightforward is that it is a soda substitute. Substitution is one of the most effective ways to change behavior. The assertion that substitution can favorably modify behavior is supported by evidence from different areas.

- What makes a health solution effective has been particularly well-studied for worker safety and the broader science of preventive medicine. One effective category is engineering controls such as cars that don't start until the driver's seatbelt is fastened. This is effective because it takes away the choice. Another category is regulation such as a tax on soda or cigarettes and enforcement such as ticketing traffic violations. Regulatory controls tend to be punitive. Substitution does give people a choice[3] and it is not typically punitive. People can continue to with their usual enjoyable behavior with minimal change, making substitution a sought after form of behavior modification.
- Substitution is endorsed in various health behavior change models such as Social Cognitive Theory, Theory of Reasoned Action/Theory of Planned Behavior, Integrated Behavior Model, and Transtheoretical Model [4]. Everett Rogers' Diffusion of Innovation Theory is a model of adaptation or uptake of new technology first developed in 1962 and used today. Diffusion of Innovation Theory would characterize Good Idea as compatible with what is currently used,

simple, easy to try, and with observable effect. These characteristics would make Good Idea an innovation which can successfully be adopted [5].

- The beverage industry used substitution effectively in the 1990s when the effects of caloric beverages industry-wide diet soft drinks. The lack of public health benefit was not due to failed behavior change but due to an ineffective substitution. This technical paper later presents the science on the metabolic effects of diet sodas.
- Substitution makes it possible to adopt a more healthful behavior without giving up the experience. Since giving up the experience steepens the slope for behavior change, being able to engage the senses in the same way makes the health behavior easier when the substitute creates a similar experience. The beverage industry has masterfully studied every imaginable angle and facet of the soda-drinking experience. They leveraged this proprietary information to make the diet soda substitution successful from a behavior change perspective.
- Substitution enables the beverage experience to evoke positive memories. Recent research on food aversions has helped inform our understanding of food memories in general [6]. Food aversions arise from negative memories associated with a food or beverage. The experience of the mind has physical consequences. Even years after the memory the person's physical ability to digest that particular food is compromised. The converse is true. Various marketing strategies aim to associate positive memories with the food or beverage [7]. When a beverage is new it is possible to "give" someone positive memories. The powerful role of memory and how substitution can transfer memory is well–established. Interestingly it is explored in youth fiction. The Newberry Award winning book The Giver by Lois Lowry received literary recognition for exploring the transfer of memory. Substitution serves as an expedient way to transfer memory.

A substitute is only effective however when its users accept it as such. For Good Idea that prompts us to consider how to effectively recreate the soda-drinker's experience.

Most of the research on the soda-drinker's experience is conducted by industry and is proprietary. Some of the findings are published in the academic literature. Here I present facets of the soda-drinking experience addressing each of the senses.

The first sense typically evoked is the sense of sight – attractively designed soda cans. This is followed by the sense of touch. Reaching into the fridge for the chilled metal evokes the expression "I've got a grip on it." The sound of opening a soda can with the burst of fizz, is a distinct sound announcing an enjoyable food experience. In this way it makes a valid analogy to Pavlov's study with the bell and food. Carbonation is an important part of the taste combined with citrus and mango. Carbonation also engages the sense of olfaction. The beverage's scents are enjoyed as bubbles rise into the nasal passages and via retronasal olfaction. Dr. Alan Hirsh has written extensively on this topic [8]. **Figure 1** provides an image to convey Good Idea's multi-sensory features.

Figure 1. Good Idea as soda substitute with acidic alkalinizing properties. The image of the Good Idea beverages conveys that it engages multiple senses to enhance its effectiveness as a substitute for soda. The pH litmus paper measures that Good Idea remains acidic as the soda flattens.

Focus groups and clinical studies on behavior change can add detail to the effectiveness of Good Idea as a soda-drinker's substitute. The marketplace is generally considered the ultimate study for consumer satisfaction. The basis for the substitute is effective.

IV. Natural flavors offer health advantage even though it places them at a marketing disadvantage

Good Idea Drinks provide nutrients which support metabolism. These should not be confused with synthetic chemicals which create dependence and mild withdrawal in their absence.

Flavor engages the chemosenses of taste and smell. Flavors are therefore neuroactive. They interact with the complexities of the central nervous system [9].

Flavors promote digestion. The sense of smell gives the digestive system a head start. Digestive juices are formed in the salivary glands and parietal cells of the stomach. The more prepared the digestive system is the less the chance of indigestion, heartburn and allergy which sometimes require medications. These medications have underdiagnosed adverse metabolic effects [10] [11].

Citrus flavors such as orange and lime are named citrus because of their citric acid content. Citric acid is acidic by pH. Stomach acidity enhances the uptake of minerals and protein. All Good Idea drinks contain citric acid and the pH is under 4, before and after the carbonation has effervesced (**Figure 1**).

Citric acid is acidic by pH, its physical chemistry. Biochemically it is alkalinizing because it donates citrate/bicarbonate to the citric acid cycle. Alkalinizing factors offset the acidifying factors of a Western diet, and in this way they promote anabolic pathways [12].

A third positive feature of citrus foods is that they have been shown to influence the rate at which nutrients enter the metabolic pathways. For example, naringenin found in grapefruit occupies the p450 enzyme so that caffeine is metabolized at a slower rate [13].

Flavors can limit caloric intake. Seasonings such as herbs, spices, extracts and oils have been successfully used to achieve satiety with fewer calories. One mechanism by which the chemosenses achieve this is through evoking the neuropathways of memory [9]. Here I relay an example from my professional experience. A youth engagement program I researched and developed at Johns Hopkins provided an anecdote which highlights this important statement [14]. A high school student who recently came to the U.S.A. as a refugee from Central America recalled how she climbed the mango trees on her way home from school. In the U.S. her favorite fruit was only available to her as a juice, due to cost and availability. The mango juice she used did not meet the criteria for "juice." It was called "nectar" and included high fructose corn syrup. What this teenager wanted most was not the calories, but the flavor of mango because it connected her to comforting memories of her now war-torn homeland. An unsweetened mango beverage with natural flavors such as Good Idea would have satisfied her taste.

Limiting caloric intake from beverages is important since it provides more metabolic leverage than reducing food calories. This isn't surprising since non-caloric water is the beverage for which the human metabolism has evolved. However the health importance of making unsweetened beverages enjoyable to drink isn't fully appreciated until one considers the other options. Most no-sugar-added beverages contain artificial sweeteners along with other artificial flavors.

The human system of satiety is too complex for science to yet explain how satiety from beverages is mediated differently than food satiety. The scientific community agrees on the complexity of satiety, and also that beverages are a bit of a "curve ball." Experts agree that beverage calories promote weight gain at a faster rate than do food calories. What experts disagree on is how to apply this information. Some scientists use it to promote diet soft drinks, claiming that it's only calories that matter. Other scientists and clinicians reason that if science doesn't yet have the wherewithal to fully explain satiety from natural mediators, it can't safely regulate artificial additives.

Despite the complexity, science has already shown that artificial additives affect central nervous system functions which include food cravings and appetite. This has been demonstrated by the artificial chemicals which mediate sweet taste [8]. Several artificial colors commonly used to enhance the appeal of beverages demonstrate central nervous system affects [15]. These findings add to the understanding that artificial flavors create chemical dependence.

Artificial sweeteners have been long-suspected by clinicians to accelerate diabetes despite the lack of imposed calories. The effect is now shown in studies. Recently the physiologic mechanism has been elucidated [16].

Genetic variation contributes to why artificial sweeteners cause adverse effects in some consumers and not others [17]. This is not surprising, since additives are chemicals which did not evolve with people. A recent chance GWAS finding illustrates this point [18]. It demonstrated that sour taste from food or esophageal reflux stimulates synthesis of a highly conserved gene for balance in the inner ear. A biologic connection between sour taste which is mediated by hydrogen ions (H+) and vestibular balance was not theorized previously. Yet one can imagine that a lactating mammal's ability to hold tight when fleeing predators could be a survival advantage.

The microbiome including the oral microbes signals appetite, food selection and cravings [19]. In the past two decades research on the microbiome continues to amaze. What organisms inhabit the microbiome is modifiable through diet [19]. Chemicals in food change the intestinal environment giving select microbial species a competitive advantage.

The science is emerging but applying the science to find healthful solutions has been slow. The beverage industry has been reported to have contributed to the delay in public health progress [20]. The motivation for this industry interference with science is high since chemical dependence drives brand loyalty. Chemical dependence is a powerful marketing tool, not accounted for in the health behavior models described above. Anyone developing a healthful beverage should be aware of the marketing riptide created by chemical dependence on artificial additives.

V. Why we know dietary chromium is a good idea

Trivalent chromium is an essential trace mineral with deficiency states

Scientific Evidence for Musculoskeletal, Bariatric and Sports Nutrition was first published in 2006. The medical reference book included a chapter on chromium. It was authored by Dr. Richard A. Anderson whose career with the United States Department of Agriculture, Agricultural Research Service included research on the insulin sensitizing nutrients chromium and cinnamon [21]. As a way of benchmarking the state of the science in 2005 I reproduced my editor's chapter note here.

Table 1. Overview of trace mineral chromium in 2005

Editor's note
Chromium (Cr) is an essential trace mineral present in human tissues at concentrations less than 1/100th that of iron. These are concentrations so small that only recent technologic advances have made measurements possible. Cr influences specific enzymes in the insulin signaling pathway that lead to increased insulin sensitivity. Insufficient Cr is associated with insulin resistance, resulting in gradual, unfavorable changes in body composition. There is evidence that whereas Cr intake may have only decreased slightly in the recent decades, the body's demand has increased appreciably because of modern-day stressors and refined carbohydrates, which increase Cr losses. Patients on prednisone, persons with insulin resistance, and persons experiencing physical stress have demonstrated benefits from additional Cr intake.

Mineral deficiency states can occur even when dietary intake is adequate. This is because having adequate minerals depends on absorption and excretion.

Metals compete for absorption. For example when dietary calcium is present the uptake of toxigenic lead is reduced. Supplemental calcium reduces absorption of magnesium. Since iron and chromium use the same transporter, iron supplementation impairs absorption of chromium [21]. Primary hemochromatosis where the regulation of iron uptake is a disease condition is associated with diabetes.

The same logic has led to the hypothesis that supplementing iron without chromium may contribute to the development of gestational diabetes, a theory that has not been disproven.

Trace minerals, while essential, are metabolically dangerous. Their metabolic interactions generate free radicals. Biologic systems incorporate metals into protein structures which are sometimes referred to as "chaperones," a term first applied to copper transport by Dr. Valeria Culotta of Johns Hopkins University. In the presence of free radicals and few chaperones mineral absorption has been observed to decrease and excretion increases. This has been described in common clinical conditions such as anemia of chronic disease with relative iron deficiency. It has been described in immune suppression following physical exertion with relative zinc deficiency.

The modern diet contains less chromium and the chromium which is present is less well absorbed due to various dietary factors. Soil depletion has been cited as a cause as are glyphosate residues [22]. Less recognized is the contribution from irradiation of dietary chromium sources such as meat, fish and eggs. Irradiation would be expected to reduce the amount of available trivalent chromium.

The inflammatory milieu in the human gastrointestinal tract compounds chromium deficiency, mostly by reducing uptake of chromium. The modern diet is inflammatory due to what is added such as emulsifiers and artificial sweeteners and to what is taken out such as fiber and specific antioxidants. The net result is that carbohydrates have a higher glycemic index and are more likely to sensitize the immune system as is happening population-wide with gluten.

Inflammatory diets adversely affect chromium in yet another way. They are known to promote inflammatory bowel disease, asthma and dermatologic conditions which sometime require steroid medications for treatment. Steroid medications decrease the body's chromium stores. Inflammatory diets are also known to worsen gastroesophageal reflux and esophagitis which sometimes require medications which reduce stomach acid production and therefore reduce chromium absorption.

Chromium deficiency has clinical manifestations

Another important aspect of the 2005 retrospective provided by Dr. Anderson's book chapter drawing from his intramural research at the USDA are the list of signs and symptoms of chromium deficiency observed in humans.

Table 2. Signs and symptoms of chromium deficiency in humans established by 2005

TABLE 11.1
Signs and symptoms of chromium deficiency observed in humans

Impaired glucose tolerance
Elevated circulating insulin
Decreased insulin binding
Decreased insulin receptor number
Glycosuria
Fasting hyperglycemia
Hypoglycemia
Elevated cholesterol
Decreased HDL cholesterol
Elevated triglycerides
Increased ocular eye pressure
Decreased lean body mass
Increased fat mass
Increased body weight
Gestational diabetes
Steroid-induced diabetes
Type 2 diabetes
Atypical depression
Peripheral neuropathy
Encephalopathy

Note: All these signs and symptoms except the last two have been observed in normal free-living subjects consuming their normal diets.

An emerging update to Dr. Anderson's list may be fragility fractures. Chromium may have dual roles in protecting against fractures. It strengthens the bone itself [23] and strengthens the muscles that support the bone. The dysmetabolism associated with chromium deficiency may contribute to fragility fractures according to the Look Ahead [24].

The clinical signs of chromium deficiency are widespread and overlapping with the other causes of dysmetabolism. Until recently trace minerals existing in picomolar levels in the bloodstream have not been able to be studied because the concentrations were below what scientific equipment could detect.

Critics of the chromium deficiency state challenge the existing data by saying that chromium's contribution to the dysmetabolism epidemic is unstudied or inconclusive[25]. However that criticism has lost scientific merit for two reasons:

Epidemiologic studies would be needed in order to identify the relative risk of chromium deficiency in the population at this time. Such a study would be difficult because of the known interaction among the variables. Once conducted the study would not be generalizable to other populations since chromium deficiency is medically understood to be more common in certain disease states and among certain populations.

The second reason the critique is flawed is important. Chromium interacts with the other causes of dysmetabolism such as stress, steroid medications, food selection and unfavorable macronutrient partitioning. The research on chromium is therefore problematic for epidemiologic studies which did not account for chromium as a contributor or consider the potential for interaction.

The salient conclusion is that chromium deficiency as part of the cause can be corrected and thereby be part of the solution. The concluding statement of Dr. Anderson's 2005 book chapter reads, "may be a safe and inexpensive aid to improved glucose and insulin metabolism and body composition." In other words, he concludes that it's a good idea.

Chromium may influence food and beverage selection

The 2005 list of the signs and symptoms of chromium deficiency has an omission. It does not include carbohydrate cravings. The original research comes primarily from animal husbandry, where ascertaining information on taste perception and cravings would understandably not be conducted. In clinical human studies taste and cravings can be quantified but until recent neuroimaging, having only subjectively been measured with Likert scales.

Throughout history water has been "mineral water." It is a source of the full spectrum of electrolytes and trace minerals. Minerals are bioactive in specific metabolic roles. With minerals dose makes the difference between a medicine and a poison. Therefore there is a host survival advantage to being able to obtain each needed mineral at the optimal amounts.

Purveyors of dietary supplements have promoted chromium to quell carbohydrate cravings for three decades now. For some dieters the benefit is observable. The mechanism(s) is (are) not yet elucidated. It is theorized here that chromium deficiency influences food selection by conferring cravings, separate from glucose signaling. Bioactivity of minerals includes modulating beverage selection. This can be achieved by methods which are not well understood.

1. Taste is a mechanism. Carbohydrate-rich foods and beverages such as baked goods and beer are a source of chromium. Cravings for carbohydrates may therefore be cravings for chromium directly. This may be mediated by metalloproteins. Taste perception has been used as a measure of nutrient status for zinc[26], iron[27], sodium and iodine.

2. Carbohydrate cravings may be mediated by the human microbiome. Yeast in the microbiome is observed to signal cravings for carbohydrates. Cells take up chromium into cell wall proteins. This is what makes yeast and foods such as bread and beer prepared with yeast sources of chromium. Chromium acquisition may give yeast a competitive survival advantage.

   Most research has been on the gut microbiome, but the oral microbiome is distinct and may the location of signaling for cravings. The microorganisms in the gingival crevices are acquired with dentition, later in development than the gut microbiome. Dental crevices have spirochetes which have demonstrated neuroactive properties. The work of David Kennedy DDS has laid a foundation for future research here [19].

3. More recently genetics have been theorized to play a role. Nutrigenomics, proteomics, and metabolomics are relatively new fields of study sometimes called the omics. They influence food selection and disease risk, effects mediated in part by minerals such as chromium.

Clinical observations and studies in bariatric medicine indicate that chromium supplementation can aid cravings. If the supplement tastes good then it is more likely to be beneficial. Given the number of plausible mechanisms beyond the placebo effect, patients may want to field-test chromium supplementation. There is individual variability with more benefits for those who find the taste agreeable. In sum, the science is accumulating to suggest that carbohydrate cravings may be among the signs and symptoms of chromium deficiency.

VI. Amino Acids promote good timing

Protein synthesis and repair is an ongoing 24-h a day process. A total of 1 to 4 % of muscle protein is replaced daily. When intake of essential amino acids is insufficient, whether from binge eating, skipping breakfast, malabsorption, a poor quality diet, or intensive weight reduction, protein maintenance declines and damaged proteins become more common [28].

The external environment also places demands on protein metabolism. The U.S. military has researched this in the extremes of high thermal demands of extreme cold, high latitude environments where vitamin D is low when not supplemented, and high altitude such as Pikes Peak Colorado where their research has been conducted [29]. Dr. Andrew Young of USARIEM had led these studies, some of which have demonstrated benefit from protein and specifically branched chain amino acids [30].

Yet until recently protein or amino acid supplementation was limited to malnutrition. Protein deficiency is defined based on studies conducted at the time when malnutrition was the primary public health concern. In fact the ICD 10 code used is called protein-calorie malnutrition, unspecified severity. Emphasizing the total protein intake to meet daily requirements overlooks how amino acid supplementation may be most effective in the epidemic of dysmetabolism.

To broaden the use of amino acid supplementation Dr. David Minkoff used net nitrogen utilization to assess the amount of protein needed for maintenance of muscle and other protein structures. His oral amino acid supplement has been shown to improve net nitrogen utilization in the setting of dysmetabolism [31].

Dysmetabolism involves the breakdown of insulin signaling. A side effect of dysmetabolism is the demand for energy substrate, usually glucose. But if glucose is not available dietary protein and the body's protein structures are catabolized and used as substrate, energy. Metabolically this is shortsighted and comes at high metabolic cost. Leftover nitrogen from protein catabolism must be excreted and reacquired. This is the rationale used by some clinician scientists who supplement their patients with amino acids during medically supervised weight loss [28 30 32-34]. A patient with impaired insulin release would catabolize protein instead of fat when glucose is in short supply.

The epidemic of dysmetabolism is not primarily about adequate protein intake as it is coordinated protein uptake and utilization. The chronic diseases of dysmetabolism are associated with an uncoupling of biologic processes. The metabolic and many other systems involved in a meal don't come together in their usual coordinated fashion. The breakdown in coordination is a cross-specialty challenge presented here:

- Stomach acid production has become uncoordinated by grab and go style eating. It doesn't produce sufficient acid for optimal digestion. A beverage with an acidic pH as shown in **Figure 1**, taken prior to a meal, can help coordinate absorption of protein.
- Protein consumption is uncoupled from alkalinizing nutrients. Taking a once-a-day vitamin may provide the nutrients the body would need but not necessarily at the time they are needed. Protein coupled with alkalinizing nutrients promotes the utilization of amino acids for building proteinaceous structures.
- Relaxation has become uncoupled from the digestive process. Meals were times to relax, a lost experience in the grab-a-bite pace of life common today.
- The signal for thirst is confused with hunger, especially now that beverages represent a significant dietary source of calories and high intensity (artificial) sweeteners.
- The research behind the World Health Organization's oral rehydration solutions demonstrate that added protein promotes hydration. But diarrheal disease management is not requisite to derive the protein benefits for hydration. The dehydration associated with dysmetabolism responds to beverages with amino acids as well.

Thus, branched chain amino acids potentially make dieting easier. Why is that important? Because intensive lifestyle intervention does improve body composition. It then stands to reason that if lifestyle intervention can be made easier more people would participate and succeed.

VII. Summary

The practice of medicine now demonstrates the benefit of combination therapies over single and sequential therapies. Multiple modalities used together are synergistic. Good Idea drinks are a combination treatment for dysmetabolism. The beverage combines the behavior strategy of substitution, bioactive natural flavors to favorably influence neurosignaling, repletion of the mineral chromium and improved metabolic response with branch chain amino acids.

The public health impact of Good Idea may be greater than can be appreciated from clinical studies. The lines of reason for this assertion are several.

- The perceived taste of Good Idea may parallel the experience of Pedialyte with zinc [26], miso soup with iodine, Epsom salts with magnesium and ice with iron [27]. In all of these beverages the perceived taste is enhanced during a deficiency state. Once the consumer or patient has repleted the mineral stores the perceived taste is less desirable. In this way added chromium may confer added desirable taste when chromium is deficient and therefore most beneficial.
- Research studies use breakfast because it is a controlled meal, not because it is the meal where dysmetabolism is most pronounced. The diurnal pattern of insulin release shifts with dysmetabolism [35] and has been referred to as Night Eating Syndrome. Thus, if Good Idea is consumed in the afternoon or later the benefit of glucose stabilization may be higher. It may also improve hydration at a time of day when dehydration is common.
- The times when Good Idea would most beneficially accompany a carbohydrate-rich meal would be during exercise, travel, mental stress and surrounding elective surgery [36]. Since these

times are outside of the usual study protocols, free-dwelling use of Good Idea may be timed to be even more effective.

- The people who may most welcome Good Idea are the people who would be drinking a soda anyhow and they are using Good Idea as a substitute. Giving soda drinkers an alternative to sweeteners and other artificial additives increases Good Idea's net public health impact.
- Good Idea's meritorious metabolic effects make it a potentially highly attractive combination product. For example, a health practitioner may choose to prescribe Good Idea when taking a medication associated with weight gain and carbohydrate cravings.
- Good Idea has the potential to have further metabolic impact. An area of future research may be around Good Idea's potential to improve gastrointestinal integrity. This could be achieved with eating a certain food when drinking Good Idea or adding a specific nutrient to the Good Idea propriety ingredients.

Good Idea can leverage its current research using the rationale above. This may be especially important because of the competition. The beverage industry uses chemical dependency from artificial ingredients to their marketing advantage [20]. This is not censored the way the addictive properties of sugar are now beginning to be regulated. Good Idea will therefore need to maximize the "feel good" benefits to achieve brand loyalty. Good Idea drinks have potential for public private partnerships, and these partnerships will be valuable in disseminating the solution that's a health solution.

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