

Power of placebo: Here is how the ‘belief effect’ influences our views on nutrition, pain and mental health

There is a fascinating interplay between the power of belief and its profound impact on our corporeal health and nutrition. From the intriguing ability of belief to shape our perception of food to its remarkable sway over our hormonal responses, the connections between what we think, what we eat, and how it affects our bodies are powerful.

What is becoming more and more clear is that expectations and predictions have a very strong influence on basic experiences, on how we feel and what we perceive. Doing anything that you believe will help you feel better will probably help you feel better.

– Dr. Leonie Koban, Ph.D., Neuroscience and Affective Sciences, Lyon Neuroscience Research Center

What is the Belief Effect?

The Belief Effect occurs when patients’ expectations and beliefs play a substantial role in determining their health outcomes. It mimics the brain’s capacity to produce real physiological responses in the absence of any active treatment or intervention.

Faith and attitudes can influence the release of neurotransmitters, [hormones](#), and immune system responses, all of which can affect the body’s functioning.

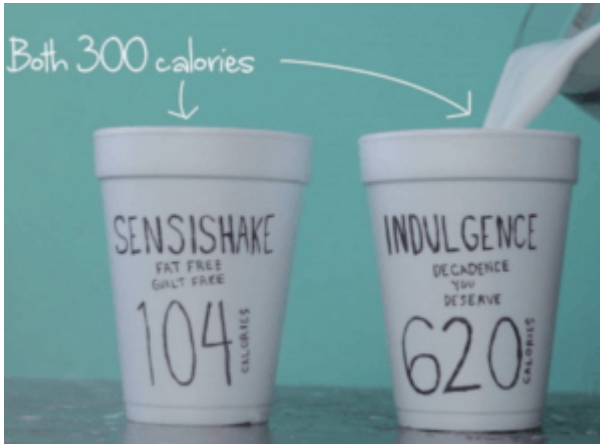
Scientific evidence

Numerous studies have detailed the intricate relationship between belief, nutrition, and health, shedding light on how our cognitive processes can significantly impact our well-being. How else does the Belief Effect play a pivotal role in shaping our nutritional choices and health outcomes?

How your beliefs shape nutritional health

The Ghrelin Response

In a study published in the journal [Psychosomatic Medicine](#), researchers examined the influence of expectation on ghrelin, the hunger hormone.



Participants were given identical milkshakes, but they were told that one was a “decadent indulgence” and the other a “sensible, low-calorie choice.”

Remarkably, those who believed they were consuming the indulgent shake showed a more significant increase in ghrelin levels or an increase in the feeling of hunger or being unsatisfied with the meal, even though both shakes had the same nutritional content, those who had the “sensishake” felt less hungry, or had a lower ghrelin level.

The flavor perception

A study published in [Appetite](#) investigated the relationship between beliefs about food healthiness and taste perception. Participants were presented with identical food items but were led to believe that one was healthier than the other.

The results showed that individuals who believed the food was healthier rated it as more flavorful, demonstrating the influence of belief on taste perception. The person’s belief or how she/he interprets (inter-presents or internally represents) [directly governs the biological response or behavior](#).

Another remarkable [study](#) involved a woman who suffered from split personalities. At her baseline personality, her blood glucose levels were normal. However, the moment she believed she was diabetic, her entire physiology changed to become that of a diabetic, including elevated blood glucose levels.

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Diet & nutrition

Belief in the effectiveness of a specific diet can have a profound impact on dietary adherence and

outcomes. A study published in the [Journal of the American Medical Association](#) (JAMA) explored the influence of belief on weight loss.

Participants who had strong beliefs in the efficacy of a particular diet were more likely to adhere to it and achieve better weight loss results compared to those with less conviction. (This is one I personally need to subscribe to—I typically last about a week on a new dietary regimen before getting off track.)

The belief effect extends to nutrient absorption, as well. [Studies](#) have shown that believing you are consuming a nutrient-rich meal can enhance your body's ability to absorb those nutrients. Your faith in the nutritional value of a meal can impact how efficiently your body extracts [vitamins](#) and minerals.

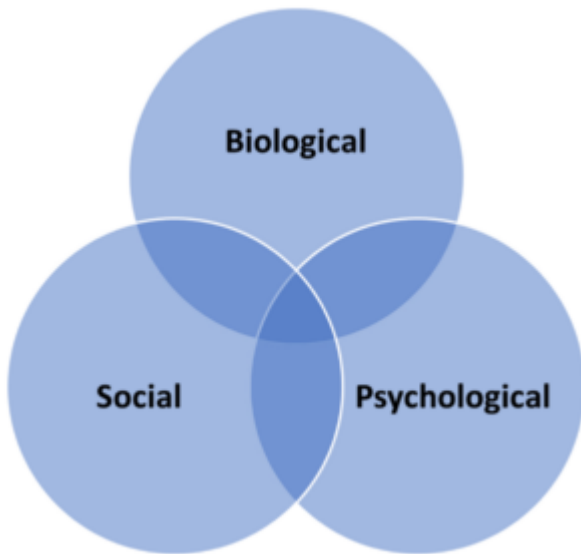
Metabolic response

Our metabolic response to various foods can be influenced by our beliefs in their healthiness. A study published in the Journal of [Behavioral Medicine](#) investigated the effect of belief on post-meal metabolic markers. Participants who believed they were consuming a healthy meal exhibited more favorable metabolic responses, including improved insulin sensitivity, compared to those who believed the meal was unhealthy. Incredible what the mind can do!

There's also a dedicated podcast on the connections between neuroscience and human behavior: [The Huberman Lab podcast](#), hosted by neuroscientist Dr. Andrew Huberman, explores topics related to the impact of beliefs on health.

In a recent episode, Dr. Huberman emphasized the vital importance of understanding [how belief affects our overall well-being](#). In this episode on [mindset and health](#), Dr. Huberman explores the impact of diet, is actually a combined product of what you are doing, what you are thinking about, your stress, your anxiety—the interconnectedness of your mental and physical self.

Belief Effect extends far beyond nutrition



Let's briefly examine just some of the ways the Belief Effect

impacts overall health.

Pain management: [Studies](#) have shown that individuals who believe they are taking a potent pain reliever but are actually ingesting a placebo often experience reduced pain perception. This demonstrates the brain's ability to release [endorphins](#) and modulate pain signals based on belief alone.

Mental health: Faith in the effectiveness of psychotherapy or medication can significantly improve [mental health outcomes](#). Positive expectations can lead to reduced symptoms of depression and anxiety.

Immune function: Belief can [influence immune responses](#), affecting the body's ability to fight off infections and diseases. Optimistic beliefs and positive attitudes have been linked to improved immune function.

Cardiovascular health: Belief in the benefits of lifestyle changes, such as exercise and dietary improvements, can lead to [better cardiovascular outcomes](#), including lowered blood pressure and cholesterol levels.

These studies provide robust evidence supporting the notion that belief can significantly influence nutrition and health outcomes. Recognizing the power of belief in shaping our dietary choices and metabolic responses underscores the importance of a holistic approach to health that includes both physical and psychological factors.

The bottom line

Science backs up the assertion that your beliefs and perceptions about food can shape not only your dietary choices but also how your body responds to the nutrients you consume. Harnessing the positive aspects of the Belief Effect, such as having faith in the nutritional value of your meals and making informed dietary choices, can contribute to improved health outcomes.

Hayley Phillip is from the Central Valley of California and a graduate of the University of California Santa Barbara with degrees in Sociology and Marketing. She moved to New York shortly after graduation, and has expertise in navigating the jungle of misinformation, misleading labels and “fake” diet and health claims.

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