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The Light = Healthy Intuition

Yi Lia,*, Nico Heuvinckb,c, Mario Pandelaere d,e

a Macquarie University, 3 Management Drive, Macquarie University, NSW 2109, Australia
b IESEG School of Management, 3, rue de la Digue, 59000 Lille, France
c LEM-CNRS 9221, 3, rue de la Digue, 59000 Lille, France
d Virginia Tech University, 2016 Pamplin Hall, 880 West Campus Drive, Postal Code: 0236, Virginia, U.S.A.
e Ghent University, Tweekerkenstraat 2, 9000 Gent, Belgium

*Corresponding author at: Macquarie University, 3 Management Drive, Macquarie University, NSW 2109, Australia

E-mail addresses: yi.li@mq.edu.au (Y. Li), n.heuvinck@ieseg.fr (N. Heuvinck), mpand@vt.edu (M. Pandelaere).

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**The Light = Healthy Intuition**

**Abstract**

This research documents a “light = healthy” intuition, such that consumers perceive foods that weigh less are healthier than their heavier counterparts with the same serving size. Subsequently, consumers consume a larger quantity of lighter-weight foods. The intuition is based on a co-activation of two meanings of the word “light”: light in physical weight and light in calorie content. An implicit attitude test finds support for this association between physical weight and food healthiness. Two studies show that physically lighter foods are perceived to be healthier because they are assumed to contain fewer calories. In line with the proposed co-activation mechanism, the intuition is bi-directional, where consumers also expect healthier foods to weigh less. Consequently, they discredit health claims issued for heavier foods. Finally, it was found that activating a competing intuition is effective at debiasing the “light = healthy” intuition.

**Keywords:** food healthiness, physical weight, light, intuition, homograph, associative learning, food consumption
The Light = Healthy Intuition

Food decisions are important but a recent survey indicates that 80% of consumers are confused about them (Food and Health Survey Report, 2018), presumably owing to the prevalence of diverse health claims in marketing communications (André, Chandon, & Haws, 2019). As a result, consumers rely on contextual cues for food choices, even if these are not diagnostic for food healthiness. Prior research documents several contextual factors that influence perceived food healthiness and food decisions. For example, consumers believe that more expensive foods are healthier (Haws, Reczek, & Sample, 2017) and that tastier foods are less healthy (Raghunathan, Naylor, & Hoyer, 2006). In this research, another ubiquitous cue that consumers use to infer food healthiness is identified: physical weight.

Weight information is widely available; in restaurants, the total weight of a steak or fast-food hamburger (e.g., quarter-pounder) tends to be communicated more often than their calories. Food and Drug Administration (FDA) guidelines require all packaged foods to indicate weight information as quantity indicators on both the front of the package and the top of the nutrition table (https://www.fda.gov/media/81606/download). During both purchase and consumption, consumers experience the haptic sensation of physical weight. We propose that the physical weights of foods can influence perceived food healthiness. Specifically, we posit and confirm a “light = healthy” intuition: Comparing two foods with the same serving size, consumers infer that the food which weighs less contains fewer calories and is thus healthier. However, this intuition is not diagnostic for assessing food healthiness. One serving of potato chips or popcorn is certainly lighter than one serving of baby carrots, but the former is by no means healthier.

Documentation of this intuition makes several contributions. First, we add to research investigating consumer lay beliefs and food evaluations. Prior studies have documented unhealthy = tasty (Raghunathan et al., 2006), healthy = expensive (Haws et al., 2017), and healthy = less filling (Suher et al., 2016) intuitions, predicting that consumers make a heuristic judgment based on learned associations (Chaiken, 1980, 1987; Chaiken & Eagly, 1983; Petty, Cacioppo, & Schumann, 1983). This study shows that consumers also associate food healthiness with physical weight and use this intuition to guide their food decisions. Second, this study contributes to research on cross-modal sensory effects. Prior research shows that sensory cues, such as temperature (Yamim, Mai, & Werle, 2020), texture (Jansson-Boyd & Kobescak, 2020), color (Madzharov, Ramanathan, & Block, 2016), glossiness (Ye, Morrin, & Kampfer, 2020), and ambient scent and sound (Biswas, Lund, & Szocs, 2019; Biswas & Szocs, 2019) can affect perceived food healthiness. This study
documents that haptic sensations of physical weight can affect perceived food healthiness, too. Finally, this research offers another nudge for healthy eating, beyond portion size effects (Cadario & Chandon, 2020; Zlatevska, Dubelaar, & Holden, 2014). Previous research has found that visually reducing the portion size lowers consumption volume (Chandon & Wansink, 2011; Wansink, 2004). In this research, while we keep both the actual and perceived portion size constant, we still influence people’s consumption quantity by varying the physical weight of the package.

**Theoretical Background**

The word *light* is a homograph; it can express different meanings. Through activation spreading in the associative network of memory (Anderson, 1983; Collins & Loftus, 1975), the different meanings are all activated when consumers encounter the word *light*. When different meanings apply to the task at hand, they stay simultaneously activated, which may cause them to become associated over time through associative learning (Martin & Levey, 1978). Associative learning occurs when people encode a link between two elements (e.g., words, pictures), such that the presentation of one element activates the mental representation of the other. People tend to store associations when the elements are presented simultaneously or temporally contiguously (Dickinson, 2001; Janiszewski & Van Osselaer, 2000), even if they do not make logical sense (Brown & Bassili, 2002) or evoke conscious awareness (Jones, Fazio, & Olson, 2009; Moors & De Houwer, 2006). This association is strengthened with repeated co-activation (Anderson, 1983).

Homograph-generated associations have been demonstrated in research on metaphors. Weight implies both physical heaviness and importance (i.e., “weighty matters”), the association of these meanings leads people to perceive books that contain more important information as literally heavier (Schneider, Rutjens, Jostmann, & Lakens, 2011); people also assign greater importance to a subsequent task when they carry heavier items (Zhang & Li, 2012). Interestingly, similar associations are also found in homophones – reading “bye” increases people’s propensity to “buy” (Davis & Herr, 2014). We posit that this mechanism underlies the association between the two meanings of *light*: “low in calories” and “low in weight.”

Growing healthy eating trends have led to more foods adopting “light” labels to signal their healthiness. According to FDA guidelines, products using this label must meet one of three criteria, the most prominent of which requires “a third fewer calories, or no more than half the fat of the original version of the product” (https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/CFRSearch.cfm?fr=101.56). This
usage of “light” in foods provides the meaning of “low in calories.” When consumers encounter light labels, the other meaning of light, low physical weight, is also activated. This co-activation of “low in calories” and “low in weight” will lead consumers, over time, to associate these two meanings as they are both applicable to food assessments. Owing to a general tendency of consumers to equate low calories with food healthiness (Carels, Harper, & Konrad, 2006; Carels, Konrad, & Harper, 2007), this association leads consumers to develop a general idea that healthy foods weigh less. As learned associations tend to be bidirectional, we propose that consumers expect that 1) lighter-weighted foods are healthier (by virtue of containing fewer calories) and 2) low-calorie healthier foods weigh less.

The proposed light = healthy intuition has several important consequences. First, perceived food healthiness based on physical weight may directly influence consumption quantities such that people consume more of the lighter-weighted foods because of the healthiness halo. Second, the light = healthy intuition could discredit the “healthiness” appeals of heavier products. Consumers may be less likely to believe that a heavier product is also healthier. Finally, we propose a simple debiasing strategy based on the fact that healthiness is a multifaceted construct. Thus, activating another healthiness related intuition may offset the light = healthy intuition. The conceptual framework is illustrated in Figure 1.

**Study 1. Implicit Attitude Test**

Study 1 uses the implicit attitude test (IAT; Greenwald, McGhee, & Schwartz, 1998; Greenwald, Nosek, & Banaji, 2003; Carpenter et al., 2019) to confirm the association between physical weight and food healthiness.

**Method**

The study recruited 199 Amazon Mechanic Turk (MTurk) panelists (53.77% male, $M_{\text{age}} = 39.58$, SD = 11.93). Participants were asked to categorize images or words appearing in the center of the screen correctly to a category appearing on the left or right top corner of the screen, as quickly as possible. The study created four groups of stimuli (Appendix A): (1) low-calorie food images (e.g., veggie burger, oatmeal chips), (2) high-calorie food images (e.g., hamburger, potato chips), (3) words associated with “light-weight” (e.g., of little weight, easy to carry), and (4) words associated with “heavy-weight” (e.g., of great weight, difficult to carry). We created 11 pairs of food items and two items within each pair were of the same serving size. In line with established IAT procedures (Greenwald et al., 2003), participants completed seven blocks of categorization tasks (Table 1). We compared the response time between the congruent pair (“Healthy/Light” & “Unhealthy/Heavy”) block (block 4), and the
incongruent pair (“Healthy/Heavy” & “Unhealthy/Light”) block (block 7). The order of the blocks was counterbalanced.

Results and Discussion

Response latencies in the congruent pair were 1269.24 milliseconds (SD = 429.16) and those in the incongruent pair were 1475.51 milliseconds (SD = 449.54). The D-score was significantly greater than 0 (D = .49, SD = .47, t(133) = 10.98, p < .001, 95% CI = [.37, .53], Cohen’s d = .95), suggesting that participants responded significantly faster in assigning the stimuli when healthy and light were grouped together. These results support the proposed association between physical weight and perceived food healthiness.

Study 2. Infer Healthiness from Weight

Study 2 serves three objectives. First, we demonstrate the light = healthy intuition prompts consumers to infer food healthiness from weight information. Second, we confirm that calorie estimates drive perceived healthiness based on physical weight and rule out two competing mechanisms: food density and food fillingness. Keeping serving size constant, heavier foods might be perceived as less healthy as they have greater density, defined as the degree of food compactness (e.g., a piece of denser cake is heavier than a piece of fluffy cake) and/or because they are more filling, defined as the subjective assessment of whether a food satisfies hunger (Suher et al., 2016). Finally, as the “light” label refers mostly to low calorie and fat content, we propose that other health-related inferences (e.g., organic nature) may be limited.

Method

MTurk panelists (N = 177, 50.3% male, M_age = 39.48, SD = 11.54) participated in this one-factor (weight: light vs. heavy) between-subjects study. They read that Susan planned to make a chicken Caesar salad and found a recipe for a 300g portion that contained 400 calories. We provided the list of seven ingredients in the salad with the exact quantities (Table 2). In the light [heavy] condition, participants read that Susan followed this recipe and used exactly the same amount of ingredients and ended up with 250g [350g] of the salad. Thus, the difference between the actual and expected weight of 300 g was not a result of the changes in the ingredient portions, but in the type of ingredients used to make the salad. Participants chose from seven pairs of ingredients, which Susan most likely used to make the salad. Each pair contained one healthy ingredient and one unhealthy/regular ingredient. Four healthy ingredients were explicitly low in calories and the other three were described as organic (Table 2). Finally, participants estimated the calorie count of the salad, and evaluated its density and fillingness on a 9-point scale (1 = “not at all dense/filling,” 9 = “extremely

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Results and Discussion

Choice of ingredients. Separate chi-square tests for each ingredient showed that in the light condition, participants were more likely to choose healthy ingredients with fewer calories (Table 2) for all four calorie-related ingredients ($p$'s < .001). In contrast, for three ingredients indicating organic options, only organic eggs prompted a significantly higher choice share in the light condition ($p = .03$) and no difference arose for the other two ingredients ($p$'s > .08). Thus, we find that “light” reliably prompts inferences of low-calorie content but less reliable inferences of other healthiness dimensions (i.e., organic). Additional analyses were undertaken to compare the choices between low-calorie ingredients and organic ingredients in Appendix B.

Mediation test. As predicted, participants estimated that the salad contained more calories ($M_{heavy} = 437.05$, $SD_{heavy} = 96.89$; $M_{light} = 345.30$, $SD_{light} = 72.04$, $t(175) = 7.14$, $p < .001$, $d = 1.08$) and was denser ($M_{heavy} = 6.41$, $SD_{heavy} = 1.64$; $M_{light} = 5.55$, $SD_{light} = 1.73$, $t(175) = 3.38$, $p = .001$, $d = 0.51$) in the heavy condition. The difference in filling perceptions between the two conditions was marginally significant ($M_{heavy} = 7.17$, $SD_{heavy} = 1.28$; $M_{light} = 6.78$, $SD_{light} = 1.51$, $t(175) = 1.88$, $p = .06$, $d = 0.28$). Next, we summed the choice of four low-calorie ingredients as a general healthiness score and ran a mediation test (Process model 4; Hayes, 2018) with 10,000 samples entering the weight condition (1 = light condition) as the independent variable, the general healthiness score as the dependent variable, and calorie estimates, density, and fillingness as three parallel mediators. The mediation showed a significant indirect effect of calorie estimates ($b = -.38$, $SE = .10$, 95% CI = [-.59, -.20]). However, neither density nor fillingness was significant (Figure 2). The results support that light-in-calories drive perceived food healthiness in the light = healthy intuition. Study 3 tests whether consumers expect healthier food to weigh less.

Study 3. Infer Weight from Healthiness

Method

MTurk panelists (N = 300, 52.7% male, $M_{age} = 39.23$, $SD = 11.84$) participated in this one-factor (food healthiness: regular vs. healthy) between-subjects study. Participants in the regular [healthy] condition saw one traditional [healthy] chocolate cake containing regular ingredients (e.g., whole milk, sugar) [low-calorie ingredients (e.g., non-fat milk, stevia)]. Participants read that this type of cake’s weight was normally between 550g and 650g, and they had to guess the weight of the traditional [healthy] chocolate cake using a slider.
Results and Discussion

Participants gave a lower weight to the healthy cake ($M = 599.93$, SD = 27.03) than the traditional cake ($M = 608.87$, SD = 23.31; $t(298) = 3.07, p = .002, d = 0.35$). This indicates that people infer that food containing low-calorie ingredients weighs less than the regular counterpart. We replicated this finding using a within-subjects design in Appendix C.

Study 4: Consumer Responses to Intuition-Inconsistent Information

As study 3 demonstrated that consumers expect healthy food to weigh less than the regular counterpart, brands should design healthy products to weigh less than less healthy options. Otherwise, consumers may discount a healthiness claim as it is inconsistent with the light = healthy intuition. To test this proposition, we used two actual products: Kraft mayonnaise and Kraft light mayonnaise. In reality, the “light” version weighs more than the original version for equal serving sizes, which creates an interesting real-world case.

Method

344 MTurk panelists were recruited to participate in this one-factor (healthiness claim: intuition-consistent vs. intuition-inconsistent) between-subjects study. Participants read that a mayonnaise brand was launching a light version, and the original and light versions were packaged in identical jars. They imagined holding the jars of both versions in their hands and they sensed a weight difference between two jars. In the intuition-inconsistent [intuition-consistent] condition, the light mayonnaise was heavier [lighter] than the original version. Weight information on the jar stated that the light mayonnaise weighed 1440g [1248g], whereas the original weighed 1248g [1440g]. Thereafter, participants indicated to what extent they believed that the light mayonnaise 1) was healthier and 2) contained lower calories, and 3) how much healthier was the light mayonnaise to the original version (all measured on 7-point scales, 1 = “not at all/a lot less healthy,” 4 = “somewhat/equally healthy,” 7 = “very much/a lot healthier”). As an attention check, participants had to recall which mayonnaise weighed more.

Results and Discussion

After removing 70 participants (20.3%) who failed the attention check, the final sample included 274 participants (48.5% male, $M_{age} = 42.42$, SD = 12.47). All the reported effects remained statistically significant with the full sample (Appendix D).

As predicted, participants in the intuition-consistent condition believed the healthy claim more ($M_{intuition-consistent} = 4.36$, SD$_{intuition-consistent} = 1.40$; $M_{intuition-inconsistent} = 3.98$, SD$_{intuition-
inconsistent = 1.55; \( F(1, 272) = 4.71, p = .031, d = 0.26 \), and perceived the light mayonnaise as healthier (\( M_{\text{intuition-consistent}} = 5.04, SD_{\text{intuition-consistent}} = .80; M_{\text{intuition-inconsistent}} = 4.47, SD_{\text{intuition-inconsistent}} = 1.24; \( F(1, 272) = 20.84, p < .001, d = 0.55 \)). Participants also reported a greater calories difference between the two versions of mayonnaise in the intuition-consistent condition (\( M_{\text{intuition-consistent}} = 4.82, SD_{\text{intuition-consistent}} = 1.34; M_{\text{intuition-inconsistent}} = 4.33, SD_{\text{intuition-inconsistent}} = 1.52; \( F(1, 272) = 8.06, p = .005, d = 0.34 \)). A serial mediation test confirmed that the intuition-inconsistent healthiness claim increased the calorie estimate of the light mayonnaise, which lowered its perceived healthiness, which in turn lowered the belief in its healthiness claim (\( b = -.13, SE = .05, 95\% \text{ CI} = [-.22, -.04] \); Process model 6; Hayes, 2018; Figure 3).

**Study 5. Effect of the Light = Healthy Intuition on Actual Consumption Quantity**

Study 5 aims to conceptually replicate the light = healthy intuition in a realistic setting, and to test its effect on actual consumption. We inconspicuously manipulated the weight of the container instead of the food itself. We predict that participants will consume more of the seemingly lighter-weighted product as it is considered healthier.

**Method**

Participants were ostensibly invited to a taste study to sample two types of M&M’s. The cover story was that M&M’s had recently introduced a healthier version with healthier ingredients, and the study was to determine if consumers could distinguish between the two versions. In reality, both containers contained identical candies with the same quantity. Two identical bowls were used and a weight was added to the invisible, hollow bottom of one container. The final weights were 400 versus 315 grams.

Participants who agreed to participate (\( N = 50, 54\% \text{ male, } M_{\text{age}} = 22.44, SD = 2.12 \)) helped the research assistant carry the two containers to the laboratory for the taste test. They held both containers for approximately 30 seconds. In the laboratory, participants started sampling and guessed which container contained the healthy M&M’s. Thereafter, participants were asked to watch three movie trailers, allegedly for a different task, during which they could eat more of the M&M’s in both the containers. None of participants finished all the M&M’s in either container. We measured the weight of the M&M’s remaining in each container.

Participants’ purchase intentions, willingness to pay, and evaluations of taste, sweetness, calories, and vitamins in M&M’s in each container were also measured. The analyses on these measures and a replication study are reported in Appendix E.
Results and Discussion

Participants were more likely to indicate that the lighter container contained the healthy M&M’s (64%, χ²(1, N = 50) = 3.92, p = .048). Furthermore, participants consumed significantly more M&M’s from the lighter container (M_{light} = 30.36g, SD_{light} = 21.67; M_{heavy} = 21.58g, SD_{heavy} = 14.55; t(49) = -3.01, p = .004, d = 0.55). Thus, study 5 shows that light = healthy intuition affects consumers’ actual consumption quantity.

Study 6: Debiasing the Light = Healthy Intuition by Activating a Competing Association

In this study, a potential debiasing strategy is considered. As proteins are commonly regarded as nourishing, they are often viewed as healthy (Carels et al., 2006; Kozup, Creyer, & Burton, 2003). A heavier option might be perceived as healthier if the weight difference is attributed to a protein difference. In this case, the light = healthy intuition may be attenuated or even reversed.

Method

MTurk panelists (N = 292, 46% male, M_{age} = 40.08, SD = 12.37) participated in this one-factor (debias condition: control vs. protein) between-subjects study. Two flavors (chocolate-caramel vs. peanut-caramel) of energy bars of the same brand and the same serving size were used as stimuli. We randomized the weight information on each energy bar, such that each flavor was heavier than the other, half of the time. In the control condition, we presented only the weight information and participants were asked to judge which bar was healthier. In the protein condition, we presented both the weight information and the amount of protein in each energy bar, such that the difference in weight was equivalent to the difference in protein (Appendix F). We predicted that more people would choose the heavier [lighter] energy bar as the healthier option in the protein [control] condition. In addition, we explicitly measured participants’ light = healthy and protein = healthy beliefs and additional analyses on these measures are included in Appendix G.

Results and Discussion

A chi-square test revealed a significant effect of the debiasing condition on healthiness judgments (Wald χ²(1) = 25.41, p < .001). In the control condition, 60.7% of the participants chose the lighter energy bar as the healthier option. In contrast, in the protein condition, 68.7% chose the heavier energy bar as the healthier option (Figure 4). This study provides additional evidence for the light = healthy intuition, using a healthier food item (energy bar). When only weight information is salient, people rely on it to make healthiness evaluations and perceive the lighter option as the healthier one. When
protein information becomes salient, the intuition is reversed, and people perceive the heavier option to be healthier.

**General Discussion**

People associate food healthiness with low weight (study 1). Correspondingly, people infer a lower-weight food option to be healthier (studies 2 and 5) and consume more food from a lighter container (study 5). The intuition is bidirectional as people assume healthier foods weigh less (study 3), leading them to discredit health claims for heavier foods (study 4). The activation of a competing intuition reduces the use of light = healthy intuition in healthiness judgments (study 6).

This study expands research on consumer food-related lay beliefs (Haws et al., 2017; Raghunathan et al., 2006; Suher et al., 2016) by showing that people also assess food healthiness based on physical weight. Such intuitions are efficient decision short-cuts for judgments, but they often lack accuracy. For example, several lighter-weight snacks, such as potato chips, popcorn, and candies, are not necessarily healthier when compared to other snacks of the same serving size (e.g., fruits and vegetables). The overgeneralized use of these intuitions may be particularly problematic for the light = healthy intuition. Unlike previously identified intuitions that are result from repeated observations of co-occurrences of healthy foods with high prices or inferior tastes, the light = healthy intuition is evoked by a co-activation of two concepts associated with a homograph, which are not necessarily correlated in actual food healthiness assessments.

The findings of this study are relevant for product and package design decisions. This study shows that the physical weight of containers can influence consumers’ perceived food healthiness. Lowering the physical weight of a “light” version of a product (without reducing its quantity) enhances the healthiness perception. In contrast, consumers discredit health claims of products that weigh more, meaning brands need to ensure that the healthy version of the product is lighter than the regular counterpart.

Finally, our findings suggest several fruitful avenues for future research. First, our research did not explicitly compare healthy foods with unhealthy ones. The theory implies that the intuition should apply across categories. However, future research could directly test whether the intuition indeed influences perceived healthiness and weight expectation in cross-category comparisons. Second, we demonstrate that consumers may consume more lighter-weight foods believing that they contain lower-in-calorie ingredients and thus healthier, and the inference about ingredients’ organic nature is limited. Future research can more extensively consider the weight-based inferences, such as consumers associating the

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consumption of heavier food items with the possibility of a weight gain, but not with other health consequences such as diabetes and heightened blood pressure. Finally, future research could investigate the effect of food weight on other consumption outcomes, i.e., actual food choices and evaluations.

We propose that co-activation of multiple meanings of “light” underlies the intuition, but we acknowledge that other mechanisms are also plausible. For instance, people may associate low body weight with health and overgeneralize this association to food items. Additionally, the intuition may simply reflect an actual relationship that people learn overtime: Eating heavier food items may serve one’s caloric needs better. This study believes that multiple processes may underlie the intuition shown, and invite future research to dig deeper into these.

We explore the co-activation of two meanings of light, but light can also describe a taste that is not intense or a color with medium saturation. According to spreading activation processes, these other meanings may also become accessible when consumers encounter the light label, such that people may expect healthy foods to have plainer tastes or less saturated colors. Prior research has established that foods packaged in vivid, color-saturated packaging are perceived as less healthy than foods in muted, less color-saturated packaging (Mead & Richerson, 2018). Similarly, consumers consume more light-colored hedonic foods than dark-colored hedonic food (Madzharov et al., 2016). Such studies draw on conceptual fluency (Mead & Richerson, 2018) and pleasure (Madzharov et al., 2016) as potential drivers, but we propose that the co-activation of multiple meanings in a homograph can serve as an overarching mechanism that may explain these previously documented effects. We call for continued research into other “light”-related intuitions, with a co-activation account.
References


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*Note.* The following procedures were used to clean the data (Greenwald et al., 2003): (1) participants whose trial response latencies were greater than 10,000 milliseconds (ms) were coded as missing values (0.03% of total trials); (2) if more than 10% of a participant’s response times were less than 300ms, the participant’s responses were removed (65 participants, or 32.66%, removed, leaving 134 participants); and (3) participants were forced to correct the errors in categorization trials, so we did not impose any error penalty (14.82% error rate). The dataset for the final sample demonstrated good internal consistency (82.21%).
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<th>Cohen’s d*</th>
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<td>2.51</td>
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*the Cohen’s d was calculated based on a comparison of choice proportions (Grissom & Kim, 2012).
Figure 1. Conceptual framework
Figure 2. Study 2: Parallel mediation test

![Diagram showing the mediation analysis with coefficients and significance levels]

- $b_1 = 0.13^{***}$ (12.88)
- $b_2 = -0.80^{***}$ (3.3)
- $b_3 = -0.11$ (2.4)
- $b_4 = 0.54^{***}$ (1.9)
- $b_5 = 0.07$ (6.5)
- $b_6 = 0.02$ (6.6)

Coefficient standard errors are marked in parentheses.

$*** = p < .001$
Figure 3. Study 4: Serial mediation test

![Diagram of serial mediation test](image)

- \( a = -0.49^{**} (0.17) \)
- \( b_1 = 0.60^{***} (0.02) \)
- \( c = 0.22 (0.12) \)
- \( b_3 = -0.59^{***} (0.01) \)
- \( b_4 = 0.36^{***} (0.00) \)
- \( b_2 = 0.31^{***} (0.00) \)
- \( b_0 = 2.74^{***} (0.00) \)

Coefficient standard errors are marked in parentheses:
** = \( p < 0.01 \); *** = \( p < 0.001 \)
Figure 4. Study 6: Perceived healthiness based on the light = healthy intuition, reversed in the protein condition.