

= Hedonic hunger =

Hedonic hunger or hedonic hyperphagia is " the drive to eat to obtain pleasure in the absence of an energy deficit . " Particular foods may have a high " hedonic rating " or individuals may have increased susceptibility to environmental food cues . Weight loss programs may aim to control or to compensate for hedonic hunger . Therapeutic interventions may influence hedonic eating behavior .

= = Background = =

Although hunger may arise from energy or nutrient deficits , as would be expected in the set @-@ point theories of hunger and eating , hunger may arise more commonly from anticipated pleasure of eating , consistent with the positive @-@ incentive perspective . Gramlich distinguished the overeating responses to these stimuli as homeostatic hyperphagia and hedonic hyperphagia respectively . Accordingly , hunger and eating are subject to feedback control from homeostatic , hedonic , and cognitive processes . Although these mechanisms interplay and overlap to some extent , they can nonetheless be individually separated . Thus , the positive @-@ incentive perspective suggests that eating is similar to sexual behavior : humans engage in sexual behavior , not because of an internal deficit , but because they have evolved in a way that makes them crave it . High calorie foods have had intrinsic reward value throughout evolution . The presence of desirable (or " hedonic ") food , or the mere anticipation of it , makes one hungry . The psychological effects of hedonic hunger may be the appetitive equivalent of hedonically @-@ driven activities such as recreational drug use and compulsive gambling . Susceptibility to food cues can lead to overeating in a society of readily available calorie dense , inexpensive foods . Such hedonistic eating overrides the body 's ability to regulate consumption with satiety .

A related phenomenon , specific appetite , also known as specific hunger , is conceptually related to , but distinct from , hedonic hunger . Specific appetite is a drive to eat foods with specific flavors or other characteristics : in usage , specific appetite has put greater emphasis on an individual who adaptationally learns a particular appetite behavior rather than an evolutionarily innate , hedonic appetite preference .

hedonic appetite preference may lead to increased weight gain due to eating when not hungry .

= = Food variability = =

A " hedonic rating " of foods reflects those which are more likely to be eaten even though the individual is not hungry . For example , functional magnetic resonance imaging (fMRI) scanning suggests that fed rats show a high preference for a mixture of fat and carbohydrate in the form of potato chips compared to their standard chow or single macronutrient foods . When binge eating occurs without the presence of energy deprivation , it is thought to be due to frequent exposure to palatable food . Another study evaluated how hedonic ratings of individual foods aggregate into the food components of particular types of meals , and related preferences to overall dietary intake .

= = Interpersonal variability = =

Individuals may have increased hedonic hunger susceptibility to environmental food cues . Genetic variability may influence hedonic hyperphagia . Variation in hedonic hunger levels from person to person may be key in determining success in weight loss tactics and a person 's ability to cope with tempting foods that are readily available . To assess this , a Power of Food Scale (PFS) has been developed that quantifies a person 's appetitive anticipation (not consumption) . Binge @-@ eaters , obese individuals and those with eating disorders such as anorexia nervosa scored higher than restrictive type and normal weight college students . A decrease in PFS score leads to better success in weight loss .

= = Food reinforcement = =

The reinforcing value of food refers to how hard someone is willing to work to obtain food . Food reinforcement is influenced by several factors including food palatability , food deprivation , and food variety . It is also motivated by concerns about fullness (expected satiation) and the hunger that might be experienced in the intervening period between meals (expected satiety) . The effector mechanisms of food reinforcement depend on dopaminergic activity in the brain .

= = Treatment = =

Conceptually , weight loss programs might target control of hedonic hunger . Specific research to determine what diet techniques would be most beneficial for those with an increased hedonic hunger would help people modify their immediate availability of food or its palatability . For example , whole grain popcorn may be a better choice than potato chips due to a lower calorie load and an increased sense of satiety . Adding dietary fiber to foods and beverages increases satiety and reduces energy intake at the next meal . Low energy density foods with high satiating power may be useful tools for weight management . Satiety has been found to be greater with yogurt beverages than fruit juice , and was equal with low energy density yogurt with inulin and high energy density yogurt . People with high PFS scores may do better with meal replacement products .

Medications may affect hedonic eating behavior . Glucagon like peptide 1 (GLP1) agonists , such as exenatide and liraglutide which are used for diabetes , may help suppress food reward behavior . Inhibition of dopamine transport within the brain increases dopamine concentrations , which can reduce energy intake . Despite theoretical underpinnings , opiate antagonists as single agents have generally not shown substantial clinical benefit . However , preliminary data has suggested synergistic effects with concurrent targeted therapy of opiate receptors and either dopamine or cannabinoid receptors .

Bariatric surgery of various types may influence hedonic hunger particularly if accompanied by counseling interventions that reduce automatic hedonic impulses . These surgeries may work in part by modifying the production of gastrointestinal hormones , particularly by increasing glucagon like peptide 1 and peptide YY (PYY) ; reduction of ghrelin has been inconsistent .