

use early in life may lead to continued binge drinking throughout the lifespan, as well as increase the risk for developing alcohol dependence. Research with adolescents and adults consistently indicates that binge drinking is related to injuries, violence, driving while intoxicated, unsafe sexual practices, and death. In addition, binge drinking in pregnant women can cause significant danger to the fetus such as fetal alcohol spectrum disorders. In the elderly, preliminary evidence suggests that binge drinking may be associated with the onset of dementia. The association of binge drinking with the concurrent use of other substances, such as tobacco, is also a public health concern.

Regarding gender and ethnic differences in binge drinking, men continue to binge drink more than women, accounting for as many as 81% of adult binge drinking episodes. Caucasians also report binge drink more than any other racial group, with African-Americans exhibiting the lowest rates of binge drinking.

Given the health implications, binge drinking has been the target of a variety of prevention and intervention efforts. In the college setting, the social norms marketing campaigns (SNM) became a widespread approach, with mixed results. In college students and other populations, individual brief motivational interventions (BMIs) have been administered in a wide variety of contexts, formats, and settings, and research indicates a consistent small to moderate effect on decreasing the frequency of binge drinking and related consequences. Interventions administered via the Internet have also demonstrated efficacy with college students and adults, and new approaches to screening and intervention through the web continue to be developed.

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## Binge Eating

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## Definition

Binge eating involves rapidly eating a very large amount of food in a relatively short period of time. Other key characteristics of binge eating include feeling out of control when eating, eating until uncomfortably full, eating apart from others, eating in the absence of hunger, and marked distress regarding overeating. Binge eating is distinguishable from other symptoms of disordered eating. Bulimia nervosa, for example, is a broader pattern of disordered eating including not only binge eating but also compensatory behaviors (e.g., dieting, purging, or exercising to avoid weight gain) and excessive concerns over body size, shape, and weight.

## Description

Binge eating is usually conceptualized with reference to either a dimensional framework (with binge eating understood as lying along a continuum of severity ranging from mild to severe) or a categorical framework (with individuals suffering from severe binge eating understood as belonging to a qualitatively discrete diagnostic category). Binge Eating Disorder is a provisional diagnostic criteria set provided for further study in the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 2000). Binge Eating Disorder generally appears to represent a reliable and a valid diagnostic category. Subdiagnostic symptoms of binge eating are also important, as such symptoms negatively impact health and functioning and may herald the occurrence of more severe symptoms of disordered eating.

Epidemiological data suggest binge eating is a common and an impairing problem that most frequently occurs in wealthy, industrialized nations. The onset of binge eating is usually in late adolescence or in young adulthood. With a female-to-male ratio of 3-to-2, binge eating is the least gender-specific form of disordered eating. The prevalence of Binge Eating Disorder ranges from 1% to 4% in samples of community members and from 15% to 50% in samples from weight-control programs. An estimated 8% of individuals who are obese have Binge Eating Disorder. Binge eating is tied to health problems such as obesity, diabetes, and gastrointestinal dysfunction. Moreover, psychiatric difficulties and binge eating frequently co-occur, with mood, anxiety, substance use, and personality problems often accompanying binge eating. Binge eating is also associated with functional impairment in social, personal, familial, and occupational roles.

Several putative factors are involved in the onset and the maintenance of binge eating. Both personality traits (such as perfectionism) and Personality Disorders (such as Borderline Personality Disorder) are risk factors for binge eating. Negative affect is also implicated in binge eating, with binge eating conceptualized as a way of momentarily escaping negative affect. Evidence

suggests unsatisfying interpersonal relationships (e.g., hostile interactions) and other interpersonal problems (e.g., evaluative fears) are related to binge eating. Cognitive biases such as strongly basing self-worth on control over eating are also tied to binge eating, and dietary restraint appears to play a key role in binge eating, with binge eating representing an attempt to compensate for caloric deprivation. Ultimately, no one single factor is responsible for binge eating and a confluence of the above factors appears to trigger and to maintain binge eating.

Binge eating is a treatable problem. Randomized controlled trials indicate cognitive behavioral therapy (Wilson & Fairburn, 2007) and interpersonal psychotherapy (Tanofsky-Kraff & Wilfley, 2010) are efficacious interventions for binge eating. Cognitive behavioral therapy focuses on establishing behavioral patterns that reduce binge eating (e.g., regular, moderate meals and snacks) and challenging dysfunctional cognitions that maintain binge eating (e.g., irrational cognitive distortions about dieting). Interpersonal psychotherapy focuses on identifying current interpersonal problem areas contributing to binge eating (e.g., marital disputes) and then improving those problem areas. Randomized trials also suggest antidepressants, especially selective serotonin reuptake inhibitors, are linked to short-term decreases in binge eating (Bodell & Devlin, 2010). Long-term effects of medications on binge eating are unknown. Combining psychotherapy and medication does not appear to result in greater reductions in binge eating.

## Cross-References

- ▶ [Bulimia](#)
- ▶ [Obesity](#)
- ▶ [Randomized Controlled Trial](#)

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chronic effects. Psychological distress in response to stressors (i.e., negative life events, both acute and chronic) has been related to alterations in immune and endocrine functioning and much of this work has focused on the effects of stress on immunocompetence and inflammatory responses. Importantly, relationships among relevant biological, psychosocial, behavioral, and environmental factors are often bidirectional and synergistic in nature.

“Biobehavioral mechanism” is a term used to suggest biomarker research linked to psychological, behavioral, and sociocultural factors. Pioneering work first discovered the interrelationship between psychological stress and physiologic responses of the nervous, endocrine, and immune systems. Among the first researchers to evaluate these relationships were Walter Cannon and Hans Selye. It was Cannon (1939) who first identified the role of the autonomic nervous system (ANS) in the fight-or-flight stress response. Selye (1952, 1975) later demonstrated interactions of the hypothalamic-pituitary-adrenal (HPA) axis and the sympathetic nervous system (SNS) that lead to subsequent changes in immune functioning and the lymphoid organs in response to psychological stress. This led to a global immunosuppression model of stress and immunity. Over the years and with advancing technology, increasingly sophisticated methods for evaluating these relationships have been developed and our understanding of the mechanisms by which psychological and behavioral factors influence biological processes and health outcomes has advanced. Psychoneuroimmunology (PNI) has emerged as a field of study that is primarily concerned with interactions between the central nervous system, the endocrine system, and the immune system and the impact of these interactions on health and disease. The HPA axis and the sympathetic-adrenal medullary (SAM) axis are the primary pathways by which these systems interact. Much of this work has been concerned with the systemic effects of psychological stress on the regulatory processes of the HPA and SAM axes and the association between chronic inflammation and acute and/or chronic health conditions. Biomarkers are used to

## Biobehavioral Mechanisms

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### Synonyms

[Biomarkers](#)

### Definition

Biobehavioral mechanisms within behavioral medicine refer to the interaction of biological, psychosocial, behavioral, and environmental factors that contribute to health-related outcomes and disease status. Biological processes are believed to mediate the influence of psychosocial, behavioral, and environmental factors on health and disease outcomes.

### Description

Research concerned with biobehavioral mechanisms of health and disease has primarily focused on the impact of psychosocial, behavioral, and environmental factors on biological processes of the immune and endocrine systems. These factors can impact biological responses individually and/or synergistically and may include both acute and