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## Eating Disorders—a Perplexing Eating Behavior

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### Commentary

Seeking food is a profound inherent drive found in all living organisms to ensure proper functioning of their biological systems. Adequate coexistence of hunger and satiety brings health and wellbeing and inadequacy in food intake can threaten the health and survival. Eating behavior is a complex phenomenon compounded by interplay of central nervous system, endocrine and gastrointestinal systems linked with numerous neural pathways [1]. To put anything in mouth is a discernible human behavior and governed by hunger, hormones, emotions, and desires. Numerous life events may claw the normal eating behavior leading to aberrant eating pattern, if prolonged can result in Eating Disorders (ED). Anorexia nervosa, bulimia or binge eating are common eating disorders which affects millions of people of all ages, men, women particularly teenage girls. Major causes of ED were associated with physical and emotional destructions due to psychological and socio-cultural factors. New researches are indicating its link with genetic and neurochemical pursuits. In most cases of anorexia, the victims have high self-image and want to protect oneself from body shaming. ED victims are often entrapped in fancy images of their bodies in social and media circles and are either unaware or refuse to accept their problem and its adverse consequences. ED is a manifestation of anxiety and trauma of self-image stirring to the extent of hospitalization and fatal stage.

Anorexia nervosa implies the self-induced starvation or intense calorie restricted diet in order to reduce body weight and remain slim forever underpinning the emotional trauma. They are obsessively fearful of weight gain and tend to indulge in unwarranted weight loss regime including intensive exercise. This condition is accentuated by hyperactivity and high self-esteem to showcase their body in silhouette. They often impersonate themselves with celebrities portrayed on television, magazines, internet and other media to achieve similar persona, appreciation and enthralled fame and visualize their body image a perfect path for success and limelight. Nonetheless symptomatic triad of anorexia, emaciation and amenorrhea cannot be ignored. Anorexia nervosa is also considered a psychiatric disorder in which victims are often treated with opioid and serotonin which may

further alter their reproductive and immune functions. Some bizarre episodes have also been observed in them.

Emotional trauma may force the person for binge energy dense foods and to overcome the guilt of eating they purge out [2]. Gorging and purging is a common characteristic of bulimia nervosa. Regular habit of bulimia nervosa can lead to certain medical conditions such as electrolyte imbalance, dental decay and gastric disruptions.

Bioscience has unfolded the convoluted phenomena of appetite, hunger and satiety [3]. Hypothalamus in the brain regulates it and maintains the body homeostasis. This function of hypothalamus is negated by the levels of circulating hormones particularly ghrelin, insulin and leptin to govern the food consumption and eating behaviour. Ghrelin hormone is secreted by the cells in the stomach as a result of hunger and its concentration is also increased with visual stimulation of food. Many often experience the feeling of hunger on single thought of food, talk of food or smell or sight of food. After eating, insulin brings down blood sugar levels and signals the brain to restrain hunger pangs. Further leptin triggers the satiety. Insulin is secreted by beta cells of pancreas and leptin is produced by the fat cells. Ghrelin is exceptionally high in anorexia and low in binge eaters and bulimia cases. Leptin also plays an important role in eating disorder and weight gain [4]. Its level is high in binge eaters and low in anorexia. High leptin level is associated with various mood disorders and neurodegenerative diseases which are also common in binge eaters. As bingeing or emotional eating is often linked with stress period resulting in high cortisol resulting level too and it becomes a vicious cycle. Hence it is said that emotions articulate hormone secretions and regulate hunger and satiety. Further neurotransmitters like serotonin and dopamine activities are also associated with eating pattern including eating disorder. Low serotonin and high dopamine are observed in anorexia and when they resume eating, serotonin level spikes, causing more anxiety and emotional havoc without adequate support. Since low serotonin level is found in depression which is often found in binge eaters also. They feel relieved by eating and it becomes vicious cycle. Perception of hunger and food intake increases the dopamine which is a pleasure signal. Emotional distress sponsors the impulsive eating behavior and leads to addiction for certain

foods generally chocolates, sweets and sweetened beverages resulting in metabolic disorders including obesity. Dysfunctional leptin signalling increases the risk of overconsumption of fatty foods. Researchers have found association of circulating leptin level with circadian rhythm. In case of bulimia, leptin levels are low and the individual does not feel satisfied, feel hungry at night and voraciously eat ad libitum [5]. It predisposes over weight, obesity and also insulin resistance. Hence eating disorders are not only linked with weight regulation but also aberrations in other female hormones affecting ovulatory functions. Timely adequate nutritional inputs, psychological counselling and treatment can wrap up numerous episodes of eating disorders.

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