

## Anorexia Nervosa (AN)

Anorexia nervosa is an eating disorder and a mental health condition. There are several explanations of anorexia, including biological explanations and psychological explanations. Patients feel an intense drive for thinness, an intense fear of gaining weight or becoming fat and a disturbance in body image. Clinical characteristics include; a body weight less than 85% of the expected weight and a BMI of less than 17.5, also a denial of the illness, and amenorrhea in females

Neurotransmitters such as Serotonin and Dopamine can add to explanations of AN, differences in the levels of the neurotransmitter Serotonin have shown to be a characteristic of patients with an eating disorder. Research that supports this is by Bailer et al (2007), he researched into this as he compared the Serotonin activity in two types of women, the first type being women recovering from 'restricting-type' anorexia, (restricted intake of food) and the second type being 'binge-eating/purging type, (periods of restricted eating and bingeing/purging). He then compared both of the levels in these types with healthy controls. His results showed much higher Serotonin levels in those women who were recovering from the bingeing/purging type. Bailer found the highest levels in women who showed the most anxiety and perfectionism, this suggests that constant and persistent disruption of serotonin levels may lead on to higher anxiety, this then may trigger, and make the patient at risk of AN. However, as the link has been found between these women and anxiety and perfectionism, it is questioned whether the alteration in serotonin levels is due to the eating disorder, or whether it is the symptoms of the anxiety causing the disruption in levels. In addition to this, it is not possible to define a cause and effect; does the disruption in serotonin levels cause the vulnerability to the eating disorder? Or is it the eating disorder and the starvation that causes there to be a change in levels of the neurotransmitters?

Another problem of this explanation is that SSRIs, (alter levels of available brain serotonin) are ineffective when used with AN patients.

However, Kaye et al (2001), found that when used with recovering AN patients, these drugs were effective in preventing a relapse. Starvation and malnutrition related changes in serotonin levels may cancel out the action of SSRIs, as they only become effective when weight returns to a more normal level.

Evolutionary explanations include the reproductive suppression hypothesis. Surbey (1987) suggests that adolescent girls' desire to control their weight shows an evolutionary adaption in which ancestral girls delayed the start of sexual maturation; this was in response to talk of the probability of poor reproductive success. The ability to delay reproduction is adaptive because it enables a female to avoid giving birth at a time when conditions are not ready to support her offspring's survival. This model is based on the observation that in a number of species puberty is delayed or reproduction suppressed in females when they are subjected to stress or are in poor physical condition. Surbey argues that AN is a 'disordered variant' of the adaptive ability of females or alter timing of reproduction if they feel unable to cope with all the responsibilities of womanhood.

This hypothesis is supported by the observation that menarch (the start of puberty) is delayed in prepubertal girls with AN. Also, since amenorrhoea is a typical characteristic of AN, this means that reproduction is effectively suspended in anorexic females. However, female mammals experience a very high and often unappreciated rate of reproductive failure. Among human pregnancies alone, over 50 per cent fail between conception and parturition, and the majority of these failures are unexplained, how can we be certain that the failure of reproduction is due to the 'ability to suppress'.

The Evolutionary explanations also include the 'adapted to flee' hypothesis (AFFH). This proposes that the typical AN symptoms of food restriction, hyperactivity and the denial of starvation, reflect the operation of adaptive mechanisms that once caused migration because of local famine conditions. Usually, when a person starts to lose weight, physiological mechanisms conserve energy and increase the desire for food. These adaptations enable survival in hard times. However among our wandering ancestors, when extreme weight loss was due to a severe depletion of local food sources, this adaptation must be turned off so that individuals can increase their chances of survival by migrating and moving to a more favourable environment. Food restriction is a common feature of many species when feeding competes with other important activities such as migration or breeding. The hyperactivity typically found in anorexics may be a form of 'migratory restlessness' as many species increase activity in times of food storage and before they migrate. Therefore, for modern-day people, those who are genetically vulnerable to AN, losing too much weight may trigger these ancestral mechanisms. When treating the implications of the AFFH, Guisinger claims that AFFH 'relieves therapists of the need to search for familial reasons for AN. A characteristic often noticed of AN is a struggle for control between those with AN and those who want them to recover. This two way struggle is explained in the terms of the 'worried and uncomprehending family' and then the anorexic's powerful biology urge to avoid food and to exercise. Awareness of this causal influence can help treatment, and encourage parents to be more compassionate towards an anorexic child. However, it can be questioned how the symptoms of AN are passed on by natural selection, specifically as they decrease fertility and could even kill the individual with this condition. AN would have functioned more effectively in ancestral conditions yet outside the ecological setting in that it evolved in, it can be deadly.

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#### **General evaluation of biological explanations**

In this section it is important that you refer to issues and debates.

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There are sociocultural explanations for AN. Cultural ideals and the media, and ethnicity and peer influences are some of them. It is widely believed that Western standards of attractiveness are an important contributory factor to the development of AN. Studies have shown that many teenagers, girls especially, have a distorted view of their body and are unhappy with their weight. Gregory et al (2000) did a survey, The National

Diet and Nutrition Survey of Young People; he found that 16% of 15-18-year old girls in the UK were 'currently on a diet'. The media also play a big part in influencing people about weight and body image, and that maintained by Western adolescents. Such as, the view of thin models portrayed on magazine covers and television and the drive for thinness in Western teenage girls.