

## **The Bare Bones: How to Recognize Eating Disorders in Children and Adolescents**

Eating disorders are becoming increasingly prevalent worldwide, with 1% of girls affected with anorexia nervosa, 1-19% of girls and young women with bulimia nervosa, and an unknown number with what is known as “eating disorder not otherwise specified”(1-4). This latter category includes binge eating disorder (skips meals all day, then grazes in the evening and/or at night) and all patients who do not meet criteria for anorexia nervosa or bulimia nervosa but who clearly have disordered eating. Eating disorders are now an equal opportunity disease, affecting girls (and boys) of all socioeconomic classes, ethnicities, and backgrounds, in developed and third world countries. Eating disorders have been found in increasing numbers in Japan, China, and other countries(5-7). In the United States, eating disorders are on the rise in minority groups such as Hispanics and native Americans(8). Anorexia nervosa used to be the domain of the Caucasian upper middle class “best little girl in the world”. We now see children developing the disorder, including boys (5-10% of cases), children as young as 6 years old, and well into adulthood. The pressure is on the clinician, parents, and the community to recognize the early signs of an eating disorder before the behaviors are entrenched; here, the ounce of prevention really is better than the pounds needed to cure!

Red flags for identification of an eating disorder in a child or adolescent can include:

- A sudden change to vegetarianism, as a

means of cutting out food groups, fat or calories.

- Clothes that suddenly start to fit more loosely.
- Extra time in the bathroom, particularly after meals, with evidence of vomitus in the bathroom or elsewhere.
- A drop in weight noted at home, at school, or in the clinician’s office.
- Lack of appropriate weight gain at a time when the child should be growing.
- Cutting up food in tiny pieces, or playing with food more than eating food.
- Lots of time spent on meal preparation, without eating what she has prepared.
- Obsession with food, calories, fat grams, or exercise.
- Extreme guilt if she cannot exercise on a given day.
- “I’m so fat” repeated often to herself or to others around her.
- Concern by a parent, peer, or teacher that the child or adolescent has developed an eating disorder.

The last red flag, in particular, should warrant investigation and close follow up; when a parent or other significant person in the child or teen’s life expresses the concern, there is a strong likelihood of an eating disorder either existent or in its earliest stages. If any of these red flags occur, the clinician should see the patient back at least monthly, and weekly when rapid weight loss is apparent.

Medical signs of an eating disorder result from the changes caused by either starvation,

bingeing, or purging. The cardiac findings are the most life threatening, and death can result from electrolyte abnormalities or excessive stimulation from caffeine, other drugs, or exercise in the face of a wasted heart muscle. This article cannot address the scope of these changes, with reviews available elsewhere(5-7). Bone loss can accompany weight loss or failure of weight gain; if a postmenarchal girl has stopped periods for at least 6 months, dual xray energy absorptiometry (DEXA) of spine and hip should be considered if available. Osteopenia can then be followed and used as one of the means of suggesting to the patient and family that her lack of weight gain has medical consequences that can be harmful on the short and long term.

Gastrointestinal symptoms occur due to the slowed gastric emptying accompanying erratic eating habits and restriction, with the body trying to draw off all the nutrients it can, and more time for the food to be broken down into gas, causing bloating. Useful dietary modifications to consider when refeeding teens with anorexia nervosa include limiting raw high-fiber foods and consuming only a moderate amount of fat (30-50 grams qd for a low fat diet), to help promote gastric emptying. Eating foods cold or at room temperature helps reduce the feeling of fullness. Choosing to eat smaller, more frequent meals will reduce bloating. Restricting the use of sugar substitutes, gum, caffeine, and diet beverages will improve the teen's ability to recognize hunger and satiety. Calorie and fat gram counting should be discouraged with use of scales limited or prohibited. The family should be encouraged to help achieve regular meal times, and time limits should be placed on meal times to prevent the teen from being at the table all day.

Interventions for teens with bulimia nervosa should focus on implementing a

structured eating behavior pattern and creating feelings of satiety. Eating hot or warm foods with adequate amounts of fat enhance feelings of satiety. Preparing foods in single servings whenever possible and avoiding "trigger" foods initially will help control the urge to binge. Eating while standing or in front of the television should be discouraged, as the individual is likely to eat more than she had planned. Skipping meals, eating on the run, and eating secretly should be discouraged. Binge purge behaviors should be stabilized before assisting an overweight teen with weight loss. The teen can learn to recognize situations in which he or she is likely to binge, when emotional eating (eating when bored, angry, hurt, *etc.*) occurs, and begin to avoid triggers for a binge or a purge.

Encouraging adequate intake of calories at breakfast and lunch is important in preventing binge eating after school. Drinking a glass of milk before each meal can aid calcium intake while taking the edge of hunger for a person with binge eating.

Treating children and adolescents with eating disorders usually involves a multi-disciplinary, team approach. When available, the team can ideally consist of the primary care clinician or subspecialist as team leader, dietitian versed in the care of children with eating disorders, psychologist, psychiatrist when medication is indicated (unless prescribed by the primary care clinician), and often family therapist. The latter is particularly useful with younger children. Treatment needs to be individualized, depending on the child and family's needs. The clinician should avoid discussing weights and numbers with the patient, encouraging a variety of foods while limiting the child's view of the scale. "Fear foods", or foods the child deems "unsafe", should be slowly incorporated while avoiding calorie and/or fat gram counting. Meal times

should be limited to 20-30 minutes per meal, with small frequent feedings if necessary. If the child is currently eating a no fat diet, start at 15% of total calories, and work towards 30-50 grams per day. A daily multivitamin should be added, along with 3-5 glasses of milk, or 1300-1500 mg calcium orally per day. The clinician and team can help provide concrete ideas to facilitate changes in eating behavior patterns. Above all, patience is required, with recovery from an eating disorder expected to be a slow and arduous process.

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**Annexure I**

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**Diagnostic Criteria for Anorexia nervosa, Bulimia nervosa, and Eating Disorder Not Otherwise Specified, as adapted from the American Psychiatric Association**

**Anorexia nervosa (AN)**

1. Intense fear of becoming fat or gaining weight, even when underweight
2. Refusal to maintain body weight at or above a minimally normal weight for age and height (*e.g.*, weight loss leading to maintenance of body weight <85% of that expected, or failure to gain weight during a period of growth leading to body weight <85% of weight expected).
3. Disturbed body image, undue influence of weight or shape on self-evaluation, or denial of the seriousness of the current low body weight.
4. Amenorrhea or absence of at least 3 consecutive menstrual periods for those postmenarchal (also considered amenorrheic if periods only inducible after estrogen therapy).

*Types*

Restricting = no regular binges or purges (self-induced vomiting or use of laxatives or diuretics).

Binge eating/purging = regularly binges or purges in patient who also meets the above criteria for anorexia nervosa.

**Bulimia Nervosa (BN)**

1. Recurrent episodes of binge eating, characterized by:
  - (a) Eating a substantially larger amount of food in a discrete period of time (*e.g.*, in 2 hours) than would be eaten by most people in similar circumstances during that same time period.
  - (b) A sense of lack of control over eating during the binge.
2. Recurrent inappropriate compensatory behavior in order to prevent weight gain, *e.g.*, self-induced vomiting, use of laxatives, diuretics, fasting, or hyperexercising.
3. Binges or inappropriate compensatory behaviors occurring, on average, at least twice weekly for at least 3 months.
4. Self-evaluation unduly influenced by body shape or weight.
5. The disturbance does not occur exclusively during periods of anorexia nervosa.

*Types*

Purging = regularly engages in self-induced vomiting or use of laxatives/diuretics.

Nonpurging = uses other inappropriate compensatory behaviors, *e.g.*, fasting, hyper exercising, without regular use of vomiting or medicines to purge.

**Eating Disorder Not Otherwise Specified (EDNOS)** (those that do not meet criteria for AN or BN by DSM-IV).

1. All criteria for AN except has regular menses.
2. All criteria for AN except weight still in normal range.
3. All criteria for BN except binges < twice/week or <3 months.
4. A patient with normal body weight who regularly engages in inappropriate compensatory behavior after eating small amounts of food (*e.g.*, self-induced vomiting after eating 2 cookies).
5. A patient who repeatedly chews and spits out large amounts of food without swallowing.
6. Binge eating disorder: recurrent binges without the compensatory behaviors associated with BN.

*Source:* Diagnostic and Statistical Manual of Mental Disorders, 4th edition, DSM-IV. Washington, D.C.: American Psychiatric Association, 1994.