



COMPETITIVE THINNESS: WHEN COMPETITION GOES BEYOND THE SPORT

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COMPETITIVE THINNESS: WHEN COMPETITION GOES BEYOND THE SPORT

- Athlete Population
- Risk Factors
- Signs & Symptoms
- Clinical Diagnoses
- Management Strategies



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ATHLETE POPULATION

- Elementary Sports & Physical Education
- High School Sports & Physical Education
- Club Sports & All-Star Teams
- Recreational & Intramural Sports
- Collegiate Sports
- Semi-Professional Sports
- Professional Sports



ATHLETE POPULATION

- Increase in female collegiate athletes
 - 500% growth between 1971 and 2000
 - Increase from 32,000 to 150,000 female athletes
- 32% of female collegiate athletes practice pathogenic weight-control behaviors
 - 70% feel these behaviors are harmless



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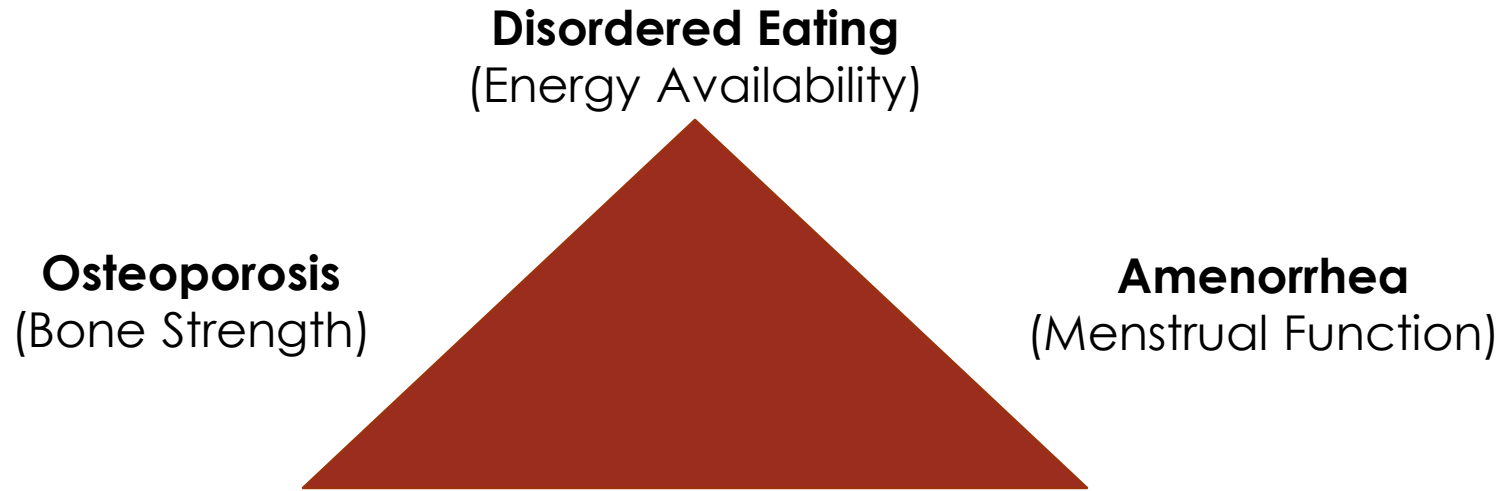


RISK FACTORS

- Sport body stereotypes
- Revealing sport attire
- Similarity between good athlete traits & symptoms of disordered patterns
- Competitive thinness
- Behavioral contagion
- Presumption of health based on competitive performance



FEMALE ATHLETE TRIAD SYNDROME

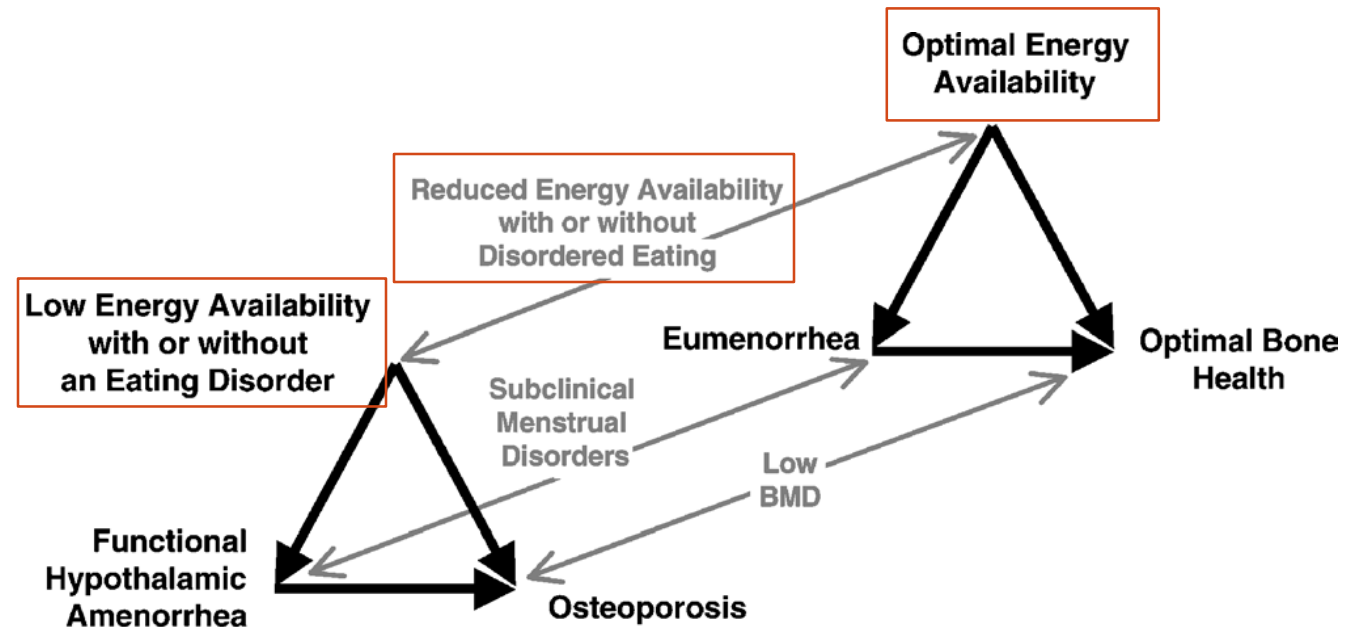


- Components span a spectrum from health to disease on which female athletes are constantly moving
- Level of energy availability is key factor causing movement in one direction or other
- Low energy availability does NOT equal negative energy balance
- Hormone replacement can mask amenorrhea
- Osteopenia versus Osteoporosis



FEMALE ATHLETE TRIAD SYNDROME

Three Interrelated Spectrums

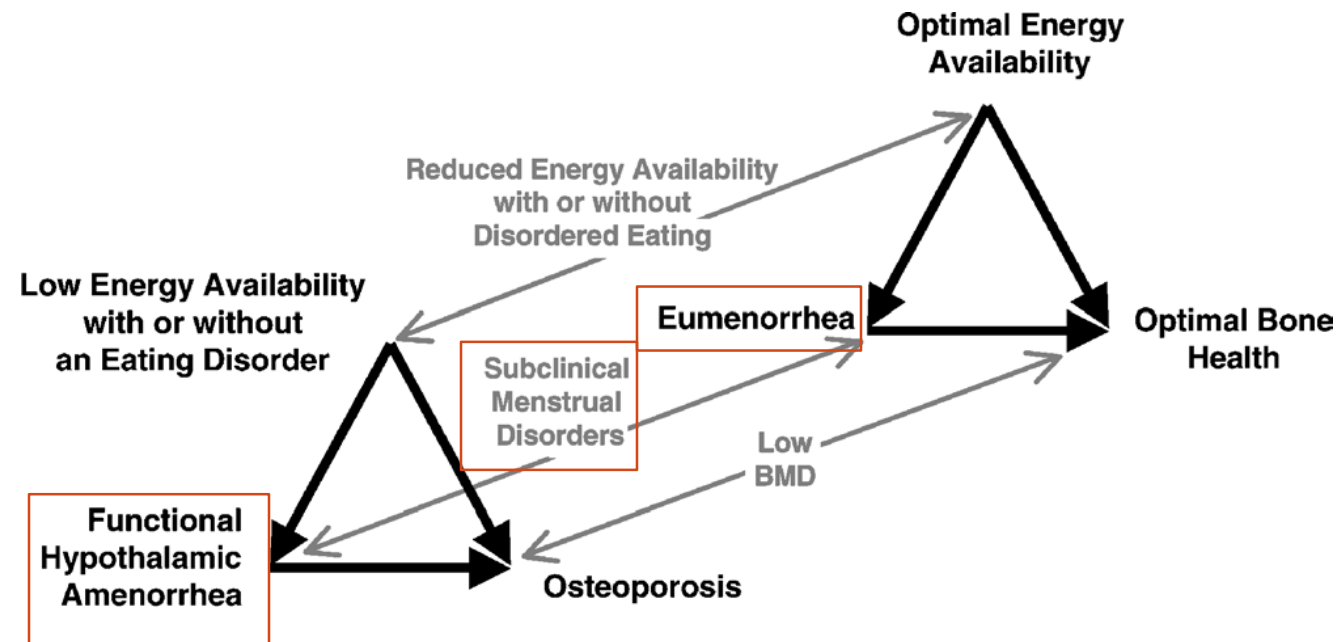


Nattiv A, Loucks A, Manore M, Sanborn C, Sundgot-Borgen J, Warren M. The female athlete triad—position stand. *American College of Sports Medicine*. 2007.



FEMALE ATHLETE TRIAD SYNDROME

Three Interrelated Spectrums

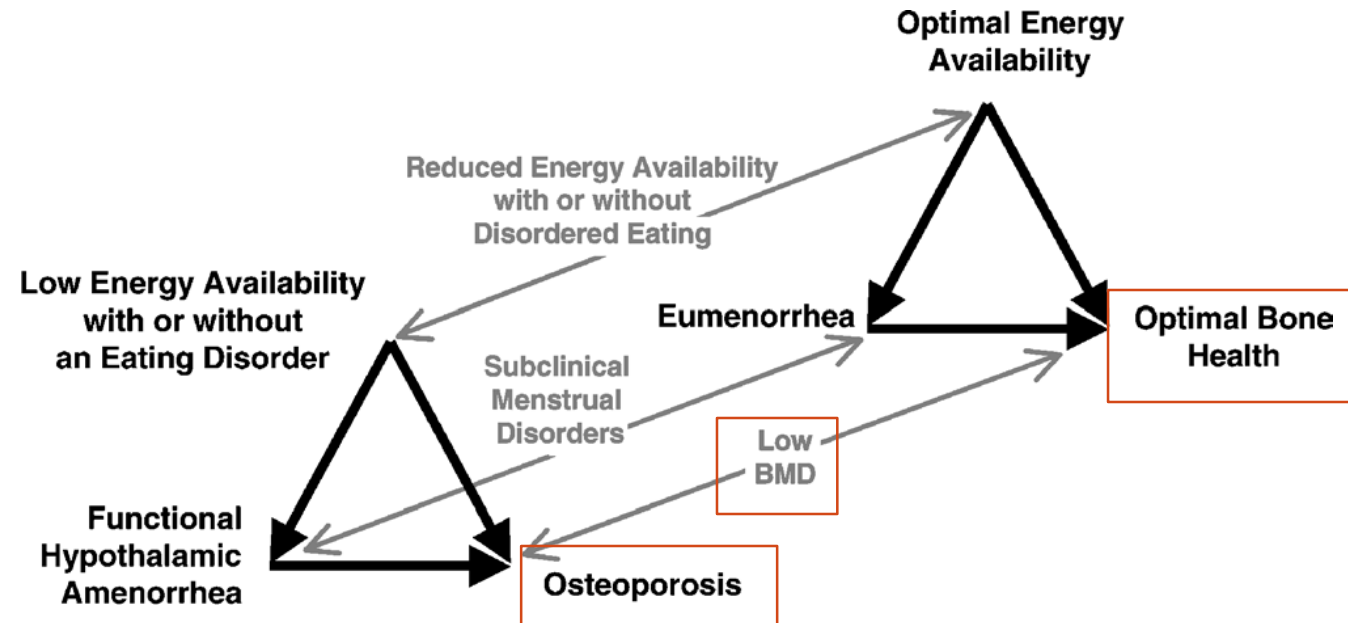


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SIGNS AND SYMPTOMS

Disordered Meal Behaviors

- Hiding food
- Dissecting food
- Rearranging food
- Over-seasoning food
- Over-heating food
- Improper use of utensils
- Odd food mixtures
- Rapid eating pace
- Slow eating pace
- Tense body language
- Strained conversation
- Visits to the bathroom
- Fluid loading
- Frequent use of napkin



SIGNS AND SYMPTOMS

- Repeated comments about fatness
- Frequent weighing
- Extreme weight fluctuations
- Intense fear of weight gain
- Preoccupation with weight & shape
- Excessive exercise
- Secretive eating
- Repeatedly disappearing after meals
- Avoidance of social eating
- Sudden interest in diet or cook books
- Sudden mood swings
- Vague physical complaints
- Concerns with what others think
- Perfectionism
- Problems with boundaries
- Ritualistic behaviors
- Addictive behaviors



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PICA

- **A:** Persistent eating of nonnutritive, nonfood substances over a period of at least 1 month.
- **B:** The eating of nonnutritive, nonfood substances is inappropriate to the developmental level of the individual.
- **C:** The eating behavior is not part of a culturally supported or socially normative practice.
- **D:** If the eating behavior occurs in the context of another mental disorder (e.g. intellectual disability [intellectual developmental disorder], autism spectrum disorder, schizophrenia) or medical condition (including pregnancy), it is sufficiently severe to warrant additional clinical attention.



RUMINATION DISORDER

- **A:** Repeated regurgitation of food over a period of at least 1 month. Regurgitated food may be re-chewed, re-swallowed, or spit out.
- **B:** The repeated regurgitation is not attributable to an associated gastrointestinal or other medical condition (e.g., gastroesophageal reflux, pyloric stenosis).
- **C:** The eating disturbance does not occur exclusively during the course of anorexia nervosa, bulimia nervosa, binge-eating disorder, or avoidant/restrictive food intake disorder.
- **D:** If the symptoms occur in the context of another mental disorder (e.g., intellectual disability [intellectual developmental disorder] or another neurodevelopmental disorder), they are sufficiently severe to warrant additional clinical attention.



AVOIDANT/RESTRICTIVE FOOD INTAKE DISORDER

- **A:** An eating or feeding disturbance (e.g. apparent lack of interest in eating or food; avoidance based on the sensory characteristics of food; concern about aversive consequences of eating) as manifested by persistent failure to meet appropriate nutritional and/or energy needs associated with one (or more) of the following:
 - **1.** Significant weight loss (or failure to achieve expected weight gain or faltering growth in children).
 - **2.** Significant nutritional deficiency.
 - **3.** Dependence on enteral feeding or oral nutritional supplements.
 - **4.** Marked interference with psychosocial functioning.



AVOIDANT/RESTRICTIVE FOOD INTAKE DISORDER

- **B:** The disturbance is not better explained by lack of available food or by an associated culturally sanctioned practice.
- **C:** The eating disturbance does not occur exclusively during the course of anorexia nervosa or bulimia nervosa, and there is no evidence of a disturbance in the way in which one's body weight or shape is experienced.
- **D:** The eating disturbance is not attributable to a concurrent medical condition or not better explained by another mental disorder. When the eating disturbance occurs in the context of another condition or disorder, the severity of the eating disturbance exceeds that routinely associated with the condition or disorder and warrants additional clinical attention.



ANOREXIA NERVOSA

- **A:** Restriction of energy intake relative to requirements, leading to a significantly low body weight in the context of age, sex, developmental trajectory, and physical health. *Significantly low weight* is defined as a weight that is less than minimally normal or, for children and adolescents, less than that minimally expected.
- **B:** Intense fear of weight gaining weight or of becoming fat, or persistent behavior that interferes with weight gain, even though at a significantly low weight.
- **C:** Disturbance in the way in which one's body weight or shape is experienced, undue influence of body weight or shape on self-evaluation, or persistent lack of recognition of the seriousness of the current low body weight.



ANOREXIA NERVOSA

- **Restricting type:** During the last 3 months, the individual has not engaged in recurrent episodes of binge eating or purging behavior (i.e., self-induced vomiting or the misuse of laxatives, diuretics, or enemas). This subtype describes presentations in which weight loss is accomplished primarily through dieting, fasting and/or excessive exercise.
- **Binge-eating/purging type:** During the last 3 months, the individual has engaged in recurrent episodes of binge eating or purging behavior (i.e., self-induced vomiting or the misuse of laxatives, diuretics, or enemas).



ANOREXIA NERVOSA

- **In partial remission:** After full criteria for anorexia nervosa were previously met, Criterion A (low body weight) has not been met for a sustained period, but either Criterion B (intense fear of gaining weight or becoming fat or behavior that interferes with weight gain) or Criterion C (disturbances in self-perception of weight and shape) is still met.
- **In full remission:** After full criteria for anorexia nervosa were previously met, none of the criteria have been met for a sustained period of time.



ANOREXIA NERVOSA

- **Mild:** BMI \geq 17 kg/m²
- **Moderate:** BMI 16-16.99 kg/m²
- **Severe:** BMI 15-15.99 kg/m²
- **Extreme:** BMI $<$ 15 kg/m²



ANOREXIA NERVOSA- HEALTH CONSEQUENCES

- Depression
- Anxiety
- Lack of menstruation
- Hyperactivity
- Constipation
- Fine body hair
- Loss of body fat
- Loss of lean mass
- Shortness of breath
- Fainting spells
- Heart tremors
- Cold extremities
- Hair loss
- Dry, brittle skin
- Shrunken organs
- Bone mineral loss
- Low body temperature
- Low blood pressure
- Decreased metabolic rate
- Slow reflexes
- Severe dehydration
- Decreased brain function
- Premature death



BULIMIA NERVOSA

- **A:** Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following:
 - **1.** Eating, in a discrete period of time (e.g. within any 2-hr period), an amount of food that is definitely larger than what most individuals would eat in an similar period of time under similar circumstances.
 - **2.** A sense of lack of control over eating during the episode (e.g., a feeling that one cannot stop eating or control what or how much one is eating).
- **B:** Recurrent inappropriate compensatory behaviors in order to prevent weight gain, such as self-induced vomiting; misuse of laxatives, diuretics, or other medications; fasting; or excessive exercise.
- **C:** The binge eating and inappropriate compensatory behaviors both occur, one average, at least once a week for 3 months.



BULIMIA NERVOSA

- **C:** The binge eating and inappropriate compensatory behaviors both occur, on average, at least once a week for 3 months.
- **D:** Self-evaluation is unduly influenced by body shape and weight.
- **E:** The disturbance does not occur exclusively during episodes of anorexia nervosa.



BULIMIA NERVOSA

- **In partial remission:** After full criteria for bulimia nervosa were previously met, some, but not all, of the criteria have been met for a sustained period of time.
- **In full remission:** After full criteria for bulimia nervosa were previously met, none of the criteria have been met for a sustained period of time.



BULIMIA NERVOSA

- **Mild:** An average of 1-3 episodes of inappropriate compensatory behaviors per week.
- **Moderate:** An average of 4-7 episodes of inappropriate compensatory behaviors per week.
- **Severe:** An average of 8-13 episodes of inappropriate compensatory behaviors per week.
- **Extreme:** An average of 14 or more episodes of inappropriate compensatory behaviors per week.



BULIMIA NERVOSA- HEALTH CONSEQUENCES

- Mood swings
- Depression
- Lack of control
- Tooth decay
- Swollen glands
- Weakness
- Broken blood vessels
- Dry, flaky skin
- Stomach pain
- Sore throat
- Constipation
- Indigestion
- Vomiting blood
- Fluid retention
- Dehydration
- Damage to bowels, liver, & kidneys
- Chronic constipation
- Peptic ulcers, pancreatitis
- Gastric & esophageal rupture
- Electrolyte imbalances
- Muscle cramping
- Irregular heartbeat
- Cardiac arrest



BINGE EATING DISORDER

- **A:** Recurrent episodes of binge eating . An episode of binge eating is characterized by both of the following:
 - **1.** Eating, in a discrete period of time (e.g. within any 2-hr period), an amount of food that is definitely larger than what most individuals would eat in an similar period of time under similar circumstances.
 - **2.** A sense of lack of control over eating during the episode (e.g., a feeling that one cannot stop eating or control what or how much one is eating).
- **B:** The binge-eating episodes are associated with three (or more) of the following:
 - **1.** Eating much more rapidly than normal.
 - **2.** Eating until feeling uncomfortably full.
 - **3.** Eating large amounts of food when not feeling physically hungry.
 - **4.** Eating alone because of feeling embarrassed by how much one is eating.
 - **5.** Feeling disgusted with oneself, depressed, or very guilty afterward.



BINGE EATING DISORDER

- **C:** Marked distress regarding binge eating is present.
- **D:** The binge eating occurs, on average, at least once a week for 3 months.
- **E:** The binge eating is not associated with the recurrent use of inappropriate compensatory behavior as in bulimia nervosa and does not occur exclusively during the course of bulimia nervosa or anorexia nervosa.



BINGE EATING DISORDER

- **In partial remission:** After full criteria for binge-eating disorder were previously met, binge eating occurs at an average frequency of less than one episode per week for a sustained period of time.
- **In full remission:** After full criteria for binge-eating disorder were previously met, none of the criteria have been met for a sustained period of time.



BINGE EATING DISORDER

- **Mild:** 1-3 binge-eating episodes per week
- **Moderate:** 4-7 binge-eating episodes per week
- **Severe:** 8-13 binge-eating episodes per week
- **Extreme:** 14 or more binge-eating episodes per week



BINGE EATING DISORDER- HEALTH CONSEQUENCES

- Mood swings
- Depression
- Lack of control
- Stomach pain
- Constipation
- Indigestion
- Fluid retention
- Damage to bowels, liver, & kidneys
- Chronic constipation
- Peptic ulcers, pancreatitis
- Gastric & esophageal rupture
- Feeling ashamed
- Anti-social behavior
- Obesity
- High blood pressure
- High cholesterol
- Gall bladder disease
- Diabetes
- Heart disease
- Certain types of cancer



OTHER SPECIFIED FEEDING OR EATING DISORDER

- **1. Atypical Anorexia Nervosa:** All of the criteria for anorexia nervosa are met, except that despite significant weight loss, the individual's weight is within or above the normal range.
- **2. Bulimia Nervosa (of low frequency and/or limited duration):** All of the criteria for bulimia nervosa are met, except that the binge eating and inappropriate compensatory behaviors occur, on average, less than once a week and/or for less than 3 months.
- **3. Binge-eating Disorder (of low frequency and/or limited duration):** All of the criteria for binge-eating disorder are met, except that binge eating occurs, on average, less than once a week and/or for less than 3 months.
- **4. Purging Disorder:** Recurrent purging behavior to influence weight or shape (e.g., self-induced vomiting; misuse of laxatives, diuretics, or other medications) in the absence of binge eating.
- **5. Night Eating Syndrome:** Recurrent episodes of night eating, as manifested by eating after awakening from sleep or by excessive food consumption after the evening meal. There is awareness and recall of the eating. The night eating is not better explained by external influences such as changes in the individual's sleep-wake cycle or by local social norms. The night eating causes significant distress and/or impairment in functioning. The disordered pattern of eating is not better explained by binge-eating disorder or another mental disorder, including substance use, and is not attributable to another disorder or to an effect of medication.



UNSPECIFIED FEEDING OR EATING DISORDER

- This category applies to presentations in which symptoms characteristic of a feeding and eating disorder that cause clinically significant distress or impairment in social, occupational, or other important areas of functioning predominate but do not meet the full criteria for any of the disorders in the feeding and eating disorders diagnostic class. The unspecified feeding and eating disorder category is used in situations in which the clinician chooses *not* to specify the reason that the criteria are not met for a specific feeding and eating disorder, and includes presentations in which there is insufficient information to make a more specific diagnosis (e.g., in emergency room settings).

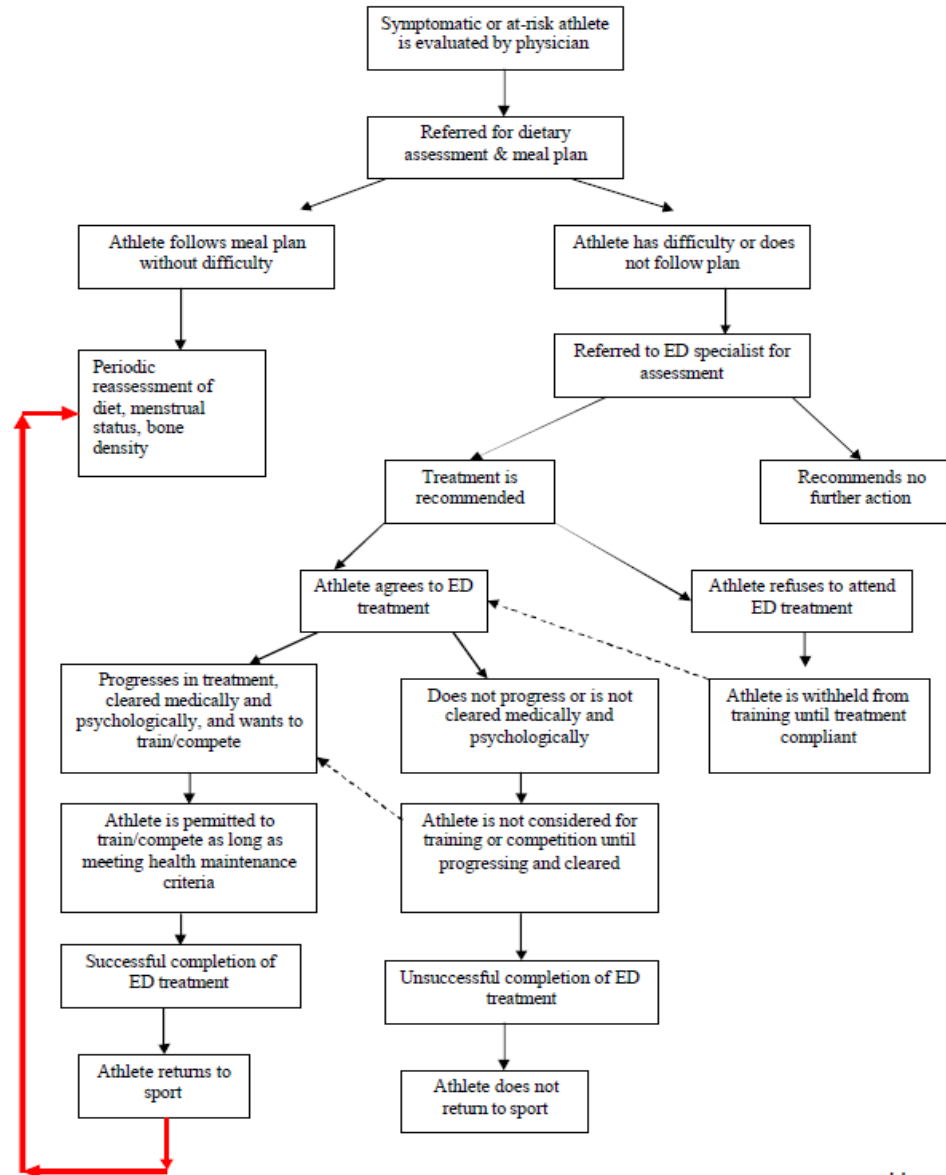


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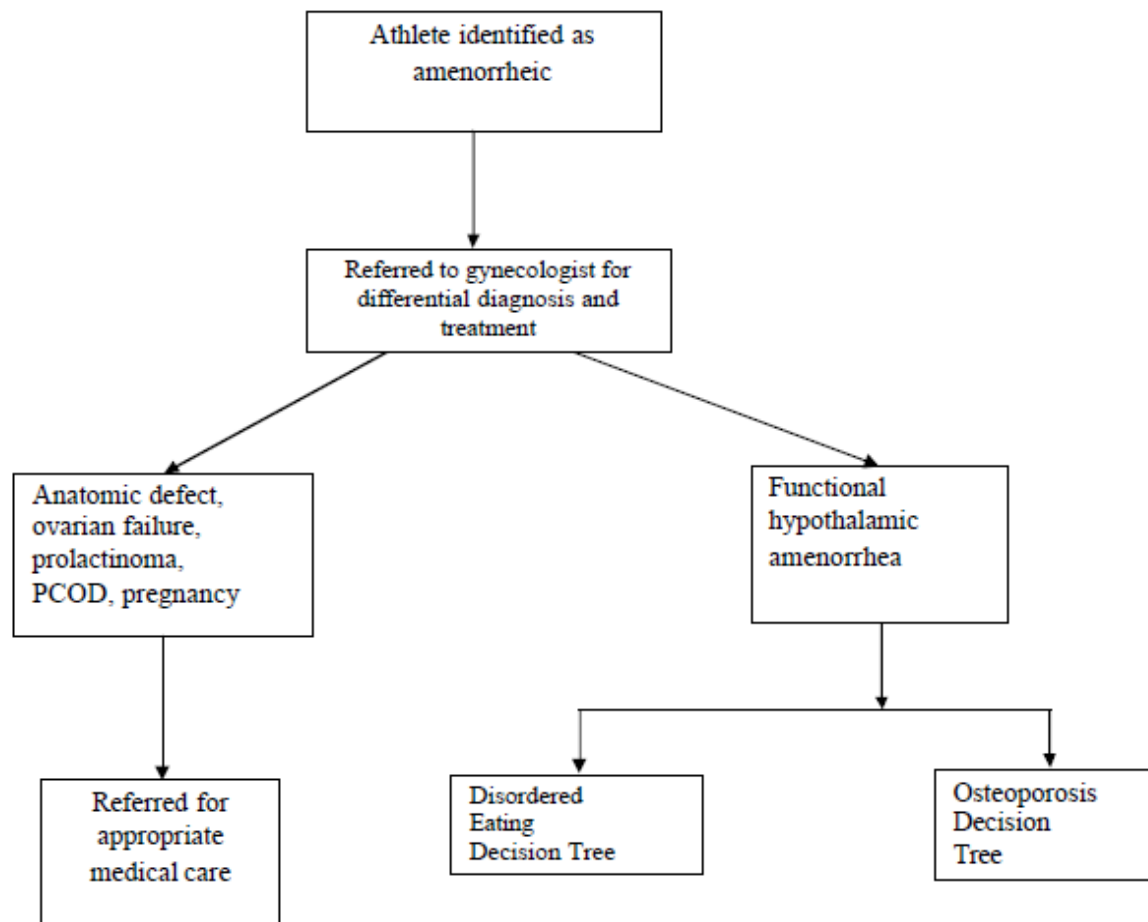
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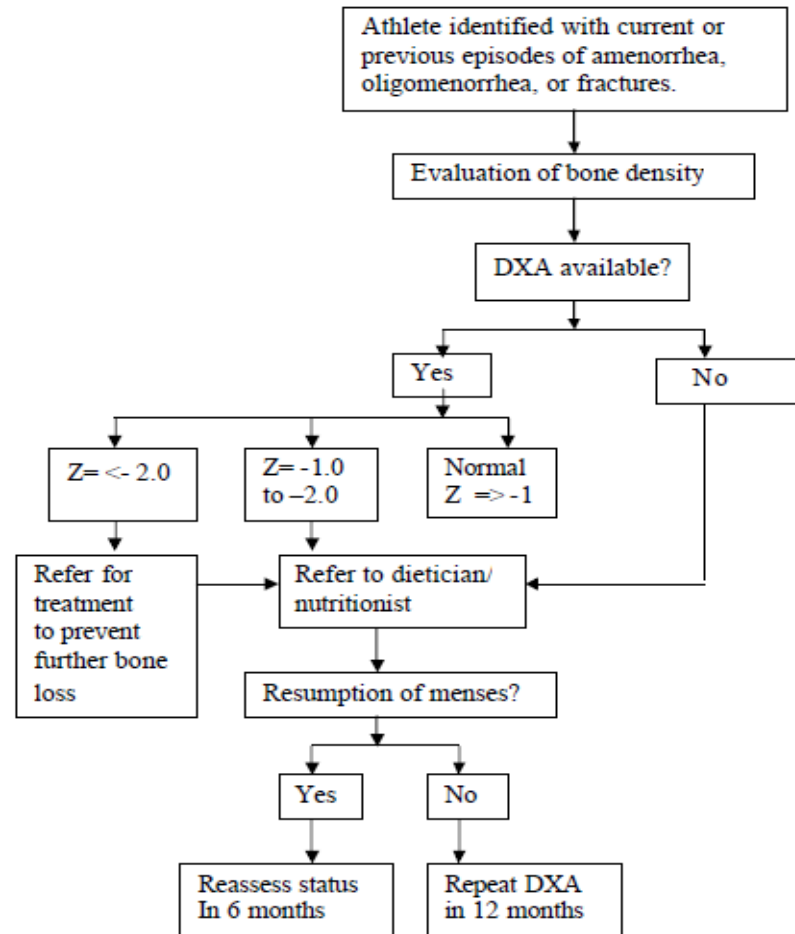
Disordered Eating Decision Tree



Amenorrhea Decision Tree



Osteoporosis Decision Tree



MANAGEMENT STRATEGIES

When should an athlete NOT be able to participate?

- The athlete has a medical condition that impedes sport participation (ex: stress fractures)
- The athlete meets diagnostic criteria for Anorexia Nervosa:
- Training or sport participation plays an integral role in the disordered eating (ex: excessive exercise)



MANAGEMENT STRATEGIES

When MIGHT it be appropriate for an athlete to participate?

- The athlete does not meet clinical diagnosis criteria.
- The athlete has been evaluated and released, both medically and psychologically.
- The athlete is in treatment and is progressing.
- The athlete agrees to and complies with health-maintenance criteria.



COLLABORATIVE MANAGEMENT APPROACH

- Team-based nutrition and exercise education
- Periodic individual athlete wellness screenings
- Nutrition and exercise education for parents
- Nutrition and exercise education for coaches
- Avoidance of weight/body composition testing without appropriate processing



COLLABORATIVE MANAGEMENT APPROACH

- Reduced focus on appearance
- Conservative sports attire
- Recognition of unrealistic “good athlete traits”
- Recognition of behavioral contagion
- Team-based meals and snacks





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Additional Questions? Interested in Handouts?
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