2021 Fourteenth National Doctors of Nursing Practice Conference

Screening Male Athletes for Eating Disorders in the College Health Setting

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she, her, hers

I declare I have no competing financial interests or other conflicts of interest.

Please take care of yourself during our time together!

Now that you are aware of our topic….

Please share your thoughts about eating disorders….

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Event#

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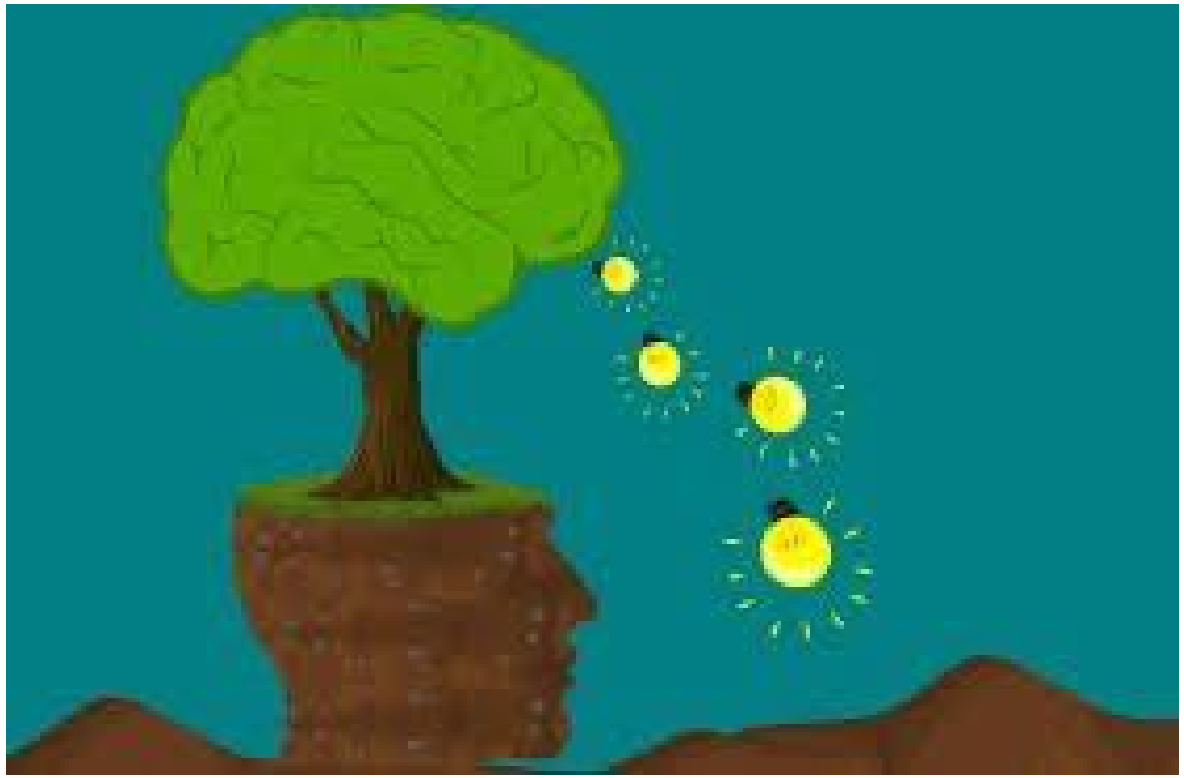

Purpose:

To increase health care providers' awareness of eating disorders in the college-age male athlete

Objectives:

- Recognize the most common eating disorder a college-age male athlete is most likely to present with in the clinical setting.
- Identify several risk factors for eating disorders in the college-age male athlete.
- Select two screening tools appropriate for screening college-age male athletes for eating disorders.

Eating disorders:

- are persistent disturbances of eating or eating-related behaviors, resulting in altered consumption of food
- significantly impair physical health and/or psychosocial functioning
- affect **ALL** races/ethnicities, social levels, gender identities, sexual orientations, body types and ages
- are lethal

DSM-5, 2013; Keel et al., 2013; Pavlova et al., 2016; Smith et al., 2018

SOCIAL & ECONOMIC COST OF EATING DISORDERS IN THE UNITED STATES

Report by the Strategic Training Initiative for the Prevention of Eating Disorders, Academy for Eating Disorders, and Deloitte Access Economics

STRIPED — A PUBLIC HEALTH INCUBATOR
Strategic Training Initiative for the Prevention of Eating Disorders

LINK TO REPORT

AED Academy for Eating Disorders

PREVALENCE & MORTALITY

Percent of the U.S. population, or **28.8 million Americans**, that will **have an eating disorder in their lifetime**

10,200 deaths per year as a direct result of an eating disorder, equating to **1 death every 52 minutes**

EATING DISORDERS AFFECT EVERYONE:

- **All ages**, starting as young as 5 years old to over 80 years old
- **All races,** however, people of color with eating disorders are **half as likely to be diagnosed or to receive treatment**
- **All genders**, with females being **2x more likely to have an eating disorder**
- **All sexual orientations**

https://higherlogicdownload.s3.amazonaws.com/AEDWEB/27a3b69a-8aae-45b2-a04c-2a078d02145d/UploadedImages/Advocate/STRIPED_INFOGRAPHIC_V2_6_23_20.pdf

COST TO ECONOMY & SOCIETY

$64.7 Billion } Yearly economic cost of eating disorders

Additional loss of wellbeing per year { **$326.5 Billion**

Cost Breakdown:

Productivity Losses ($48.6B)

Informal Care ($6.7B)

Efficiency Losses ($4.8B)

Health System ($4.6B)

COST TO HOSPITAL SYSTEMS:

53,918 ER visits

costing **$29.3M**

23,560 inpatient hospitalizations

costing **$209.7M**

LOSS PER GROUP:

$23.5B Individuals & Families

Caregivers provide 6 weeks of informal, unpaid care per year

$17.7B Government

$16.3B Employers

$7.1B Society

[1]Sonneville KR, Lipson SK. Disparities in eating disorder diagnosis and treatment according to weight status, race/ethnicity, socioeconomic background, and sex among college students. International Journal of Eating Disorders 2018: 1-9.

Let’s take a poll….

Don’t worry, it is just a warm up…

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Approximately 40% of those with binge eating disorder are male

Westerberg & Waitz, 2013

IT'S TIME TO TALK ABOUT IT

HIGH RISK OF DEVELOPING AN EATING DISORDER FOR ATHLETES

College athletes have an elevated risk of developing an eating disorder. One study found the number of college athletes at-risk for developing Anorexia Nervosa or Bulimia Nervosa to be:[4]

ANOREXIA NERVOSA	35%	10%
BULIMIA NERVOSA	58%	38%

LEARN MORE: WWW.MYNEDA.ORG

CITATIONS: WWW.MYNEDA.ORG/INFOGRAPHICS

NEDA
Feeding hope.
National Eating Disorders Association

Johnson, C. Powers, P.S., and Dick, R. Athletes and Eating Disorders: The National Collegiate Athletic Association Study, Int J Eat Disord 1999; 6:179.

Our best available data indicates:

- males account for 25% of individuals with AN & BN
  36% with binge eating disorder

- that 3.5% of women and 2.0% of men had binge eating disorder during their life
- **3 X** more common than anorexia and bulimia combined

- BED is also more common than breast cancer, HIV, and schizophrenia (Hudson et al., 2007)

Athletes have a higher rate of eating disorders compared to the general population; and the college population also has higher incidence (Joy et al., 2016)

Among college-aged men, common behaviors include binge eating (7.9%), excessive/compulsive exercise (4.4%), fasting (4%), self-induced vomiting (2.7%), and laxative/diuretic abuse (1.6%) (Eichstadt et al., 2020)

Why college-age male athletes?

- Understudied subgroup
- Assessment measures and diagnostic criteria typically normed/designed for adolescent/young adult females
- Males engage in behaviors to increase muscle mass to build a sculpted, muscled & lean body vs. a thin body
- Different screening tools, variation of use in studies

Why college-age male athletes?

- Unique set of risk factors-including sport of choice, LBGBTQ
- Binge eating at greater rates
- More difficult to identify-less likely to self-disclose
- Subclinical/subthreshold presentations
- Under reporting/lack of consistent screening

Consider these lists:

Good athlete	Anorexic patient
Mental toughness	Asceticism
Commitment to training	Excessive exercise
Pursuit of excellence	Perfectionism

ANAD, 2021

Poll time!

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Risk factors…

- Type of sport
- Body habitus/body dissatisfaction
- Uniforms
- Weigh ins
- Identifying as
- Transitioning to college

Reyes- Rodriquez et al., 2011

performance
decreased
kcal
heal
season
athlete
compete
lift
strength
delay
fuel
power
train
fatigue
endurance
recovery
play
time
fasting
nutrition
energy
speed
injury
enhance

Screening Issues

- Screening vs. diagnosing
- Screening tools are not typically male or athlete specific
- First point of contact is often the primary care setting
- Tools used in primary care need to be short and succinct
- Screening can lead to early identification, treatment and improved outcomes for the athlete (Chapman et al., 2016)
- Very few screening tools for Binge Eating Disorder
- In season vs. out of season screening

The Screening Tools: SCOFF

- Do you make yourself **S**ick because you feel uncomfortably full? Yes No
- Do you worry you have lost **C**ontrol over how much you eat? Yes No
- Have you recently lost more than **15 pounds*** in a three-month period? Yes No
- Do you believe yourself to be **F**at when others say you are thin? Yes No
- Would you say **F**ood dominates your life? Yes No

- A positive test result is $\geq$ 2 abnormal responses for each screening tool. Scores of 0-1 "Yes" responses rule out an eating disorder

*original questionnaire was written as one stone

Morgan, J. F., Reid, G., & Lacey, H. (1999). The SCOFF questionnaire: Assessment of a new screening tool for eating disorders. *British Medical Journal, 319,* 1467-8.

Binge Eating Disorder Screener (BED-7)

1. During the last 3 months, did you have any episodes of excessive overeating (i.e., eating significantly more than what most people would eat in a similar period of time)?	Yes	No

NOTE: IF YOU ANSWERED "NO" TO QUESTION 1, YOU MAY STOP. THE REMAINING QUESTIONS DO NOT APPLY TO YOU.

2. Do you feel distressed about your episodes of excessive overeating?	Yes	No

Within the past 3 months...	Never or Rarely	Sometimes	Often	Always
3. During your episodes of excessive overeating, how often did you feel like you had no control over your eating (e.g., not being able to stop eating, feel compelled to eat, or going back and forth for more food)?				
4. During your episodes of excessive overeating, how often did you continue eating even though you were not hungry?				
5. During your episodes of excessive overeating, how often were you embarrassed by how much you ate?				
6. During your episodes of excessive overeating, how often did you feel disgusted with yourself or guilty afterward?				
7. During the last 3 months, how often did you make yourself vomit as a means to control your weight or shape?				

Herman, B., Deal, L.S., & DiBenedetti, D.B…Brown, T. M. (2016). Development of the 7-item binge-eating disorder screener (BEDS-7). *Primary Care Companion for CNS Disorders, 18*(2).

Binge eating disorder screening tool: BED-7

Instructions: If the patient answers “YES” to question 1, continue on to questions 2 through 7. If the patient answers “NO” to question 1, there is no reason to proceed with the remainder of the screener.

If the patient answers “YES” to question 2 AND checks one of the shaded boxes for all questions 3 through 7, follow-up discussion of the patient’s eating behaviors and his or her feelings about those behaviors should be considered.

Evaluate the patient based upon the complete DSM-5 diagnostic criteria for B.E.D.

Herman, B., Deal, L.S., & DiBenedetti, D.B…Brown, T. M. (2016). Development of the 7-item binge-eating disorder screener (BEDS-7). *Primary Care Companion for CNS Disorders, 18*(2). Retrieved from: https://www.psychiatrist.com/PCC/article/Pages/2017/v19n03/16m02075.aspx?sclick=1

Also of note…

- The PHQ-9 is a widely used screening tool for depression and asks a question regarding eating-overeating and lack of appetite
- A positive response to this question should trigger additional investigation…

Project Process: Implementation

- IRB approval
- Informed consents were signed by providers and subjects
- Completion of a pre and post survey (before and after the slideshow)
- The male athlete was screened if in the provider's schedule
- Collect basic demographics on the sheet provided: AGE, SPORT, BMI, RACE/ETHNICITY
- If a positive screen-referral to PMHNP, counseling & nutritionist-all services free of charge

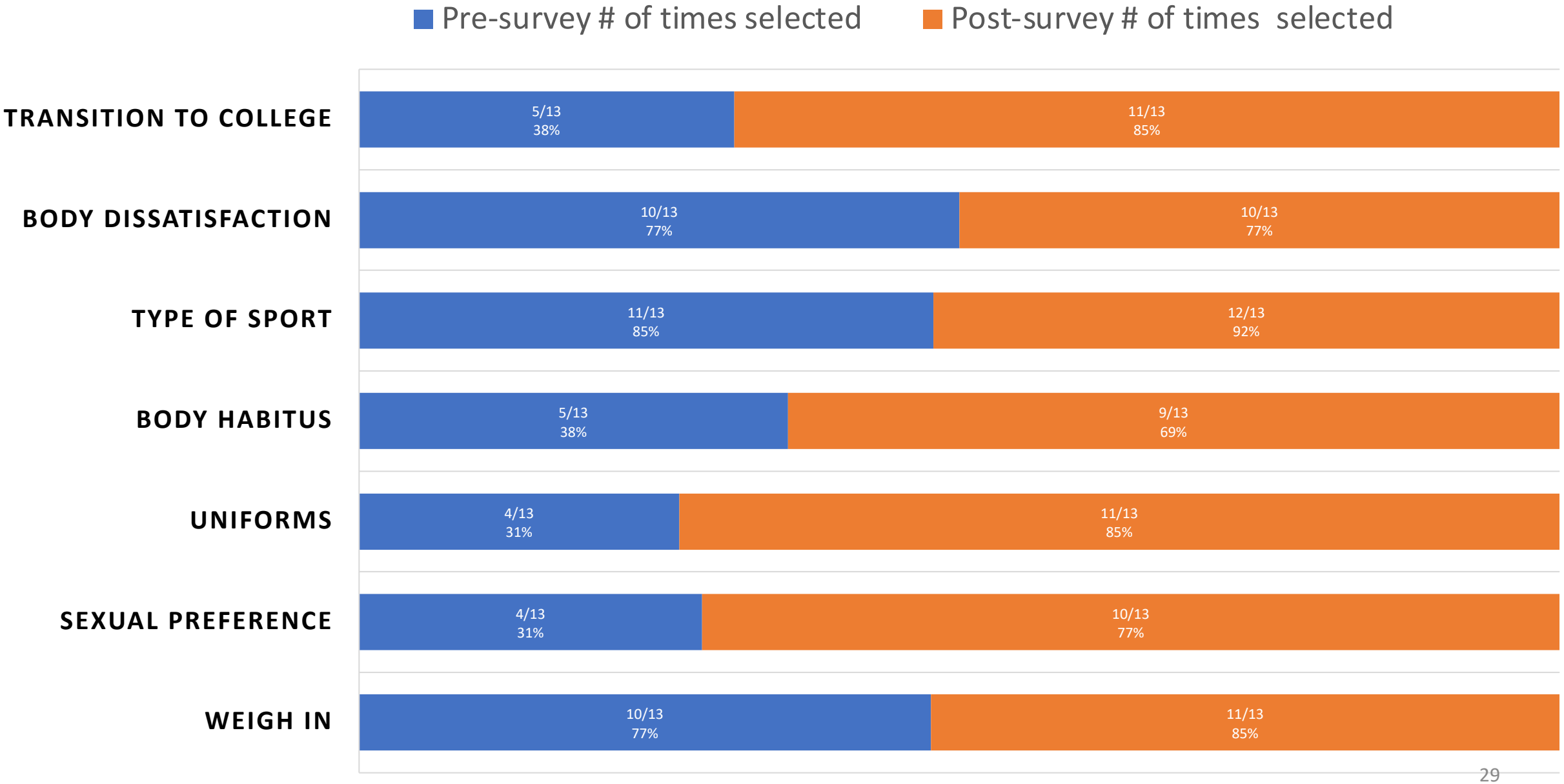
Results: Target Population: The Providers

- Thirteen providers participated, all currently working in college health
  - 8 Nurse practitioners
  - 2 PMH Nurse Practitioners
  - 1 Medical Assistant
  - 1 Registered Nurse
  - 1 Licensed Clinical Professional Counselor
- Years in clinical practice
  - < 5 years 4
  - 6-10 years 1
  - > 10 years 8

Overall positive results!

- Knowledge of ED in male athletes improved
- Risk factor knowledge improved
- Screening tool awareness increased

Results: Provider Outcomes: Risk Factors Pre/Post Surveys



Results: 12 Male Athletes Screened

Varsity sports represented: Football (2) Rugby (2) Lacrosse (7)

Soccer (1)

Age range: 18-21

BMI range: 21.9-35.8

Race/ethnicity: 11- White 1-Hispanic

Results: 12 Male Athletes Screened

SCOFF:

11 Scored 0

1 Scored 1

BED-7

11 scored 0

1 scored positive

Prevalence rate 8.3%

SCREENING TOOL	POSITIVE SCREEN	NEGATIVE SCREEN
SCOFF	0	12
BED-7	1	11

Clinical Guidelines

- Gold standards for diagnosing include more in depth tools in addition to a clinical interview
- Guidelines
  - AED-Academy for Eating Disorders-medical and nutrition standards of care
  - Intermountain https://intermountainhealthcare.org/ext/Dcmnt?ncid=522882792
  - NICE-The National Institute for Health and Excellence https://www.nice.org.uk/guidance/NG69. 12/2020

Want to do a quality improvement project?

- Add the screening tools into your EHR
- Do a presentation about eating disorders in athletes
- Do a presentation about the screening tools
- Present the current guidelines
- Appropriate for all settings:
  - ER
  - Primary care
  - Inpatient
  - Schools/Colleges/Universities

Thank you for your time and attention!

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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 gaining weight or 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. Specify if: In partial remission: After full criteria for anorexia nervosa were previously met, Criterion A has not been met for a sustained period, but either Criterion B or C is still met.

Anorexia Nervosa

- 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. Specify current severity: The minimum level of severity is based, for adults, on current body mass index (BMI) (see below) or for children and adolescents, on BMI percentile.
- The ranges below are derived from World Health Organization categories for thinness in adults; for children and adolescents, corresponding BMI percentiles should be used.
- The level of severity may be increased to reflect clinical symptoms, the degree of functional disability, and the need for supervision. Mild: BMI > 17 kg/m2 Moderate: BMI 16-16.99 kg/m2 Severe: BMI 15-15.99 kg/m2 Extreme: BMI < 15 kg/m2

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 amount of time (ex: within a 2 hour period) an amount of food that is definitely larger than what most individuals would eat in a similar period of time under similar circumstances.

   2. Sense of lack of control over eating during an episode

B. Recurrent inappropriate compensatory behavior 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, on average, at least once a week for three months.

D. Self-evaluation is unduly influenced by body shape and weight

Bulimia Nervosa

- E. The disturbance does not occur exclusively during episodes of anorexia nervosa. Specify if: 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. Specify current severity: The minimum level of severity is based on the frequency of inappropriate compensatory behaviors (see below). The level of severity may be increased to reflect other symptoms and the degree of functional disability. 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 of14 or more episodes of inappropriate compensatory behaviors per week

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-hour period), an amount of food that is definitely larger than what most people would eat in a 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.

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.

Specify if: In partial remission: After full criteria for binge-eating disorder were previously met, binge eating occurs at an average frequency of less than on 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. Specify current severity: The minimum level of severity is based on the frequency of episodes of binge eating (see below). The level of severity may be increased to reflect other symptoms and the degree of functional disability. 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

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.

Specify if: In partial remission: After full criteria for binge-eating disorder were previously met, binge eating occurs at an average frequency of less than on 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. Specify current severity: The minimum level of severity is based on the frequency of episodes of binge eating (see below). The level of severity may be increased to reflect other symptoms and the degree of functional disability. 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

Additional Feeding disorders: Other Specified Feeding or Eating Disorder or Unspecified Feeding or Eating Disorders**:**

- **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.
- **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.
- **Avoidant/Restrictive Food Intake Disorder:** 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. (See DSM-5 criteria for full criteria.)
- **Binge-eating disorder (of low frequency and/or limited duration):** All of the criteria for binge-eating disorder are met, except that the binge eating occurs, on average, less than once a week and/or for less than 3 months.
- **Purging disorder:** Recurrent purging to influence weight or shape(e.g. self-induced vomiting; misuse of laxatives, diuretics, or other medications) in the absence of binge eating.

Additional thoughts…

- Substance use and supplement use
- Food insecurity
- Body appreciation
- RED-S
- Orthorexia Nervosa