



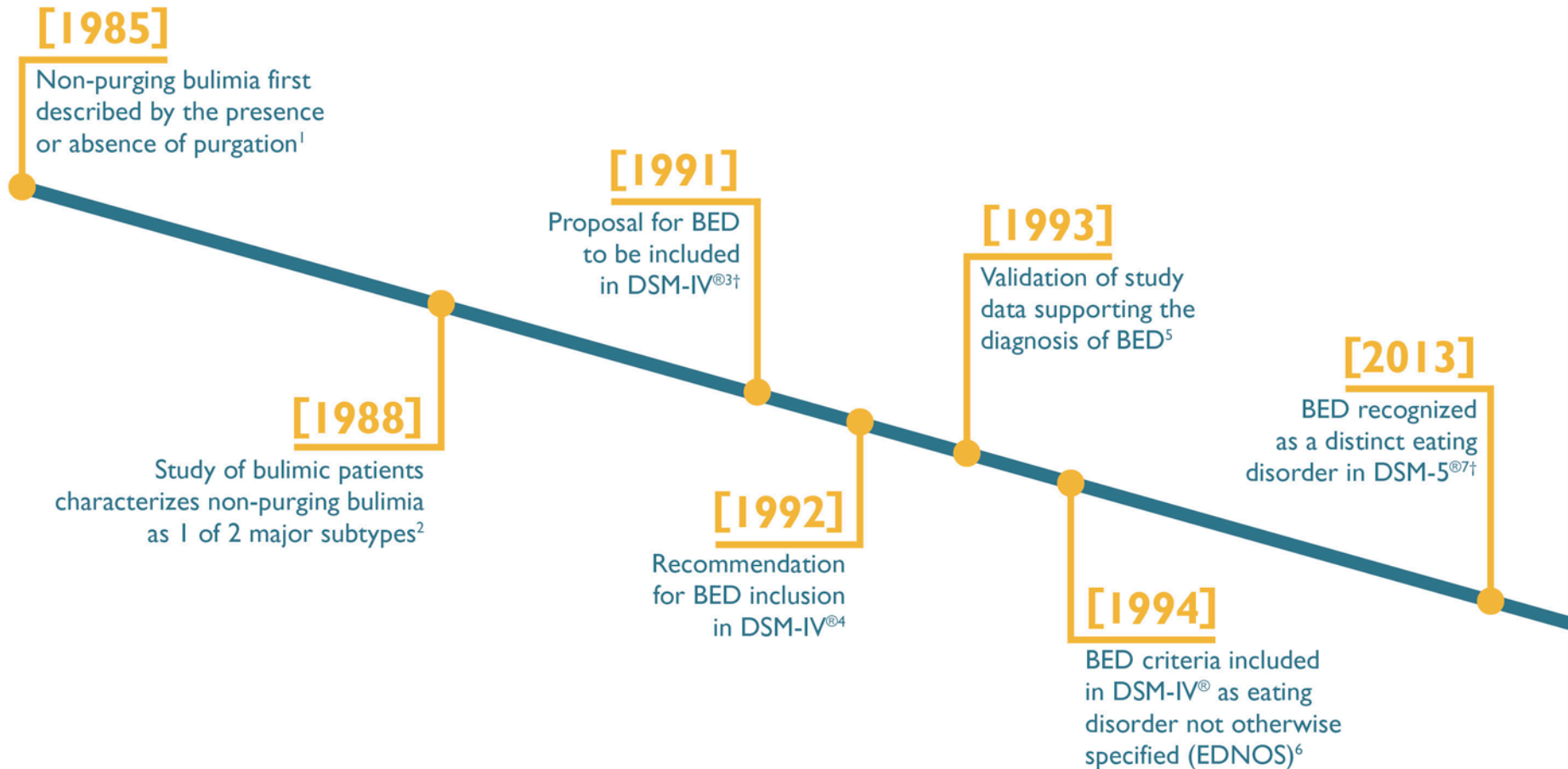
Binge Eating Disorder

Disease overview

Disclosures

- **Faculty:**
 - Brian Stonehocker, MD, FRCPC
 - Divisional Director, Division of Consultation Liaison Psychiatry, University of Alberta
 - Psychiatrist, Edmonton Bariatric Clinic
 - Assistant Clinical Professor, Department of Psychiatry, University of Alberta
- **Relationships with commercial interests:**
 - Speakers' Bureau: Shire, Lundbeck, Lilly

Binge Eating Disorder (BED) historical perspective



† DSM, DSM-IV-TR and DSM-5 are registered trademarks of the American Psychiatric Association.

1. Grace PS, et al. *J Clin Psychol*. 1985;41:173-80. 2. Willmuth ME, et al. *Int J Eat Disord* 1988;7:825-35. 3. Spitzer RL, et al. *Int J Eat Disord* 1991;10:627-9. 4. Spitzer RL, et al. *Int J Eat Disord* 1992;11:191-203. 5. Spitzer RL, et al. *Int J Eat Disord* 1993;13:137-53. 6. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. Fourth Edition. Washington (DC): American Psychiatric Association; 1994. 7. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. Fifth Edition. Arlington, VA, American Psychiatric Association; 2013.

What is Binge Eating Disorder?

Binge Eating Disorder involves:¹



Eating larger than normal amounts of food within short time periods with a perceived lack of control



Recurring episodes that take place at least once a week for 3 months



No compensatory behaviors; bingeing does not occur exclusively during anorexia nervosa or bulimia nervosa



At least 3 of the following:

- Eating much faster than normal
- Eating until uncomfortably full
- Eating without physical hunger
- Eating alone due to shame
- Feeling disgust or guilt afterwards



Significant distress over the binge eating

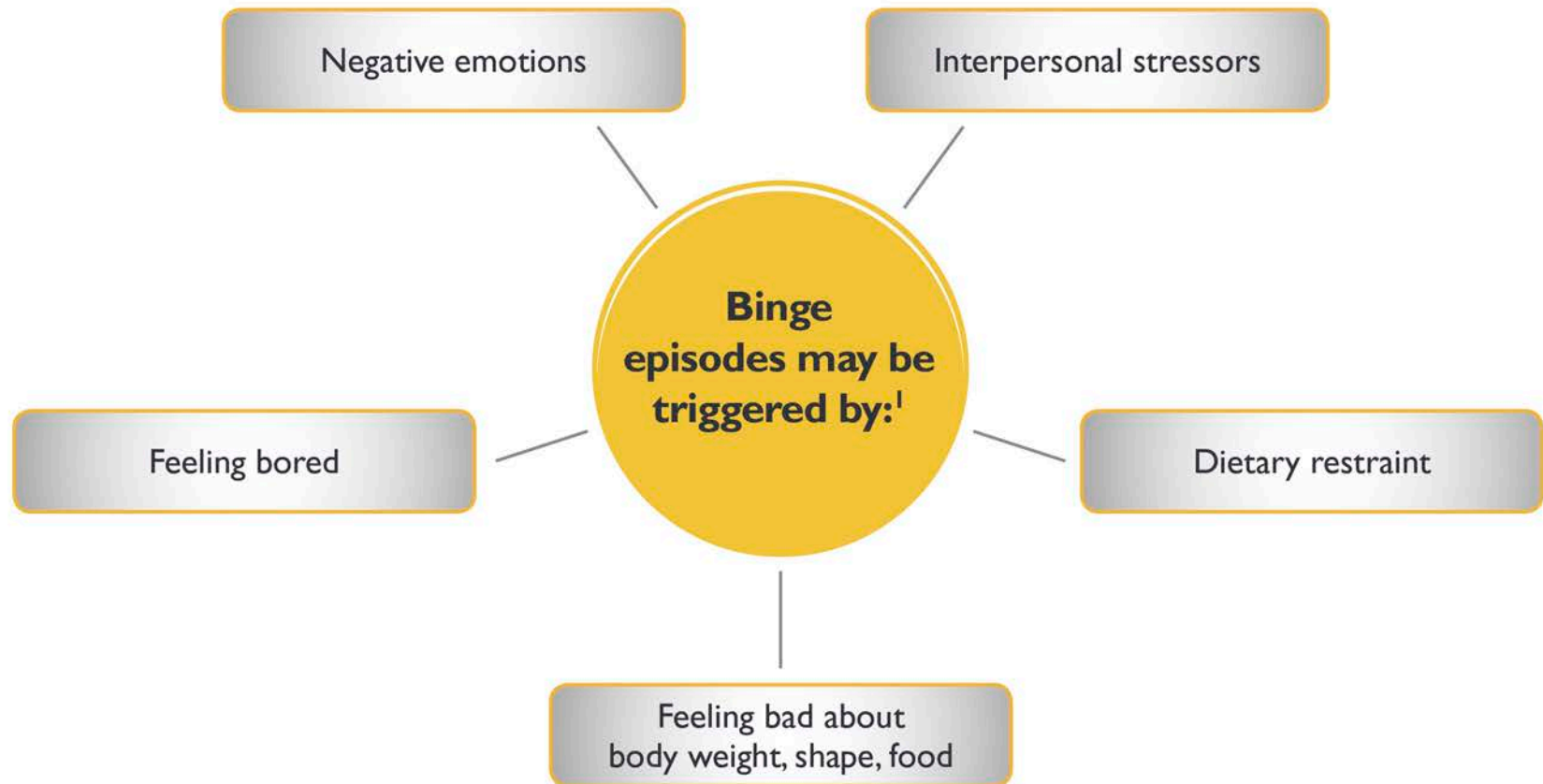
With Binge Eating Disorder, binge eating is not about hunger.

Binge Eating Disorder is a psychiatric disorder. Those who live with it may eat until they're uncomfortably full, or even if they're not hungry.

Adapted from the American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. Fifth Edition. Arlington, VA, American Psychiatric Association; 2013.

1. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. Fifth Edition. Arlington, VA, American Psychiatric Association; 2013.

What triggers binge eating?

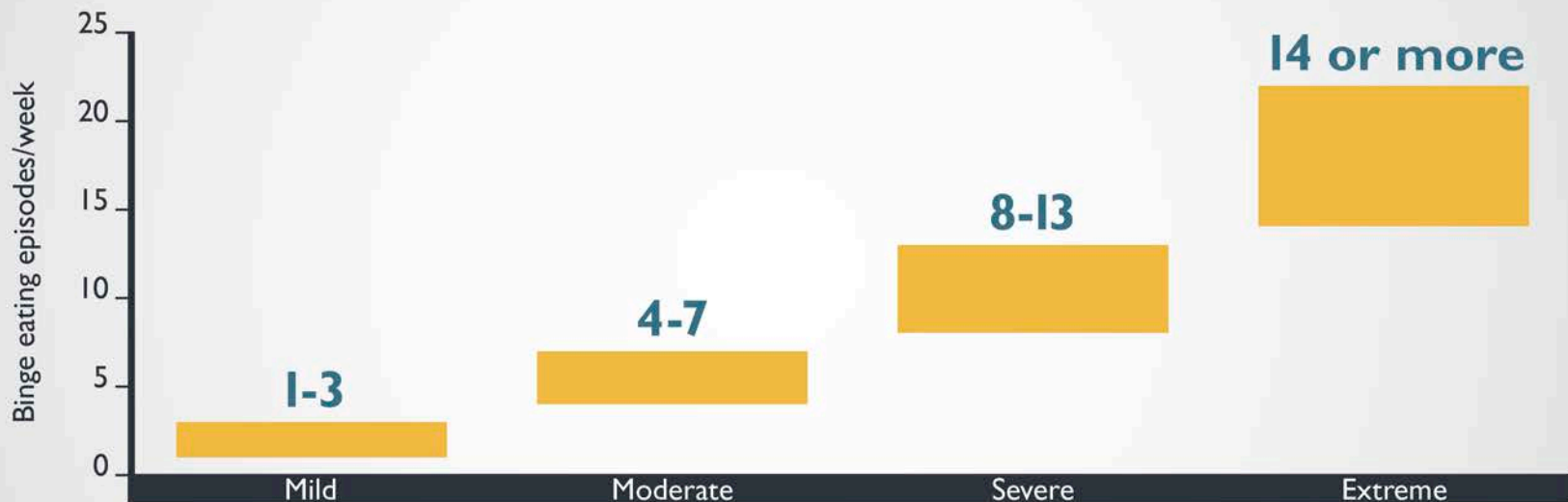


Binge Eating Disorder severity is based on binge episode frequency (DSM-5^{®†})

The level of severity is based on the frequency of episodes of binge eating.¹

The level of severity may be increased to reflect other symptoms and the degree of functional disability.¹

DSM-5[®] Binge Eating Disorder severity categorization (binge eating episodes/week)¹



Adapted from the American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition. Arlington, VA, American Psychiatric Association; 2013.

[†] DSM and DSM-5 are registered trademarks of the American Psychiatric Association.

¹. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition. Arlington, VA, American Psychiatric Association; 2013.

Binge Eating Disorder is distinct from anorexia nervosa and bulimia nervosa (DSM-5[†])

How is Binge Eating Disorder distinct?[†]

- No intense fear of weight gain
- No inappropriate use of laxatives, diuretics, enemas, induced vomiting, etc.
- No persistent food restriction or recurring inappropriate compensatory behaviors

Anorexia nervosa[†]

- Persistent energy intake restriction leading to significantly low weight
- Intense fear of weight gain
- Disturbance in self-perceived weight or shape
- Restricting behavior or purging behavior

Bulimia nervosa[†]

- Recurring inappropriate compensatory behaviors (e.g., misuse of laxatives, fasting or excessive exercise)
- Self-evaluation is unduly influenced by weight and shape
- Restriction of caloric intake and preferential selection of “low” calorie food

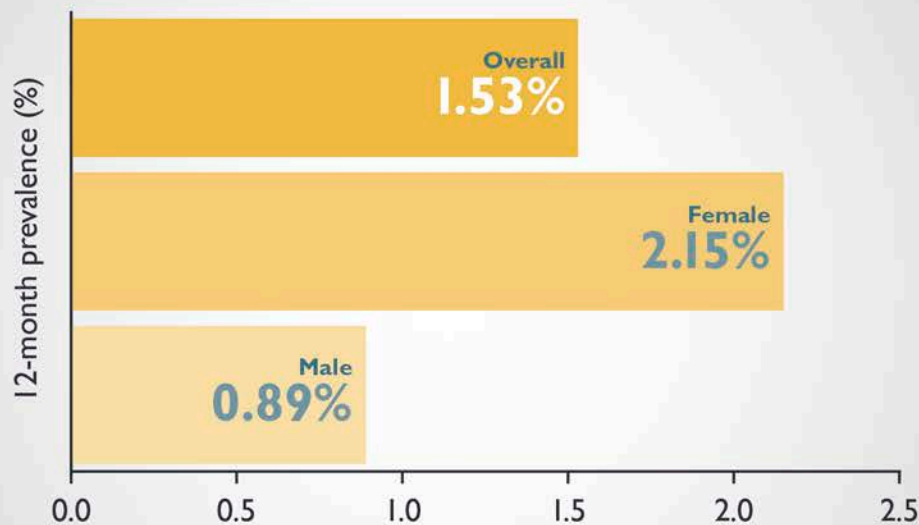
[†] DSM and DSM-5 are registered trademarks of the American Psychiatric Association.

¹ American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. Fifth Edition. Arlington, VA, American Psychiatric Association; 2013.

Binge Eating Disorder estimates in Canada

Findings from the Canadian VALIDATE survey

Twelve-month prevalence of Binge Eating Disorder



Adapted from Data on file, 2016.

1.53%
participants self-reported
symptoms that were consistent
with the DSM-5[†] criteria
for Binge Eating Disorder
in a survey of over
10,000 Canadian adults
aged 18 years and over.^{1‡§}

[†] DSM and DSM-5 are registered trademarks of the American Psychiatric Association.

[‡] Overall, experienced in the last 12 months.

¹. Data on file, 2016. Shire Pharma Canada ULC.

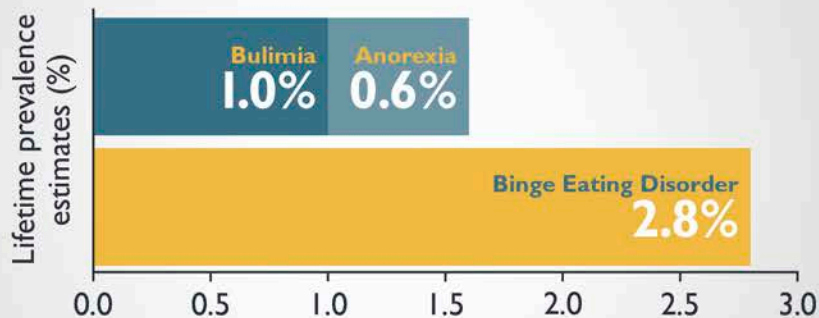
Binge Eating Disorder estimates vs. other eating disorders

In a survey of 2,980 American adults, BINGE EATING DISORDER...

... was the **most common eating disorder** in adults, more common than anorexia and bulimia combined.^{1†}

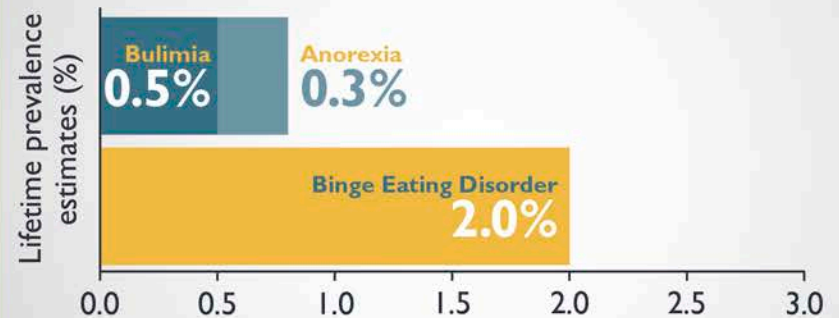
... affected more **men** than any other eating disorder.^{1,2†}

Lifetime prevalence estimates (women and men)



Adapted from Hudson JI, et al. 2007.

Lifetime prevalence estimates in men



Adapted from Hudson JI, et al. 2007.

Average age of onset – Binge Eating Disorder vs. bulimia nervosa

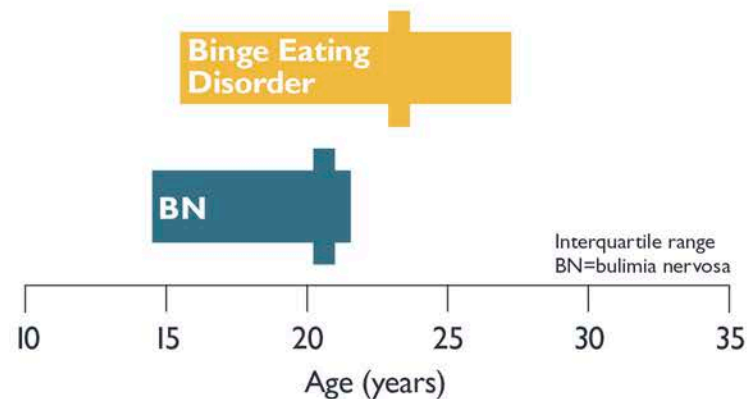
It was shown that the average age of onset for Binge Eating Disorder occurred several years later than for bulimia nervosa^{1†}

In a multinational survey of over 24,000 adults, the average age of onset for Binge Eating Disorder (23.3 years) was several years later than that of bulimia nervosa (20.6 years).^{1†}

The average age of onset for Binge Eating Disorder was demonstrated to be

23.3 years.^{1†}

Binge Eating Disorder vs. bulimia nervosa: Estimated mean age of onset and estimated interquartile range^{1†}



Adapted from Kessler RC, et al. 2013.

In a study of American adults, Binge Eating Disorder affected more people over the age of 30 than bulimia nervosa.^{2‡}

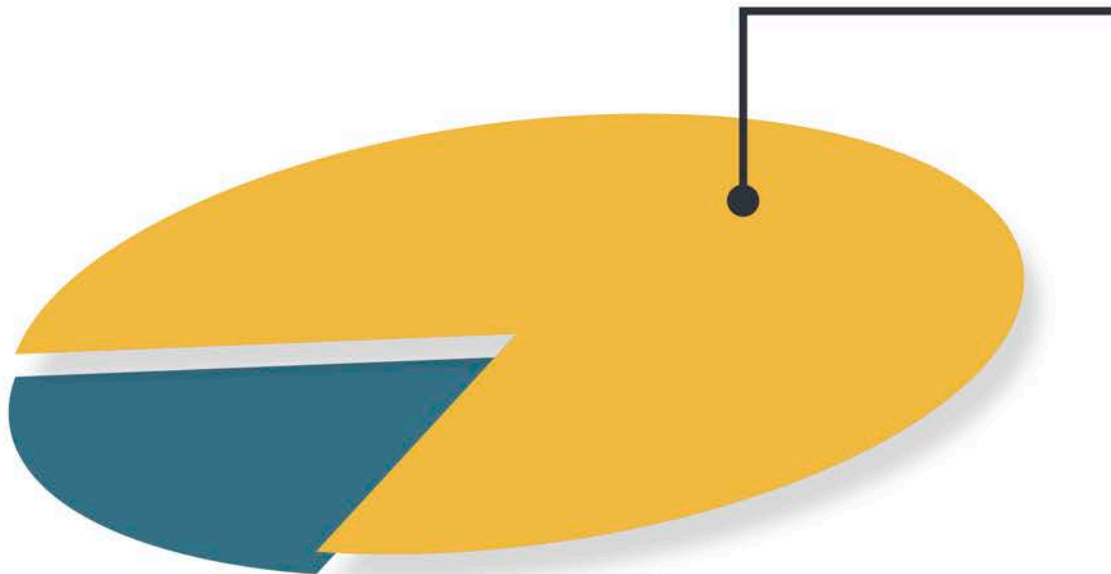
1. Kessler RC, et al. *Biol Psychiatry* 2013;73(9):904-14. 2. Hudson JL, et al. *Biol Psychiatry* 2007;61(3):348-58.

Adults with Binge Eating Disorder often have coexisting psychiatric comorbidities¹

In a multinational survey of over 24,000 adults,

79%

of 722 people with lifetime Binge Eating Disorder met criteria for at least one other mental disorder.^{2†}



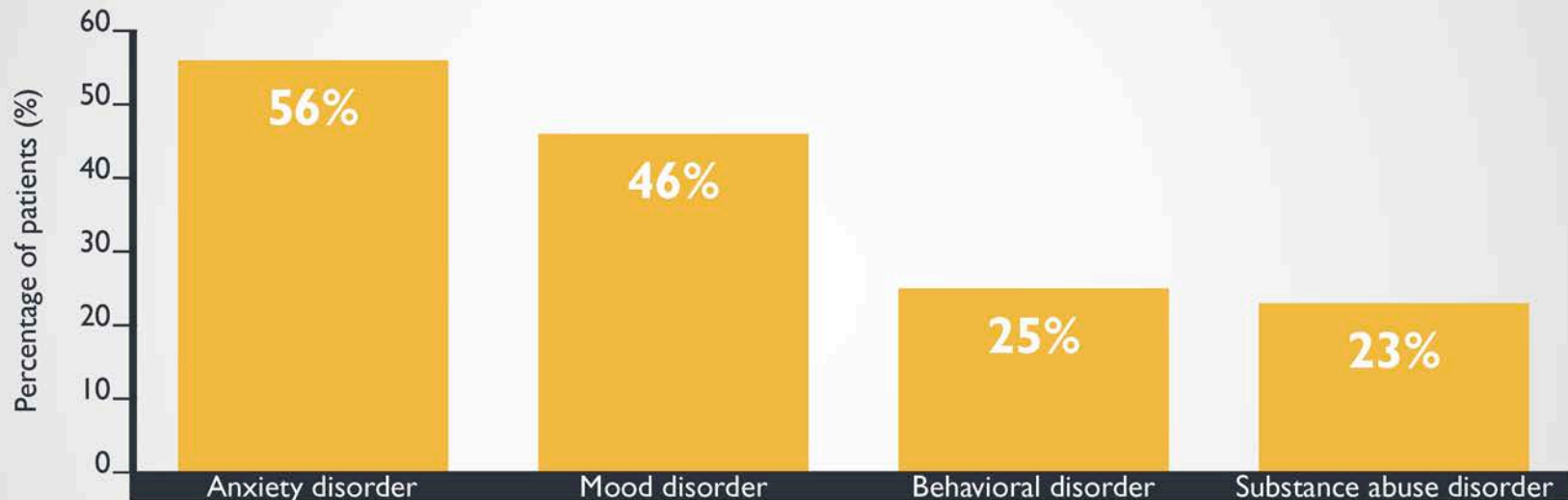
Adapted from Kessler RC, et al. 2013.

1. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. Fifth Edition. Arlington, VA, American Psychiatric Association; 2013. 2. Kessler RC, et al. *Biol Psychiatry* 2013;73(9):904-14.



What psychiatric disorders were most coexistent with Binge Eating Disorder?^{1†}

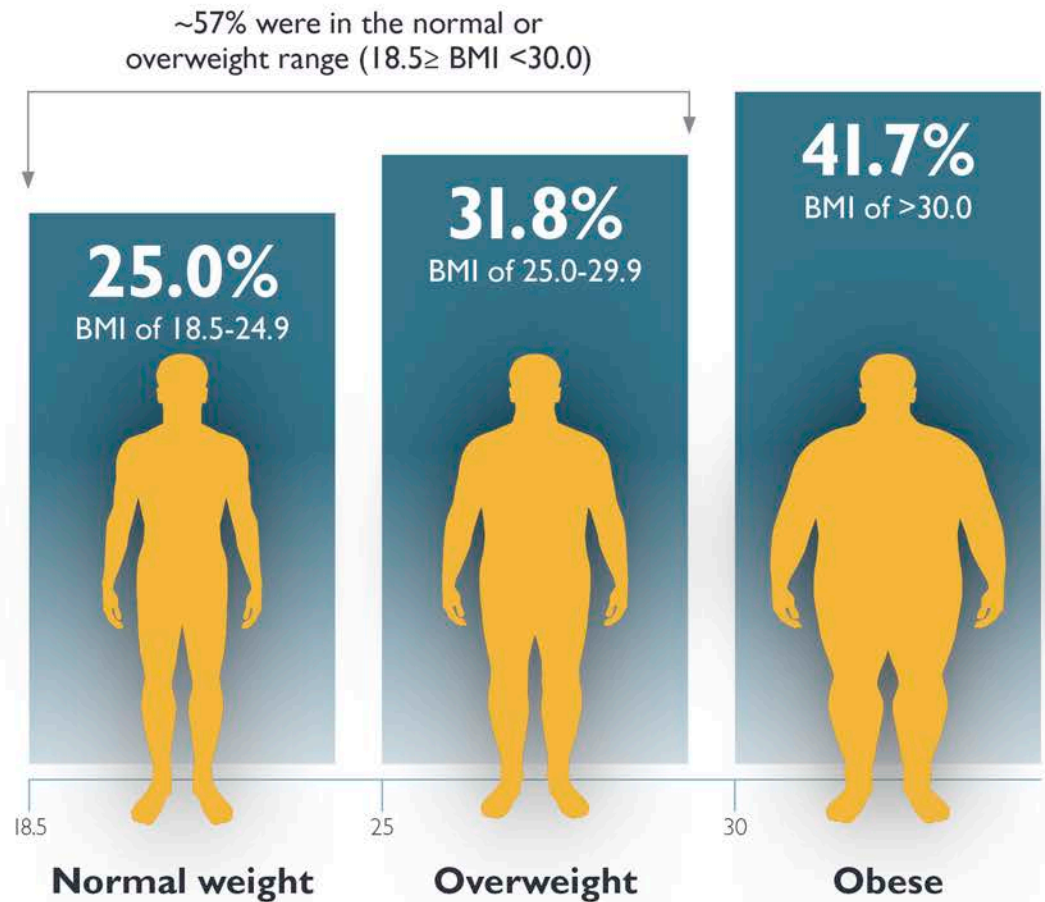
Associations of lifetime DSM-IV^{®†}/CIDI Binge Eating Disorder with lifetime DSM-IV[®]/CIDI disorders assessed in the WMH surveys^{1†}



Adapted from Kessler RC, et al. 2013.
CIDI=Composite International Diagnostic Interview; WMH=World Mental Health

Binge Eating Disorder affects individuals in a range of sizes

In a multinational survey of over 24,000 adults, those with 12-month Binge Eating Disorder (n=344) had a range of BMIs.^{1†}



BMI=body mass index

1. Kessler RC, et al. *Biol Psychiatry* 2013;73(9):904-14.

Adapted from Kessler RC, et al. 2013.

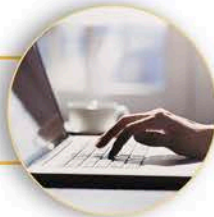
A modified version of the Sheehan Disability Scale was used to assess the severity of recent eating problems

The scale evaluates severity of impairment in four domains of living:^{1,2}



Social life

Work



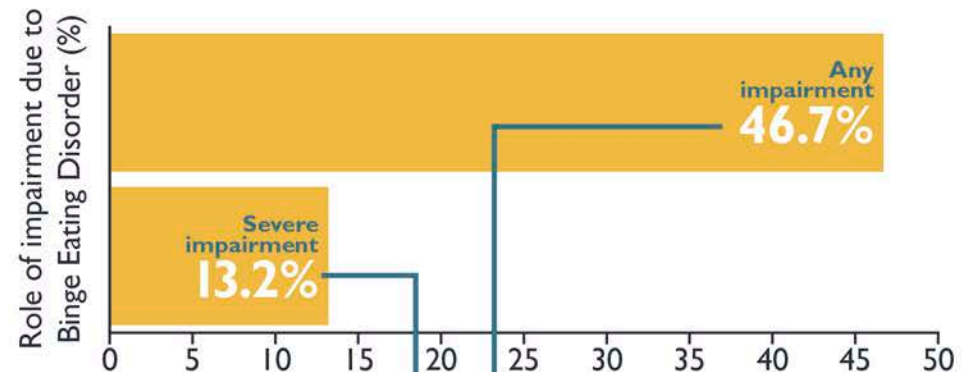
Close relationships



Home management



In a multinational survey of over 24,000 adults:^{1†}



Adapted from Kessler RC, et al. 2013.

13.2%

of 344 respondents with 12-month Binge Eating Disorder reported **severe impairment.**

46.7%

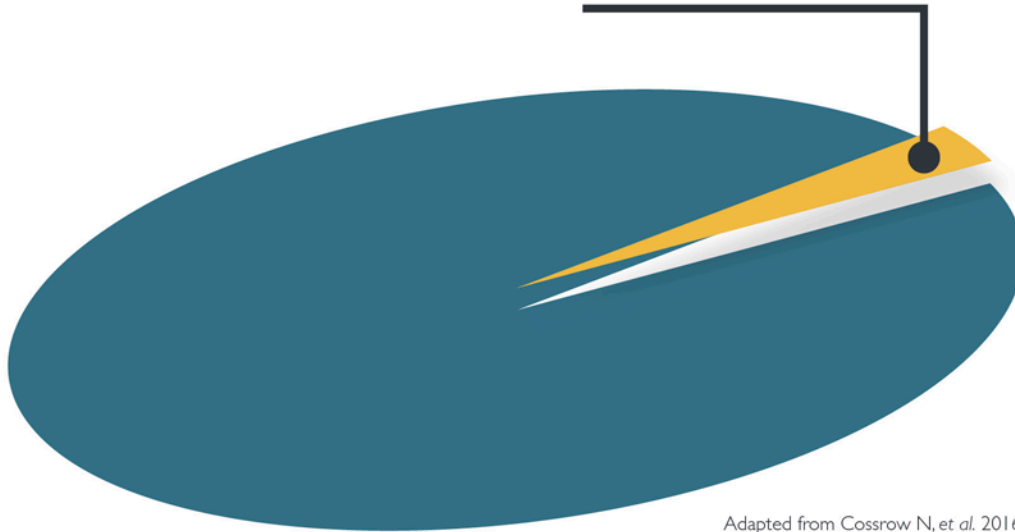
of 344 respondents with 12-month Binge Eating Disorder reported **any impairment.**

Low diagnosis rate among adults

In a survey of over 22,000 American adults,

**ONLY
3.2%**

of the individuals who self-reported symptoms consistent with the DSM-5[†] criteria for Binge Eating Disorder within the past 12 months also reported receiving a diagnosis.^{1‡}



Those suffering with Binge Eating Disorder may also have:^{2,3§}

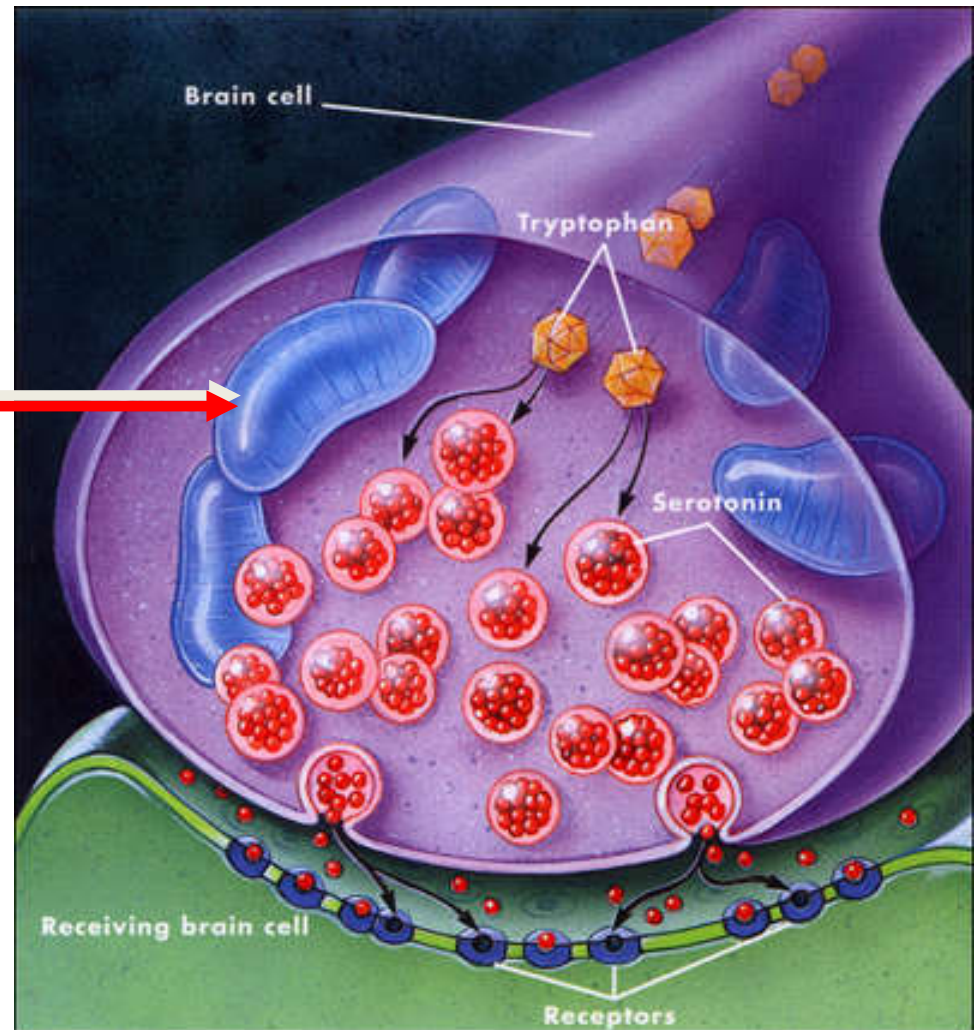
- Psychiatric comorbidities (such as mood or anxiety disorders)
- Role impairment (in work, social life, home management or close relationships)

Adapted from Cossrow N, et al. 2016.

[†] DSM and DSM-5 are registered trademarks of the American Psychiatric Association.

1. Cossrow N, et al. *J Clin Psychiatry* 2016;77(8):968-74. **2.** American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. Fifth Edition. Arlington, VA, American Psychiatric Association; 2013. **3.** Kessler RC, et al. *Biol Psychiatry* 2013;73(9):904-14.

Emotion Regulation with Food



Emotion Regulation with Food

- After a tense interaction with a co-worker, you head to the vending machine for a candy bar and a Coke. Then you return to your desk even more agitated than before.
- You have a high stress day. You decide not to cook the balanced meal you had planned, and instead you head to the drive-thru for an extra-value meal on the way home.

Physical Hunger vs. Emotion Regulation

- How does physical hunger affect your mood?
- Eating for physical hunger is always a good idea!
- Rarely would physical hunger alone lead to significant obesity

Discussing Emotional Eating in a non-shaming manner

- “Have you noticed a link between emotions and eating?”
- “What foods work for you?”
- “An effective “medication” with side effect of weight gain”
- “Emotional eating is often a sign that you are trying to meet a need and TRYING to take care of yourself”
- Your weight currently is the best weight for you based on the balance of emotion regulation and other factors

Neurotransmitters and Intake

- Serotonin
- Dopamine
- Endorphins

Balance is the key.

Serotonin

- More Serotonin receptors in GI system than the brain
- Carbohydrates – a significant component of “comfort foods” raises serotonin

Dopamine

- “Seek and find” chemical
- Helps explain why we feel a need for rewards

Endorphins

- Best known for creating the “exercise high”
- Intensifies pleasure associated with serotonin
- Believed to contribute to the “addictiveness” of chocolate

The 7-item BED Screener

Help identify your patients with BED using the 7-item BED Screener (BEDS-7)

This tool is intended *for screening use only*. It should not be used as a diagnostic tool.

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?



Scoring the BEDS-7: if the response to Q1 is "YES," Q2 through Q7 are answered. If the response to Q1 is "NO," the remaining questions do not apply as the screening result is negative. If the response to Q2 is "YES" and a shaded box is checked for each of the items Q3 through Q7, the screening result is positive.

Summary

- Binge Eating Disorder was **recently (2013) recognized** in the DSM-5[†] as a distinct eating disorder.¹
- Binge Eating Disorder is the **most common eating disorder** according to two separate American studies.^{2,3}
- Binge Eating Disorder is **not always associated with obesity**.³
- Individuals with Binge Eating Disorder are **likely to have coexisting psychiatric disorders**.³
- **The exact cause of Binge Eating Disorder is unknown.**⁴⁻⁷
 - Research suggests there might be a neurobiological basis as well as genetic and environmental risk factors.
- The **BEDS-7** represents a **rapid assessment tool** to help physicians identify patients who may have Binge Eating Disorder.⁸

† DSM and DSM-5 are registered trademarks of the American Psychiatric Association.

1. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. Fifth Edition. Arlington, VA, American Psychiatric Association; 2013. 2. Hudson JL, et al. *Biol Psychiatry* 2007;61(3):348-58. 3. Kessler RC, et al. *Biol Psychiatry* 2013;73(9):904-14. 4. Balodis IM, et al. *Obesity (Silver Spring)* 2013;21(2):367-77. 5. Davis CA, et al. *Obesity (Silver Spring)* 2009;17(6):1220-5. 6. Berridge KC, et al. *Brain Res* 2010;1350:43-64. 7. Wyvell CL and Berridge KC. *J Neurosci* 2000;20(21):8122-30. 8. Herman BK, et al. *Prim Care Companion CNS Disord* 2016;18(2).

