

Rumination Disorder

DSM-5-TR 307.53 | ICD-10-CM F98.21

Repeated effortless regurgitation of recently swallowed food that is re-chewed, re-swallowed, or spat out, persisting at least 1 month.

PREVALENCE

~1-3% of adults; higher in ID

TYPICAL ONSET

Infancy 3-12 mo; also adults

SEX RATIO

Roughly equal; slight female

COURSE

Chronic; long diagnostic delay

CLINICAL PICTURE

- Regurgitation begins within minutes of eating, is effortless, and is not preceded by nausea, retching, or heaving that would signal true vomiting.
- The returned material tastes like the meal rather than acidic or bitter, and patients re-chew and re-swallow it or discreetly spit it into a napkin.
- Infants show a recognizable posture of arched back, head held back, and rhythmic tongue and sucking movements, with irritability between episodes.
- Adults typically arrive after years of negative endoscopy and reflux trials, having been labeled with gastroparesis, refractory GERD, or bulimia nervosa.
- Consequences accumulate quietly: weight loss, dental erosion, halitosis, electrolyte disturbance, and avoidance of eating in front of other people.
- In children and adults with intellectual disability the behavior is often self-stimulatory and increases during periods of understimulation or stress.

DIAGNOSTIC CRITERIA AT A GLANCE

- Repeated regurgitation of food is present for at least 1 month, and the returned food may be re-chewed, re-swallowed, or spat out by the individual.
- The behavior is not explained by a gastrointestinal or other medical condition such as reflux disease, achalasia, or pyloric stenosis on adequate workup.
- It does not occur only during anorexia nervosa, bulimia nervosa, binge-eating disorder, or avoidant/restrictive food intake disorder episodes.
- When it arises alongside intellectual disability or another neurodevelopmental disorder, it must be severe enough to warrant independent clinical attention.
- The diagnosis can be made at any age, and the specifier in remission is used once criteria have not been met for a sustained period of time.

NEUROBIOLOGY & PHYSIOLOGY

- The mechanism is a learned, unconscious contraction of the abdominal wall that raises intragastric pressure while the lower esophageal sphincter relaxes.
- High-resolution manometry with impedance is the confirmatory study, showing an abdominal pressure rise above roughly 30 mmHg just before retrograde flow.
- Postprandial gastric accommodation is often impaired and visceral hypersensitivity is common, which is why episodes cluster in the first 30 minutes after eating.
- In infancy the behavior is linked to understimulation, neglect, and disturbed caregiver interaction, and it can function as self-soothing sensory input.
- Nutritional sequelae include weight loss, failure to thrive, dental enamel erosion, hypokalemia, and aspiration risk with recurrent pneumonia in some cases.
- Adult-onset cases frequently follow a triggering event such as gastroenteritis, surgery, or a stressful period that establishes the habitual muscular pattern.

PSYCHOLOGICAL MECHANISMS

- Operant learning maintains the behavior: early episodes relieve postprandial fullness or discomfort, and the relief negatively reinforces the muscle pattern.
- The act is habitual rather than intentional, so patients often cannot describe doing anything and report that the food simply comes back on its own.
- Anxiety, stress, and mealtime tension reliably increase episode frequency, and many adults notice clustering during examination periods or work crises.
- Shame drives concealment, eating alone, and delayed disclosure, so the behavior is rarely volunteered unless the clinician asks about re-chewing directly.
- In infants the feeding relationship itself is the target, since responsive holding, stimulation, and soothing reduce the reinforcing value of the behavior.

DIFFERENTIAL & COMORBIDITY

- Reflux and true vomiting involve nausea, retching, acidic material, and a longer postprandial delay, while rumination is effortless, prompt, and non-acidic.
- Gastroparesis and achalasia produce delayed regurgitation of undigested or fermented food with nausea, and are separated by gastric emptying and manometry.
- Bulimia nervosa involves deliberate self-induced vomiting driven by shape and weight concerns, which is absent in uncomplicated rumination disorder.
- Intellectual disability, autism spectrum disorder, anxiety disorders, and depression are the most frequent comorbidities across the age range.
- Monitor for malnutrition, dehydration, hypokalemia, dental damage, and aspiration, and treat medical instability before behavioral work begins.

Treatment EVIDENCE-BASED MANAGEMENT

PHARMACOLOGIC

- No medication is FDA-approved; drugs are adjuncts to behavioral treatment and are aimed at reducing regurgitation events or treating comorbidity.
- Baclofen 10 mg three times daily** raises lower esophageal sphincter pressure and reduced regurgitation events in a placebo-controlled crossover trial.
- Proton pump inhibitors, prokinetics, and antiemetics do not work for the core behavior, and continuing them delays effective treatment.
- SSRIs** are reasonable when anxiety or depression is prominent, since arousal reliably drives episode frequency in adolescents and adults.
- Low-dose tricyclics are sometimes used for overlapping functional dyspepsia, but evidence in rumination specifically is limited to small case series.

PSYCHOTHERAPY

- Diaphragmatic breathing** taught immediately after meals is first-line, since relaxed abdominal breathing is physically incompatible with the strain pattern.
- Habit reversal training** pairs awareness training with the competing diaphragmatic response and typically produces change within a few sessions.
- Manometry or surface EMG **biofeedback** helps patients who cannot feel the abdominal contraction, giving them a visible target to learn.
- For infants, caregiver-focused work increases holding, eye contact, and stimulation, and restructures feeding so that mealtimes become soothing.
- Anxiety-focused **CBT** addresses the stress triggers and the social avoidance of eating with others that maintains isolation around meals.

ADJUNCT & SUPPORTIVE

- Confirm the diagnosis positively with postprandial high-resolution impedance manometry rather than repeating another round of negative endoscopy.
- Chewing sugar-free gum after meals is a simple adjunct that competes with the behavior and increases salivation and swallowing frequency.
- Nutritional rehabilitation, weight monitoring, and dental review address the accumulated physical consequences of chronic regurgitation.
- In infancy, assess the caregiving environment for neglect or understimulation and involve early intervention or child protection when indicated.
- Track episode counts and postprandial timing in a simple food and symptom diary, which also builds the awareness that habit reversal requires.

- ☆ **CLINICAL PEARLS**
- Effortless, non-acidic, and within minutes of eating separates rumination from vomiting or reflux.
 - Postprandial diaphragmatic breathing is first-line and often works within a handful of sessions.
 - Adults collect years of negative GI workups; ask directly whether the food is re-chewed.

References

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NOTE

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