OBSESSIVE-COMPULSIVE AND RELATED DISORDERS

Trichotillomania (Hair-Pulling Disorder)

TTM

DSM-5-TR 312.39 | ICD-10-CM F63.3

Recurrent body-focused hair pulling producing noticeable hair loss, with repeated failed attempts to stop and heavy concealment.

LIFETIME PREVALENCE	TYPICAL ONSET	SEX RATIO	COURSE
~1-2% of adults	Ages 10-13, peripubertal	~4:1 to 10:1 female:male	Chronic, waxing and waning

CLINICAL PICTURE

- Scalp, eyebrows, and eyelashes are the most common sites, while pubic, facial, and body hair pulling is common but rarely disclosed.
- Pulling occurs in an automatic mode outside awareness during sedentary activity and in a focused mode to relieve tension or a specific urge.
- Many patients report tension before pulling and relief or gratification afterward, though a substantial subgroup describes no conscious urge.
- Post-pulling rituals include inspecting the root, rolling the hair between the fingers, biting it, and swallowing it in 5-20% of patients.
- Camouflage with hats, scarves, wigs, and makeup, plus avoidance of swimming, wind, and salons, marks the functional cost of the disorder.
- Shame drives concealment, and many patients have never disclosed pulling to a clinician despite years of symptoms and dermatology visits.

DIAGNOSTIC CRITERIA AT A GLANCE

- Recurrent pulling out of one's own hair resulting in hair loss, from any body site, occurring over time rather than in a single episode.
- Repeated attempts to decrease or stop the pulling, which distinguishes the disorder from an untroubled and unproblematic habit.
- Pulling causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.
- Not attributable to a dermatologic condition and not better explained by another mental disorder such as body dysmorphic disorder.
- Tension before pulling and relief afterward are no longer required, which broadens the diagnosis to include purely automatic pullers.

NEUROBIOLOGY & PHYSIOLOGY

- Best framed as a compulsivity and habit-learning disorder involving dorsal striatum, supplementary motor area, and weakened response inhibition.
- Structural imaging shows volumetric changes in striatal and cortical motor regions along with reduced white matter integrity in habit pathways.
- Glutamatergic modulation is supported by **N-acetylcysteine 1200-2400 mg/day**, which outperformed placebo in adults over 12 weeks.
- Heritability is substantial, and SLITRK1 and SAPAP3 findings converge with knockout mouse models that display compulsive self-grooming.
- Serotonergic agents show weak efficacy for pulling itself, distinguishing the disorder pharmacologically from OCD despite shared classification.
- Trichobezoar from trichophagia can cause obstruction, perforation, and Rapunzel syndrome, requiring endoscopic or surgical removal.

PSYCHOLOGICAL MECHANISMS

- The behavioral model treats pulling as automatically reinforced by sensory stimulation and by relief from tension, boredom, or aversive affect.
- Internal and external cues, such as sitting at a mirror, driving, reading, or feeling a coarse hair, reliably trigger discrete pulling episodes.
- Emotion regulation accounts explain pulling as downregulation of boredom, anxiety, and frustration when other coping options feel unavailable.
- Shame and concealment reduce help seeking and drive social avoidance, which in turn maintains isolation and lowers competing activity.
- Perfectionism about hair symmetry or texture fuels focused pulling aimed at removing hairs judged coarse, gray, or otherwise imperfect.

DIFFERENTIAL & COMORBIDITY

- Exclude alopecia areata, tinea capitis, and traction alopecia; dermoscopy in pulling shows broken hairs of varying lengths and no exclamation hairs.
- Distinguish from OCD, where pulling would follow an obsession, and from BDD, where hair removal serves a specific appearance concern.
- Excoriation disorder co-occurs in a substantial minority of patients, so screen for both body-focused repetitive behaviors together.
- Comorbid major depression, anxiety disorders, and substance use are common and shape both engagement and treatment sequencing.
- Ask about abdominal pain, vomiting, and early satiety whenever trichophagia is present, since trichobezoar can present as obstruction.

Treatment EVIDENCE-BASED MANAGEMENT

PHARMACOLOGIC

- No medication is FDA-approved; **N-acetylcysteine 1200-2400 mg/day** has the strongest adult evidence with a benign adverse effect profile.
- **SSRIs** are largely ineffective for the pulling itself but remain appropriate for comorbid depression and anxiety disorders.
- **Clomipramine 100-250 mg/day** shows modest benefit in small controlled trials; monitor ECG and anticholinergic burden closely.
- **Olanzapine 2.5-10 mg/day** reduced symptoms in a controlled trial, but weigh metabolic and sedation risk against the modest benefit.
- Pediatric N-acetylcysteine trials were negative, so behavior therapy remains the primary approach for children and younger adolescents.

PSYCHOTHERAPY

- **Habit reversal training** is first-line, combining awareness training, a competing response, and social support across 8-12 sessions.
- **Comprehensive behavioral treatment** adds stimulus control and modality-specific strategies for automatic versus focused pulling patterns.
- **Acceptance-enhanced behavior therapy** and DBT-informed skills improve maintenance by targeting affect regulation and urge tolerance.
- Decoupling and stimulus-control tactics, including barriers, gloves, bandages, and fidget objects, reduce automatic episodes at known cue sites.
- Behavior therapy effect sizes are large and clearly exceed medication, though relapse is common without scheduled booster sessions.

ADJUNCT & SUPPORTIVE

- Track with the **Massachusetts General Hospital Hairpulling Scale** or the NIMH Trichotillomania Severity Scale every 4-6 weeks.
- Photograph affected areas with consent to document regrowth, which sustains motivation more reliably than patient self-report alone.
- Coordinate with dermatology for scalp health and to definitively exclude alternative causes of patterned or diffuse alopecia.
- **TLC Foundation for BFRBs** resources, peer support, and group treatment reduce shame and the isolation that maintains concealment.
- Sleep regulation, stress reduction, and scheduled screen breaks lower cue exposure during high-risk sedentary evening periods.

CLINICAL PEARLS

- Behavior therapy beats medication here; habit reversal is the treatment, not an add-on.
- Ask whether they eat the hair; trichobezoar is a surgical problem waiting to happen.
- Automatic pulling needs stimulus control; focused pulling needs a competing response.

References

American Psychiatric Association. (2022). *Diagnostic and statistical manual of mental disorders* (5th ed., text rev.). https://doi.org/10.1176/appi.books.9780890425787

Franklin, M. E., & Tolin, D. F. (2007). *Treating trichotillomania: Cognitive-behavioral therapy for hairpulling and related problems*. Springer.

Grant, J. E., & Chamberlain, S. R. (2016). Trichotillomania. *The American Journal of Psychiatry, 173*(9), 868-874.

Grant, J. E., Odlaug, B. L., & Kim, S. W. (2009). N-acetylcysteine, a glutamate modulator, in the treatment of trichotillomania: A double-blind, placebo-controlled study. *Archives of General Psychiatry, 66*(7), 756-763.

Sadock, B. J., Sadock, V. A., & Ruiz, P. (2021). *Kaplan & Sadock's synopsis of psychiatry* (12th ed.). Wolters Kluwer.

Stahl, S. M. (2021). *Stahl's essential psychopharmacology* (5th ed.). Cambridge University Press.

Woods, D. W., & Twohig, M. P. (2008). *Trichotillomania: An ACT-enhanced behavior therapy approach therapist guide*. Oxford University Press.

NOTE

References are formatted in APA 7th edition style with hanging indents. Diagnostic terminology, criteria structure, and coding follow the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed., text rev.; APA, 2022); criteria are paraphrased for instructional use and are not reproduced verbatim. Verify all citations against the original sources before use in academic work, and confirm medication dosing against current prescribing information.