

Language Disorder

DSM-5-TR 315.32 | ICD-10-CM F80.2

Persistent difficulty acquiring and using spoken, written, or signed language, with vocabulary and sentence structure well below age expectation.

PREVALENCE

~7% of school entrants

TYPICAL ONSET

Early developmental period

SEX RATIO

~1.3-1.5:1 male:female

COURSE

Persistent past age 5 in most

CLINICAL PICTURE

- Late talkers who plateau: fewer than 50 words at 24 months, few word combinations, and vocabulary that grows slowly through preschool.
- Sentences are short, telegraphic, and grammatically simplified, with omitted tense markers, pronouns, articles, and auxiliary verbs.
- Word-finding difficulty produces pauses, circumlocutions, and heavy reliance on nonspecific fillers such as thing, stuff, and that one.
- Narratives are sparse and disorganized; the child cannot sequence events or supply the background a listener needs to follow the story.
- Comprehension deficits are easily missed because children respond to routine, gesture, and context rather than to the words themselves.
- Adolescents show flat reading comprehension, avoidance of oral presentations, and withdrawal misread as shyness or defiance.

DIAGNOSTIC CRITERIA AT A GLANCE

- Persistent deficits in acquisition and use of language across modalities from reduced vocabulary, limited sentence structure, and impaired discourse.
- Language abilities are quantifiably and substantially below age expectation on standardized measures, not merely delayed relative to peers.
- Onset is in the early developmental period, though deficits may become obvious only when language demands increase in school.
- Functional impairment is required in communication, social participation, academic achievement, or occupational performance.
- Not attributable to hearing or other sensory impairment, motor dysfunction, another medical or neurological condition, or intellectual disability.

NEUROBIOLOGY & PHYSIOLOGY

- Heritability estimates reach **50-70%**; siblings of affected children carry roughly a fourfold increase in risk of language disorder.
- Common variants rather than single genes dominate; CNTNAP2, ATP2C2, and CMIP show replicated association with language phenotypes.
- FOXP2 mutations cause a rare monogenic speech and language disorder and anchored the genetics of the wider language phenotype.
- Structural imaging shows reduced leftward planum temporale asymmetry and altered arcuate fasciculus connectivity between frontal and temporal language cortex.
- Procedural learning deficits implicating frontostriatal circuits parsimoniously explain the disproportionate impairment in grammar.
- Recurrent otitis media with effusion, prematurity, and low birth weight add modest independent risk to early language acquisition.

PSYCHOLOGICAL MECHANISMS

- Phonological short-term memory is a core weakness; nonword repetition is impaired and serves as an efficient clinical marker.
- Limited verbal working memory constrains sentence processing so that long or embedded utterances are decoded incompletely.
- Reduced language input quality and quantity compound the primary deficit, widening vocabulary gaps year over year.
- Communication failure invites peer rejection, and children learn avoidance, lowering rates of self-initiated interaction.
- Weak verbal mediation limits self-talk for emotion regulation, contributing to frustration outbursts and behavioral dysregulation.

DIFFERENTIAL & COMORBIDITY

- Rule out hearing loss with audiologic testing first; also exclude intellectual disability, selective mutism, and environmental deprivation.
- **Autism spectrum disorder** shares language delay but adds restricted interests and reciprocal social deficits beyond language level.
- Comorbidity is the rule: **ADHD**, specific learning disorder, and developmental coordination disorder each co-occur in 20-50%.
- Language disorder is the strongest early predictor of later reading disorder because phonology and vocabulary underpin both.
- Anxiety, depression, and unemployment risk rise into adulthood, and rates of language impairment are high in juvenile offenders.

Treatment EVIDENCE-BASED MANAGEMENT

PHARMACOLOGIC

- No medication treats language disorder; speech-language intervention is the sole evidence-based core treatment for the deficit.
- Treat comorbid **ADHD** with stimulants to improve availability for therapy; medication does not improve language structure itself.
- Audiologic referral and tympanostomy tubes for chronic effusion restore access to speech input in persistently affected children.
- Consider genetic and neurologic evaluation when dysmorphology, regression, seizures, or global delay accompany the language deficits.
- Avoid supplements, auditory integration training, and other unvalidated products marketed for childhood language delay.

PSYCHOTHERAPY

- **Speech-language therapy** delivered individually or in small groups, roughly two sessions weekly for 8-12 weeks or longer, is first-line.
- Focused stimulation and enhanced milieu teaching embed high-density models of target forms into play and daily routines.
- **Parent-implemented intervention** trains caregivers in recasting, expansion, and responsive turn taking, with strong preschool effect sizes.
- Explicit grammar facilitation targeting tense and agreement morphemes outperforms general language stimulation for syntax.
- Vocabulary and narrative instruction plus **CBT** for social anxiety supports school-age children and adolescents.

ADJUNCT & SUPPORTIVE

- IEP services under speech or language impairment provide direct therapy, extended time, and classroom language supports.
- Standardized batteries such as the **CELF-5** and **PLS-5** quantify baseline severity and track progress every 6-12 months.
- Augmentative and alternative communication, including picture systems and speech-generating devices, supports minimally verbal children.
- Shared book reading, dialogic reading, and preserved bilingual home language exposure enrich input without harming acquisition.
- Screen and monitor reading skills from kindergarten onward given the high conversion to specific learning disorder in reading.

CLINICAL PEARLS

- Never wait and see past age 3 for a late talker; screen hearing first, always.
- Nonword repetition is a fast, relatively culture-fair marker of language disorder.
- Bilingualism does not cause language disorder; the deficit shows in both languages.

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NOTE

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