

Boston Naming Test 2nd Edition

Introduction

The **Boston Naming Test 2nd Edition** (BNT-2) remains one of the most widely used instruments in clinical neuropsychology and speech-language pathology for assessing word-retrieval abilities. Developed to evaluate an individual's ability to name objects presented in black-and-white line drawings, this updated version builds upon the original 1983 test while preserving its core purpose: to detect impairments in visual confrontation naming. Whether used to diagnose aphasia, track cognitive decline in dementia, or assess recovery after traumatic brain injury, the BNT-2 provides clinicians with a reliable, standardized measure of lexical access. In this article, we explore the test's background, administration, scoring, clinical applications, and the key improvements introduced in the second edition.

What Is the Boston Naming Test 2nd Edition?

The BNT-2 is a well-validated neuropsychological assessment tool designed to measure an individual's ability to retrieve words from memory when presented with visual stimuli. The test consists of 60 black-and-white line drawings of common

objects, arranged by increasing difficulty. The first items are simple, high-frequency words (e.g., tree, pencil), while later items are less common (e.g., abacus, trellis). The examinee is asked to name each picture within a set time limit. If the examinee cannot name the picture, the examiner may provide a semantic cue (e.g., “It is a type of furniture”) or a phonemic cue (e.g., “It starts with /h/”). The BNT-2 is particularly sensitive to mild word-finding difficulties that might not be evident in everyday conversation.

Purpose and Goals

The primary goal of the **Boston Naming Test 2nd Edition** is to identify and quantify anomic aphasia—a condition where individuals struggle to recall words despite intact comprehension and articulation. However, its applications extend beyond aphasia. It helps in:

- Assessing language function in dementia (e.g., Alzheimer’s disease, frontotemporal dementia)
- Evaluating word-retrieval deficits after stroke or traumatic brain injury
- Monitoring recovery or progression of language impairments over time
- Detecting subtle naming difficulties in conditions like multiple sclerosis or Parkinson’s disease
- Differentiating between types of aphasia (e.g., Broca’s versus Wernicke’s)

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Background and Development

The original Boston Naming Test, created by Edith Kaplan, Harold Goodglass, and Sandra Weintraub in 1983, quickly became a standard measure in neuropsychological assessments. However, as clinical practice evolved, certain limitations emerged—outdated drawings, ambiguous items, and inadequate normative data for diverse populations. In response, the **Boston Naming Test 2nd Edition** was developed by a team including Sandra Weintraub, Gayle Deutsch, and others. The second edition, published in 2000, updated the picture stimuli, refined the administration and scoring instructions, and provided expanded normative data spanning ages 5 to 96 years. The BNT-2 also includes a version for Spanish-speaking individuals, known as the Boston Naming Test–Spanish version.

Key Improvements in the Second Edition

Several enhancements distinguish the BNT-2 from its predecessor:

- **Updated Item Selection:** Some original drawings were replaced to reduce cultural bias and improve clarity. The item order was revalidated to ensure a smooth difficulty gradient.
- **Expanded Normative Sample:** Norms were developed based on a large, geographically diverse sample that included individuals with different educational backgrounds and ages, improving diagnostic accuracy.
- **Standardized Cueing System:** The second edition provides clear guidelines for when and how to administer

semantic and phonemic cues, reducing examiner

variability.

- **Improved Scoring Criteria:** Clearer definitions for acceptable responses and a systematic scoring form facilitate reliable evaluations.
- **Psychometric Evidence:** The BNT-2 demonstrates strong internal consistency (Cronbach's $\alpha > 0.90$) and test-retest reliability, making it suitable for repeated assessments.

Administration of the BNT-2

The test is individually administered and typically takes 15 to 30 minutes. The examiner presents each picture in a spiral-bound booklet, allowing extra time for items the examinee may find difficult. The standard procedure is as follows:

1. **Spontaneous Naming:** The examinee is asked to name the picture. Responses are recorded verbatim.
2. **Semantic Cue:** If the examinee does not name the item within 20 seconds, or gives a response indicating misperception, the examiner provides a semantic cue (e.g., "It is used for writing").
3. **Phonemic Cue:** If the examinee still cannot produce the word after the semantic cue, a phonemic cue is given (e.g., "It begins with /p/").
4. **Multiple-Choice Option (Optional):** For some items, if the examinee cannot name the picture after phonemic cueing, a multiple-choice format may be used to differentiate between naming and recognition deficits.

The test can be discontinued after six consecutive failures on spontaneous naming. Instructions are provided in the manual for

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both the full 60-item form and a shorter 30-item version for quick screening.

Scoring and Interpretation

Scoring is straightforward but requires careful attention to response accuracy. Each correctly spontaneously named item earns one point. Points are also given for correct naming after a semantic or phonemic cue? No—only spontaneous naming counts toward the total score. However, the number of semantic and phonemic cues provided is recorded separately, as it offers valuable clinical information about the nature of the naming deficit. For example, a patient who benefits from phonemic cues may have a primary phonological retrieval problem, while one who benefits only from semantic cues may have a conceptual deficit.

The total raw score (number of spontaneously named items) is converted to a standardized score (e.g., T-score, percentile) using age- and education-matched norms. The manual provides tables for children (ages 5–13) and adults (ages 14–96), with separate norms for older adults. Clinicians also look at the pattern of errors (e.g., perceptual errors, semantic paraphasias, phonemic paraphasias) to guide diagnosis.

Clinical Applications

The **Boston Naming Test 2nd Edition** is used in diverse clinical settings. Below are some of its primary applications:

Aphasia Assessment

For individuals with stroke or brain tumors affecting language areas, the BNT-2 helps identify anomia and differentiate it from other language syndromes. Performance profiles—“tip-of-the-tongue” responses, circumlocutions, or semantic errors—provide insights into the underlying cognitive process.

Dementia Evaluation

Word-finding difficulties are often an early sign of Alzheimer’s disease. The BNT-2 can detect subtle naming decline in mild cognitive impairment and track progression over time. Research shows that patients with Alzheimer’s tend to make more semantic errors, while those with primary progressive aphasia may show different error patterns.

Traumatic Brain Injury

Even mild traumatic brain injury can disrupt lexical retrieval. The BNT-2 is sensitive to these deficits, especially at the more difficult items. It is also used to monitor recovery during rehabilitation.

Learning Disabilities and Developmental Disorders

In children, the BNT-2 can help assess language development and identify specific word-retrieval problems that may affect reading comprehension or academic performance. It is often included in comprehensive evaluations for dyslexia or specific language impairment.

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Strengths and Limitations

Strengths

- **High Reliability:** Extensive normative data and strong psychometric properties make the BNT-2 a dependable tool.
- **Clinical Relevance:** The cueing system provides nuanced information about the type of naming deficit.
- **Wide Age Range:** Suitable from childhood through old age.
- **International Use:** The test has been adapted for use in many languages and cultures.

Limitations

- **Cultural Bias:** Despite updates, some items may still be less familiar to individuals from non-Western backgrounds (e.g., “pretzel,” “tripod”).
- **Educational Bias:** Performance correlates with education level, so low scores may not always reflect impairment.
- **Length:** The full 60-item version can be tiring for older adults or patients with severe deficits; the shorter form may lack sensitivity.
- **Focus on Visual Naming:** The test only assesses confrontation naming, not other aspects of language such as fluency or comprehension.

Tips for Clinicians Using the BNT-2

To get the most out of the test, practitioners should follow these evidence-based recommendations:

- Use the full form for detailed diagnosis; reserve the 30-item version for screening.
- Record all responses, including semantic and phonemic paraphasias, to aid differential diagnosis.
- Interpret scores in context of the patient's educational and cultural background.
- Consider using the BNT-2 alongside other language measures (e.g., verbal fluency, Boston Diagnostic Aphasia Examination) for a comprehensive assessment.
- For serial assessments, be mindful of practice effects; the manual provides guidelines for repeated testing.

Conclusion

The **Boston Naming Test 2nd Edition** remains an indispensable instrument for clinicians seeking to evaluate word-retrieval abilities with precision and depth. Its thoughtful updates in stimuli, norms, and administration guidelines have preserved the test's relevance in an era of rapidly evolving neuropsychological assessment. While no single tool can capture the full complexity of language processing, the BNT-2 consistently demonstrates strong psychometric properties and clinical utility. Whether you are diagnosing aphasia, monitoring Alzheimer's progression, or investigating naming deficits after

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brain injury, the BNT-2 provides reliable, actionable insights. By understanding its strengths and using it judiciously, clinicians can enhance their ability to identify and serve individuals with communication disorders.