



Sensory Integration Therapy and Auditory Integration Therapy

Policy # 00174

Original Effective Date: 08/24/2005

Current Effective Date: 11/13/2023

Applies to all products administered or underwritten by Blue Cross and Blue Shield of Louisiana and its subsidiary, HMO Louisiana, Inc. (collectively referred to as the "Company"), unless otherwise provided in the applicable contract. Medical technology is constantly evolving, and we reserve the right to review and update Medical Policy periodically.

Services Are Considered Investigational

Coverage is not available for investigational medical treatments or procedures, drugs, devices or biological products.

Based on review of available data, the Company considers sensory integration (SI) therapy and auditory integration therapy to be **investigational**.*

Background/Overview

The goal of sensory integration therapy is to improve how the brain processes and adapts to sensory information, as opposed to teaching specific skills. Therapy usually involves activities that provide vestibular, proprioceptive, and tactile stimuli, which are selected to match specific sensory processing deficits of the child. For example, swings are commonly used to incorporate vestibular input, while trapeze bars and large foam pillows or mats may be used to stimulate somatosensory pathways of proprioception and deep touch. Tactile reception may be addressed through a variety of activities and surface textures involving light touch.

Auditory integration therapy (also known as auditory integration training, auditory enhancement training, audio-psycho-phonology) involves having individuals listen to music modified to remove frequencies to which they are hypersensitive, with the goal of gradually increasing exposure to sensitive frequencies. Although several methods of auditory integration therapy have been developed, the most widely described is the Berard method, which involves 2 half-hour sessions per day separated by at least 3 hours, over 10 consecutive days, during which patients listen to recordings. Auditory integration therapy has been proposed for individuals with a range of developmental and behavioral disorders, including learning disabilities, autism spectrum disorder, pervasive developmental disorder, and attention-deficit/hyperactivity disorder. Other methods

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include the Tomatis method, which involves listening to electronically modified music and speech, and Samonas Sound Therapy, which involves listening to filtered music, voices, and nature sounds.

FDA or Other Governmental Regulatory Approval

U.S. Food and Drug Administration (FDA)

Sensory integration therapy is a procedure and, as such, is not subject to regulation by the U.S. FDA. No devices designed to provide auditory integration therapy have been cleared for marketing by the FDA.

Rationale/Source

This medical policy was developed through consideration of peer-reviewed medical literature generally recognized by the relevant medical community, U.S. Food and Drug Administration approval status, nationally accepted standards of medical practice and accepted standards of medical practice in this community, technology evaluation centers, reference to federal regulations, other plan medical policies, and accredited national guidelines.

Sensory integration therapy has been proposed as a treatment of developmental disorders in patients with established dysfunction of sensory processing, particularly autism spectrum disorder. Sensory integration therapy may be offered by occupational and physical therapists who are certified in sensory integration therapy. Auditory integration therapy uses gradual exposure to certain types of sounds to improve communication in a variety of developmental disorders, particularly autism.

Summary of Evidence

For individuals who have developmental disorders who receive sensory integration therapy, the evidence includes systematic reviews of randomized controlled trials (RCTs) and case series. Relevant outcomes are functional outcomes and quality of life. Due to the individualized approach to sensory integration therapy and the large variations in patients' disorders, large multicenter RCTs are needed to evaluate the efficacy of this intervention. The most direct evidence on sensory integration therapy outcomes derives from several RCTs. Although some of these trials demonstrated improvements for subsets of outcomes measured, they had small sample sizes, heterogeneous patient populations, and variable outcome measures. A RCT of 138 children ages 4 to 11 years published in 2022 found that sensory integration therapy for children with autism and sensory processing difficulties did not demonstrate clinical benefit above standard care. The

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evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have developmental disorders who receive auditory integration therapy, the evidence includes systematic reviews of RCTs. Relevant outcomes are functional outcomes and quality of life. For auditory integration therapy, the largest body of literature relates to its use in autism spectrum disorder. Several systematic reviews of auditory integration therapy in the treatment of autism have found limited evidence to support its use. No comparative studies identified evaluated use of auditory integration therapy for other conditions. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

Supplemental Information

Practice Guidelines and Position Statements

Guidelines or position statements will be considered for inclusion in 'Supplemental Information' if they were issued by, or jointly by, a US professional society, an international society with US representation, or National Institute for Health and Care Excellence (NICE). Priority will be given to guidelines that are informed by a systematic review, include strength of evidence ratings, and include a description of management of conflict of interest.

American Academy of Pediatrics

A 2012 policy statement by the American Academy of Pediatrics on sensory integration therapy for children with developmental and behavioral disorders stated that “occupational therapy with the use of sensory-based therapies may be acceptable as one of the components of a comprehensive treatment plan. However, parents should be informed that the amount of research regarding the effectiveness of sensory integration therapy is limited and inconclusive.” The American Academy of Pediatrics indicated that these limitations should be discussed with parents, along with instructions on how to evaluate the effectiveness of a trial period of sensory integration therapy.

American Occupational Therapy Association

The 2015 American Occupational Therapy Association (AOTA) guidelines stated: “American Occupational Therapy Association (AOTA) recognizes sensory integration as one of several theories and methods used by occupational therapists and occupational therapy assistants working with children in public and private schools...to “enhanc[e] a person’s ability to participate in life through

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engagement in everyday activities....When children demonstrate sensory, motor, or praxis deficits that interfere with their ability to access the general education curriculum, occupational therapy using a sensory integration approach is appropriate.”

In 2011, the American Occupational Therapy Association (AOTA) published evidence-based occupational therapy practice guidelines for children and adolescents with challenges in sensory processing and sensory integration. The AOTA gave a level C recommendation for sensory integration therapy for individual functional goals for children, for parent-centered goals, and for participation in active play in children with sensory processing disorder, and to address play skills and engagement in children with autism. A level C recommendation is based on “...weak evidence that the intervention can improve outcomes, and the balance of the benefits and harms may result either in a recommendation that occupational therapy practitioners routinely provide the intervention ... or in no recommendation because the balance of the benefits and harm is too close to justify a general recommendation.” Specific performance skills evaluated were motor and praxis skills, sensory-perceptual skills, emotional regulation, and communication and social skills. There was insufficient evidence to recommend sensory integration therapy for academic and psychoeducational performance (eg, math, reading, written performance).

American Speech-Language-Hearing Association

In 2002, the American Speech-Language-Hearing Association Work Group on Auditory Integration Therapy concluded that auditory integration therapy has not met scientific standards for efficacy that would justify its practice by audiologists and speech-language pathologists.

U.S. Preventive Services Task Force Recommendations

Not applicable.

Medicare National Coverage

There is no national coverage determination. In the absence of a national coverage determination, coverage decisions are left to the discretion of local Medicare carriers.

Ongoing and Unpublished Clinical Trials

Some currently unpublished trials that might influence this review are listed in Table 1.

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Table 1. Summary of Key Trials

NCT Number	Trial Name	Planned Enrollment	Completion Date
<i>Unpublished</i>			
NCT02536365	Sensory Integration Therapy in Autism: Mechanisms and Effectiveness	180	Dec 2021
NCT04696133	Therapeutic Outcomes of Sensory Integration Versus Fine Motor Intervention in Children With Autism	30	Dec 2021

ISRCTN: International Standard Randomized Controlled Trial Number; NCT: national clinical trial.

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Policy History

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08/03/2005 Medical Director review

08/16/2005 Medical Policy Committee review

08/24/2005 Managed Care Advisory Council approval

09/05/2007 Medical Director review

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09/19/2007	Medical Policy Committee approval. Addition of FDA and or other governmental regulatory approval. Policy statement unchanged.
09/03/2009	Medical Policy Committee review
09/16/2009	Medical Policy Implementation committee approval. Coverage eligibility unchanged.
09/09/2010	Medical Policy Committee review
09/15/2010	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
09/01/2011	Medical Policy Committee review
09/14/2011	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
10/11/2012	Medical Policy Committee review
10/31/2012	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
10/03/2013	Medical Policy Committee review
10/16/2013	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
10/02/2014	Medical Policy Committee review
10/15/2014	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
10/08/2015	Medical Policy Committee review
10/21/2015	Medical Policy Implementation Committee approval. Auditory integration therapy added as investigational and added to the title.
10/06/2016	Medical Policy Committee review
10/19/2016	Medical Policy Implementation Committee approval. No change to coverage.
01/01/2017	Coding update: Removing ICD-9 Diagnosis Codes
10/05/2017	Medical Policy Committee review
10/18/2017	Medical Policy Implementation Committee approval. No change to coverage.
10/04/2018	Medical Policy Committee review
10/17/2018	Medical Policy Implementation Committee approval. No change to coverage
10/03/2019	Medical Policy Committee review
10/09/2019	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
10/01/2020	Medical Policy Committee review

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10/07/2020	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
10/07/2021	Medical Policy Committee review
10/13/2021	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
10/06/2022	Medical Policy Committee review
10/11/2022	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
10/05/2023	Medical Policy Committee review
10/11/2023	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.

Next Scheduled Review Date: 10/2024

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CPT is a registered trademark of the American Medical Association.

Codes used to identify services associated with this policy may include (but may not be limited to) the following:

Code Type	Code
CPT	97533
HCPCS	No codes
ICD-10 Diagnosis	All related diagnoses

*Investigational – A medical treatment, procedure, drug, device, or biological product is Investigational if the effectiveness has not been clearly tested and it has not been incorporated into standard medical practice. Any determination we make that a medical treatment, procedure, drug, device, or biological product is Investigational will be based on a consideration of the following:

- A. Whether the medical treatment, procedure, drug, device, or biological product can be lawfully marketed without approval of the U.S. Food and Drug Administration (FDA) and whether such approval has been granted at the time the medical treatment, procedure, drug, device, or biological product is sought to be furnished; or
- B. Whether the medical treatment, procedure, drug, device, or biological product requires further studies or clinical trials to determine its maximum tolerated dose, toxicity, safety, effectiveness, or effectiveness as compared with the standard means of treatment or diagnosis, must improve health outcomes, according to the consensus of opinion among experts as shown by reliable evidence, including:
 1. Consultation with technology evaluation center(s);
 2. Credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community; or
 3. Reference to federal regulations.

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