



# Louisiana

## **Sensory Integration Therapy and Auditory Integration Therapy**

**Policy #** 00174

**Original Effective Date:** 08/24/2005

**Current Effective Date:** 11/11/2024

*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

©2024 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.



# Louisiana

## Sensory Integration Therapy and Auditory Integration Therapy

Policy # 00174

Original Effective Date: 08/24/2005

Current Effective Date: 11/11/2024

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

©2024 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.



# Louisiana

## Sensory Integration Therapy and Auditory Integration Therapy

Policy # 00174

Original Effective Date: 08/24/2005

Current Effective Date: 11/11/2024

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

©2024 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.



# Louisiana

## Sensory Integration Therapy and Auditory Integration Therapy

Policy # 00174

Original Effective Date: 08/24/2005

Current Effective Date: 11/11/2024

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**

A search of ClinicalTrials.gov in February 2024 did not identify any studies that would likely influence this review.

©2024 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.



# Louisiana

## Sensory Integration Therapy and Auditory Integration Therapy

Policy # 00174

Original Effective Date: 08/24/2005

Current Effective Date: 11/11/2024

## **References**

1. Sinha Y, Silove N, Hayen A, et al. Auditory integration training and other sound therapies for autism spectrum disorders (ASD). *Cochrane Database Syst Rev*. Dec 07 2011; 2011(12): CD003681. PMID 22161380
2. Schaaf RC, Burke JP, Cohn E, et al. State of measurement in occupational therapy using sensory integration. *Am J Occup Ther*. 2014; 68(5): e149-53. PMID 25184475
3. Mailloux Z, May-Benson TA, Summers CA, et al. Goal attainment scaling as a measure of meaningful outcomes for children with sensory integration disorders. *Am J Occup Ther*. 2007; 61(2): 254-9. PMID 17436848
4. Parham LD, Cohn ES, Spitzer S, et al. Fidelity in sensory integration intervention research. *Am J Occup Ther*. 2007; 61(2): 216-27. PMID 17436844
5. Weitlauf AS, Sathe N, McPheeters ML, et al. Interventions Targeting Sensory Challenges in Autism Spectrum Disorder: A Systematic Review. *Pediatrics*. Jun 2017; 139(6). PMID 28562287
6. Case-Smith J, Weaver LL, Fristad MA. A systematic review of sensory processing interventions for children with autism spectrum disorders. *Autism*. Feb 2015; 19(2): 133-48. PMID 24477447
7. May-Benson TA, Koomar JA. Systematic review of the research evidence examining the effectiveness of interventions using a sensory integrative approach for children. *Am J Occup Ther*. 2010; 64(3): 403-14. PMID 20608272
8. Randell E, Wright M, Milosevic S, et al. Sensory integration therapy for children with autism and sensory processing difficulties: the SenITA RCT. *Health Technol Assess*. Jun 2022; 26(29): 1-140. PMID 35766242
9. Corbett BA, Shickman K, Ferrer E. Brief report: the effects of Tomatis sound therapy on language in children with autism. *J Autism Dev Disord*. Mar 2008; 38(3): 562-6. PMID 17610057
10. Mudford OC, Cross BA, Breen S, et al. Auditory integration training for children with autism: no behavioral benefits detected. *Am J Ment Retard*. Mar 2000; 105(2): 118-29. PMID 10755175
11. Porges SW, Bazhenova OV, Bal E, et al. Reducing auditory hypersensitivities in autistic spectrum disorder: preliminary findings evaluating the listening project protocol. *Front Pediatr*. 2014; 2: 80. PMID 25136545
12. Zimmer M, Desch L, Rosen LD, et al. Sensory integration therapies for children with developmental and behavioral disorders. *Pediatrics*. Jun 2012; 129(6): 1186-9. PMID 22641765

©2024 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.



# Louisiana

## Sensory Integration Therapy and Auditory Integration Therapy

Policy # 00174

Original Effective Date: 08/24/2005

Current Effective Date: 11/11/2024

13. Occupational Therapy for Children and Youth Using Sensory Integration Theory and Methods in School-Based Practice. Am J Occup Ther. 2015; 69 Suppl 3: 6913410040p1-6913410040p20. PMID 26713950
14. Watling R, Koenig KP, Davies PL, et al. Occupational therapy practice guidelines for children and adolescents with challenges in sensory processing and sensory integration. Bethesda, MD: American Occupational Therapy Association Press; 2011.
15. American Speech-Language-Hearing Association, Working Group in AIT. Auditory Integration Training [Technical Report:]. 2004; <https://www.asha.org/policy/ps2004-00218/>.

### **Policy History**

Original Effective Date: 08/24/2005

Current Effective Date: 11/11/2024

|            |   |
|------------|---|
| 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   |
| 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.   |

©2024 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.



# Louisiana

## Sensory Integration Therapy and Auditory Integration Therapy

Policy # 00174

Original Effective Date: 08/24/2005

Current Effective Date: 11/11/2024

- 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 interration 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
- 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.
- 10/03/2024 Medical Policy Committee review
- 10/08/2024 Medical Policy Implementation Committee approval. Coverage eligibility unchanged.

Next Scheduled Review Date: 10/2025

©2024 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.



# Louisiana

Sensory Integration Therapy and Auditory Integration Therapy

Policy # 00174

Original Effective Date: 08/24/2005

Current Effective Date: 11/11/2024

## **Coding**

*The five character codes included in the Blue Cross Blue Shield of Louisiana Medical Policy Coverage Guidelines are obtained from Current Procedural Terminology (CPT®)†, copyright 2023 by the American Medical Association (AMA). CPT is developed by the AMA as a listing of descriptive terms and five character identifying codes and modifiers for reporting medical services and procedures performed by physician.*

*The responsibility for the content of Blue Cross Blue Shield of Louisiana Medical Policy Coverage Guidelines is with Blue Cross and Blue Shield of Louisiana and no endorsement by the AMA is intended or should be implied. The AMA disclaims responsibility for any consequences or liability attributable or related to any use, nonuse or interpretation of information contained in Blue Cross Blue Shield of Louisiana Medical Policy Coverage Guidelines. Fee schedules, relative value units, conversion factors and/or related components are not assigned by the AMA, are not part of CPT, and the AMA is not recommending their use. The AMA does not directly or indirectly practice medicine or dispense medical services. The AMA assumes no liability for data contained or not contained herein. Any use of CPT outside of Blue Cross Blue Shield of Louisiana Medical Policy Coverage Guidelines should refer to the most current Current Procedural Terminology which contains the complete and most current listing of CPT codes and descriptive terms. Applicable FARS/DFARS apply.*

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

©2024 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.



# Louisiana

## Sensory Integration Therapy and Auditory Integration Therapy

Policy # 00174

Original Effective Date: 08/24/2005

Current Effective Date: 11/11/2024

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.

‡ Indicated trademarks are the registered trademarks of their respective owners.

**NOTICE:** If the Patient's health insurance contract contains language that differs from the BCBSLA Medical Policy definition noted above, the definition in the health insurance contract will be relied upon for specific coverage determinations.

**NOTICE:** Medical Policies are scientific based opinions, provided solely for coverage and informational purposes. Medical Policies should not be construed to suggest that the Company recommends, advocates, requires, encourages, or discourages any particular treatment, procedure, or service, or any particular course of treatment, procedure, or service.

**NOTICE:** Federal and State law, as well as contract language, including definitions and specific contract provisions/exclusions, take precedence over Medical Policy and must be considered first in determining eligibility for coverage.

©2024 Blue Cross and Blue Shield of Louisiana

Blue Cross and Blue Shield of Louisiana is an independent licensee of the Blue Cross and Blue Shield Association and incorporated as Louisiana Health Service & Indemnity Company.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from Blue Cross and Blue Shield of Louisiana.