

FEP Medical Policy Manual

FEP 8.03.13 Sensory Integration Therapy and Auditory Integration Therapy

Effective Policy Date: July 1, 2019

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Original Policy Date: June 2012

Related Policies:

8.03.10 - Cognitive Rehabilitation

Sensory Integration Therapy and Auditory Integration Therapy

Description

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

OBJECTIVE

The objective of this evidence review is to determine whether sensory integration therapy or auditory integration therapy improves the net health outcome for patients with developmental disorders.

POLICY STATEMENT

Sensory integration therapy and auditory integration therapy are considered investigational.

BENEFIT APPLICATION

Experimental or investigational procedures, treatments, drugs, or devices are not covered (See General Exclusion Section of brochure).

FDA REGULATORY STATUS

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

RATIONALE

Summary of Evidence

For individuals who have developmental disorders who receive SIT, the evidence includes RCTs, systematic reviews of these trials, and case series. The relevant outcomes are functional outcomes and QOL. Due to the individualized approach to SIT and the large variations in patients" disorders, large multicenter RCTs are needed to evaluate the efficacy of this intervention. The most direct evidence on SIT outcomes derives from several randomized trials. Although some of these trials demonstrated improvements for subsets of outcomes measured, they had small sample sizes, heterogeneous patient populations, and variable outcome measures. The evidence is insufficient to determine the effects of the technology on health outcomes.

For individuals who have developmental disorders who receive AIT, the evidence includes several RCTs and systematic reviews of these trials. The relevant outcomes are functional outcomes and QOL. For AIT, the largest body of literature relates to its use in ASD. Several systematic reviews of AIT in the treatment of autism have found limited evidence to support its use. No comparative studies identified evaluated use of AIT for other conditions. The evidence is insufficient to determine the effects of the technology on health outcomes.

SUPPLEMENTAL INFORMATION

Practice Guidelines and Position Statements

Sensory Integration Therapy

American Academy of Pediatrics

A policy statement by the American Academy of Pediatrics (2012) on SIT for children with developmental and behavioral disorders stated that "[o]ccupational 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 Academy indicated that these limitations should be discussed with parents, along with instruction on how to evaluate the effectiveness of a trial period of SIT.

American Occupational Therapy Association

TheAOTA(2009) stated that "AOTA recognizes SI [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 improve a child"s "ability to access the general education curriculum" and to participate in school-related activities. 18,

The AOTA (2011) 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 SIT 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 SIT for academic and psychoeducational performance (eg, math, reading, written performance).

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.

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 7 2011(12):CD003681. PMID 22161380
- 2. Blue Cross and Blue Shield Association Technology Evaluation Center (TEC). Sensory integration therapy. TEC Assessment. 1999; Volume 14: Tab 22.
- 3. Schaaf RC, Burke JP, Cohn E, et al. State of measurement in occupational therapy using sensory integration. Am J Occup Ther. Sep-Oct 2014;68(5):e149-153. PMID 25184475
- 4. 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. Mar-Apr 2007;61(2):254-259. PMID 17436848
- 5. Parham LD, Cohn ES, Spitzer S, et al. Fidelity in sensory integration intervention research. Am J Occup Ther. Mar-Apr 2007;61(2):216-227. PMID 17436844
- 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):133-148. PMID 24477447
- 7. Brondino N, Fusar-Poli L, Rocchetti M, et al. Complementary and alternative therapies for autism spectrum disorder. Evid Based Complement Alternat Med. Jun 2015;2015:258589. PMID 26064157
- 8. Watling R, Hauer S. Effectiveness of Ayres Sensory Integration(R) and sensory-based interventions for people with autism spectrum disorder: a systematic review. Am J Occup Ther. Sep-Oct 2015;69(5):6905180030:1-12. PMID 26356655
- 9. Case-Smith J, Arbesman M. Evidence-based review of interventions for autism used in or of relevance to occupational therapy. Am J Occup Ther. Jul-Aug 2008;62(4):416-429. PMID 18712004
- 10. 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. May-Jun 2010;64(3):403-414. PMID 20608272
- 11. Schaaf RC, Benevides T, Mailloux Z, et al. An intervention for sensory difficulties in children with autism: a randomized trial. J Autism Dev Disord. Jul 2014;44(7):1493-1506. PMID 24214165
- 12. Pfeiffer BA, Koenig K, Kinnealey M, et al. Effectiveness of sensory integration interventions in children with autism spectrum disorders: a pilot study. Am J Occup Ther. Jan-Feb 2011;65(1):76-85. PMID 21309374
- 13. Miller LJ, Coll JR, Schoen SA. A randomized controlled pilot study of the effectiveness of occupational therapy for children with sensory modulation disorder. Am J Occup Ther. Mar-Apr 2007;61(2):228-238. PMID 17436845
- 14. Uyanik M, Bumin G, Kayihan H. Comparison of different therapy approaches in children with Down syndrome. Pediatr Int. Feb 2003;45(1):68-73. PMID 12654073
- 15. Parr J. Autism. BMJ Clin Evid. Jan 7 2010;2010. PMID 21729335
- 16. Rossignol DA. Novel and emerging treatments for autism spectrum disorders: a systematic review. Ann Clin Psychiatry. Oct-Dec 2009;21(4):213-236. PMID 19917212
- 17. Zimmer M, Desch L. Sensory integration therapies for children with developmental and behavioral disorders. Pediatrics. Jun 2012;129(6):1186-1189. PMID 22641765

- 18. Roley SS, Bissell J, Clark GF. Providing occupational therapy using sensory integration theory and methods in school-based practice. Am J Occup Ther. Nov-Dec 2009;63(6):823-842. PMID 20092120
- 19. 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.

POLICY HISTORY - THIS POLICY WAS APPROVED BY THE FEP® PHARMACY AND MEDICAL POLICY COMMITTEE ACCORDING TO THE HISTORY BELOW:

Date	Action	Description
June 2012	New policy	Sensory integration therapy and auditory integration therapy is considered investigational.
December 2013	Replace policy	Policy updated with literature review, new references added, policy statement unchanged.
March 2015	Replace policy	Policy updated with literature review through September 23, 2014. References 1-2, 9-10, 14, and 20-21 added. Policy statement expanded to include investigational statement for auditory integration therapy. Title changed to reflect inclusion of auditory integration therapy.
June 2018	Replace policy	Policy updated with literature review through January 8, 2018; references 7-8 added. Policy statement unchanged.
June 2019	Replace policy	Policy updated with literature review through January 6, 2019; no references added. Policy statement unchanged.