



# CIGNA MEDICAL COVERAGE POLICY

The following Coverage Policy applies to all health benefit plans administered by CIGNA Companies including plans formerly administered by Great-West Healthcare, which is now a part of CIGNA.

**Subject Sensory and Auditory  
Integration Therapy -  
Facilitated Communication**

**Effective Date ..... 2/15/2011  
Next Review Date ..... 2/15/2012  
Coverage Policy Number ..... 0283**

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## Hyperlink to Related Coverage Policies

Attention-Deficit/Hyperactivity Disorder:  
Assessment and Treatment

Autism Spectrum Disorders/Pervasive  
Developmental Disorders: Assessment  
and Treatment

Occupational Therapy

Pediatric Intensive Feeding Programs

Speech/Language Therapy

## INSTRUCTIONS FOR USE

Coverage Policies are intended to provide guidance in interpreting certain **standard** CIGNA HealthCare benefit plans. Please note, the terms of a customer's particular benefit plan document [Group Service Agreement (GSA), Evidence of Coverage, Certificate of Coverage, Summary Plan Description (SPD) or similar plan document] may differ significantly from the standard benefit plans upon which these Coverage Policies are based. For example, a customer's benefit plan document may contain a specific exclusion related to a topic addressed in a Coverage Policy. In the event of a conflict, a customer's benefit plan document **always supercedes** the information in the Coverage Policies. In the absence of a controlling federal or state coverage mandate, benefits are ultimately determined by the terms of the applicable benefit plan document. Coverage determinations in each specific instance require consideration of 1) the terms of the applicable benefit plan document in effect on the date of service; 2) any applicable laws/regulations; 3) any relevant collateral source materials including Coverage Policies and; 4) the specific facts of the particular situation. Coverage Policies relate exclusively to the administration of health benefit plans. Coverage Policies are not recommendations for treatment and should never be used as treatment guidelines. Proprietary information of CIGNA. Copyright ©2011 CIGNA

## Coverage Policy

**Sensory integration therapy is specifically excluded under many health benefit plans. In addition, many benefit plans specifically exclude behavioral training and services, training, educational therapy or other nonmedical ancillary services for learning disabilities, developmental delays, autism or mental retardation.**

**CIGNA does not cover sensory integration therapy (SIT), auditory integration therapy (AIT) or facilitated communication (FC) therapy for any indication because they are considered experimental, investigational or unproven.**

**Note: This Coverage Policy does not address sensory desensitization therapy.**

## General Background

### Sensory Integration Therapy (SIT)

Sensory integration therapy (SIT) has been proposed as a method to improve the way the brain processes and organizes external stimuli, such as touch, movement, body awareness, sight and sound. SIT is usually performed by an occupational therapist. Sensory stimulation is provided in combination with muscle activities, theoretically in order to improve how the brain processes and organizes sensory information. The therapeutic

techniques may include deep brushing, swings for vestibular input, textures, bounce pads, scooter boards, weighted vests and other clothing, ramps and generally increasing or decreasing sensory diet depending on the needs of the child (Shaw, 2002). SIT was originally developed as a treatment for learning disabilities and subsequently has been proposed as treatment for autism, mental retardation, Down syndrome, and developmental delays. Definitive patient selection criteria have not been established for SIT.

Sensory integration is the process where individuals register, modulate and discriminate sensations received through the sensory system to produce purposeful, adaptive behaviors in response to the environment (American Occupational Therapy Association [AOTA], 2008a). Sensory integration dysfunction, or disorder, is a condition that includes an imbalance among the primary sensations of sight hearing, touch, taste, or smell; the sense of movement and/or the positional sense (Eide, 2003).

### **Literature Review for Sensory Integration Therapy**

May-Benson, et al. (2010) reported on a systematic review of literature on the effectiveness of sensory integration (SI) interventions on the ability of children with difficulty processing and integrating sensory information to engage in desired occupations and to apply these findings to occupational therapy practice. The review included 27 studies and the results indicated that the SI approach may result in positive outcomes in sensorimotor skills and motor planning; socialization, attention, and behavioral regulation; reading-related skills; participation in active play; and achievement of individualized goals. It appeared that gross motor skills, self-esteem, and reading gains may be sustained from three months to two years. Studies were limited by small sample sizes, variable intervention dosage, lack of fidelity to intervention, and selection of outcomes that may not be meaningful to clients and families or may not change with amount of treatment provided. The authors note that replication of findings with methodologically and theoretically sound studies is needed to support the current findings.

A review of SI outcomes research in relation to faithfulness of intervention to underlying therapeutic principles or fidelity was performed (Parham, et al., 2007). The review included 34 studies which were analyzed for consistency of intervention descriptions with the following elements: structural (e.g., equipment used, therapist training) and therapeutic process categories. The reviewers made the following findings:

- Most studies described structural elements related to therapeutic equipment and interveners' profession.
- Only one of the 10 process elements, presentation of sensory opportunities, was addressed in all studies. Most studies described fewer than half of the process elements.
- Intervention descriptions in 35% of the studies were inconsistent with one process element, therapist-child collaboration.

The authors note that the validity of SI outcomes studies is affected by weak fidelity in regard to the therapeutic process.

Dawson and Watling (2000) conducted a systematic review of the research regarding the effectiveness of interventions for sensory and motor abnormalities in autism. The interventions included SIT and auditory integration training (AIT). Four studies on the effectiveness of sensory integration therapy in autism that utilized objective measures of behavior to assess outcome were found. All but one had sample size of fewer than six subjects and none of the studies had a comparison group. One study that had a larger sample size and better design found no change in vocal behavior following brief participation in sensory activities. The review concluded that although sensory and motor impairments are commonly found in autism, the interventions developed to address them have not been well validated. In the case of SIT, it was noted, "there exist so few studies that conclusions cannot be drawn" (Dawson and Watling, 2000). In the case of AIT, it is noted that "there is no, or at best equivocal support for this intervention approach based on the available controlled studies" (Dawson and Watling, 2000). There is little known regarding which ages or subgroups of individuals are most likely to benefit from therapies addressing sensory and motor difficulties, and further research is recommended.

A meta-analysis was conducted for the purpose of determining whether existing studies of treatment using sensory integration approaches support the efficacy of this method (Vargas, et al., 1999). Sixteen studies were used to compare SIT with no treatment, and 16 studies were used to compare SIT with alternative treatments. The review noted that there was a significant difference between the average size of effect of the earlier studies compared to the more recent studies. The authors concluded that in the SIT and no treatment studies, the

recent studies did not demonstrate an overall positive effect and that the sensory integration methods were found to be as effective as various alternative treatment methods.

Several studies have been published that examined the effectiveness of SIT. While some of the studies indicated that there may be some effect noted with treatment with SIT, many of these studies involve small number of children and short follow-up time periods (Wuang, et al., 2009; Fazlioglu, et al., 2008; Miller, et al., 2007; Watling and Dietz, 2007; Smith, et al., 2005).

The peer-reviewed literature fails to demonstrate that SIT, compared with other treatments or with no treatment, provides clinically relevant, long-term improvements in outcomes in children with learning disabilities, Down syndrome, developmental disorders or SI disorders. Studies of SIT in children with cerebral palsy or autism are also lacking, and therefore the evidence is insufficient to evaluate SIT for these indications as well.

### **Professional Societies/Organizations for Sensory Integration Therapy**

**American Academy of Pediatrics (AAP):** The AAP Committee on Children with Disabilities published a clinical report for prescribing therapy services for children with motor disabilities. The report notes that “Scientific legitimacy has also not been established for sensory integration intervention for children with motor disabilities” (Michaud, et al., 2004/2007).

The AAP Council on Children with Disabilities published guidelines for the management of children with autism spectrum disorders. Regarding sensory integration therapy, the guidelines note “Sensory integration (SI) therapy often is used alone or as part of a broader program of occupational therapy for children with ASDs [autism spectrum disorders]. The goal of SI therapy is not to teach specific skills or behaviors but to remediate deficits in neurologic processing and integration of sensory information to allow the child to interact with the environment in a more adaptive fashion. Unusual sensory responses are common in children with ASDs, but there is not good evidence that these symptoms differentiate ASDs from other developmental disorders, and the efficacy of SI therapy has not been demonstrated objectively. Available studies are plagued by methodologic limitations, but proponents of SI note that higher-quality SI research is forthcoming.” (Myers, et al., 2007; Reaffirmed Dec 2010)

### **Auditory Integration Therapy (AIT)**

Auditory integration therapy or training (AIT) refers to listening to music that has been computer modified to remove frequencies to which an individual demonstrates hypersensitivities and to reduce the predictability of auditory patterns. A special device is used to modify the music for the treatment sessions. The treatment program consists of 20 half-hour sessions during a 10- to 12-day period, with two sessions daily. Auditory thresholds are determined via audiograms. The audiogram is then reviewed for evidence of hyperacusis (i.e., an abnormal sensitivity to sound). A clinical history of sound sensitivities and behavior is also reviewed. Audiograms are repeated midway and at the end of the training session to document progress and to determine whether further treatment sessions are necessary. AIT is usually provided by a speech-pathologist or audiologist. This treatment has been proposed for improving abnormal sound sensitivity in individuals with behavioral disorders, including autism spectrum disorders.

### **Literature Review for Auditory Integration Therapy**

A Cochrane review was conducted with the objective of determining the effectiveness of AIT or other methods of sound therapy in individuals with autism spectrum disorders (Sinha, et al., 2004). Six randomized controlled trials of AIT were identified, including one crossover trial. Four trials had fewer than 20 patients involved in the study. Seventeen different outcome measures were used. It was noted in the review that due to the high heterogeneity or presentation of data in unusable forms, a meta-analysis was not possible. It was noted that three studies did not demonstrate the benefit of AIT over the control conditions. Three trials reported improvements at three months for the AIT group with the Aberrant Behavior Checklist (ABC), which is of questionable validity. The reviewers concluded, “Further research is needed to determine the effectiveness of sound therapies. In the absence of evidence, the treatment must be considered experimental and care must be taken not to risk hearing loss” (Sinha, et al., 2004). Sinha et al. published a systematic review in 2006. This review incorporated the same studies and findings that were included in the 2004 Cochrane review. There were no additional studies included. The authors concluded that at the present time there is not sufficient evidence to support the use of AIT (Sinha, et al., 2006).

Mudford et al. (2000) performed a crossover study for the purpose of evaluating the benefits of auditory integration training for children with autism. There were 16 children who had been diagnosed with autism

involved in the study, with all children receiving both treatments. There were at least four months between treatments. The control treatment was conducted by the auditory integration training providers in an identical room with identical procedures, with the difference being that the headphones used were nonfunctional. The measures included parent and teacher ratings of behavior, direct observational recordings, IQ, language, and social/adaptive tests. It was noted that significant differences tended to show that the control condition was superior on parent-rated measures of hyperactivity and on direct observational measures of ear-occlusion, and no difference was detected on teacher-rated measures. The children's IQ and language comprehension did not increase; however, adaptive/social behavior scores and expressive language quotients decreased. The authors concluded that no children could be identified as benefiting from AIT clinically or educationally to any significant degree.

The published peer-reviewed scientific literature does not support the efficacy of AIT for the treatment of patients with learning disabilities, autism, and other behavioral disorders.

### **Professional Societies/Organizations for Auditory Integration Therapy**

**American Academy of Pediatrics (AAP):** The AAP published a statement regarding two treatments proposed for autism (i.e., AIT and facilitated communication) (AAP, 1998/2006/2010). They noted that, as yet, there are no good controlled studies to support the use of AIT for children with autism. It is also noted that, until further information is available, the use of these treatments does not appear warranted at this time, except within research protocols.

**American Speech-Language-Hearing Association (ASHA):** ASHA prepared an evidenced-based technical report regarding AIT (ASHA, 2004). They noted that, despite approximately one decade of practice, this method has not met scientific standards for efficacy and safety that would justify its inclusion as a mainstream treatment for a variety of communication, behavioral, emotional and learning disorders.

**Educational Audiology Association (EAA):** The EAA issued a position statement regarding AIT (EAA, 1997). They stated that "Auditory integration therapy has not been proven to be a viable treatment for any disability. Only inconsistent, uncontrolled, anecdotal evidence has been provided to support claims of changes in auditory performance." In addition, the position statement noted that without controls to protect against excessively loud auditory stimuli, AIT may cause harm to the auditory system.

### **Facilitated Communication (FC)**

Facilitated Communication (FC) is a method of providing assistance to a nonverbal person by typing out words using a typewriter, computer keyboard, or other communication device. FC involves supporting the individual's hand to make it easier for him or her to indicate the letters that are chosen sequentially to develop the communicative statement. Proponents claim that this manual prompting by a trained facilitator provides expressive language abilities to a wide range of individuals, including those with severe intellectual disabilities or autism. FC has been at the center of a growing controversy, because several scientific studies have suggested that facilitators may unintentionally influence the communication, perhaps to the extent of actually selecting the words themselves. There is insufficient evidence found in the medical literature regarding the effectiveness of this therapy.

### **Professional Societies/Organizations for Facilitated Communication**

**American Academy of Child & Adolescent Psychiatry (AACAP):** The AACAP published a policy statement regarding facilitated communication that states, "Studies have repeatedly demonstrated that FC is not a scientifically valid technique for individuals with autism or mental retardation. In particular, information obtained via FC should not be used to confirm or deny allegations of abuse or to make diagnostic or treatment decisions" (AACAP, 1993/2008).

**American Academy of Pediatrics (AAP):** The AAP has published a statement regarding two treatments proposed for autism: AIT and facilitated communication. According to the AAP, there is good scientific data showing FC to be ineffective; therefore, its use does not appear warranted at this time (AAP, 1998/2006/2010).

**American Psychological Association (APA):** The APA has adopted the position that facilitated communication is a controversial and unproven communicative procedure with no scientifically demonstrated support for its efficacy (APA, 1994).

## Summary

Evidence in the published, peer-reviewed scientific literature does not support the efficacy of sensory integration therapy (SIT), auditory integration therapy (AIT) or facilitated communication (FC) for autism, mental retardation, developmental delays, behavioral disorders, or any other indications. In addition, these treatments are not accepted by the professional organizations that are involved in the care of these conditions. The role of these interventions in the management of these conditions is not known at this time.

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## Coding/Billing Information

**Note:** This list of codes may not be all-inclusive.

### Experimental/Investigational/Unproven/Not Covered:

CPT* Codes	Description
97533	Sensory integrative techniques to enhance sensory processing and promote adaptive responses to environmental demands, direct (one-on-one) patient contact by the provider, each 15 minutes

ICD-9-CM Diagnosis Codes	Description
	All codes

\*Current Procedural Terminology (CPT®) ©2010 American Medical Association: Chicago, IL.

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## Policy History

<b>Pre-Merger Organizations</b>	<b>Last Review Date</b>	<b>Policy Number</b>	<b>Title</b>
CIGNA HealthCare	2/15/2008	0283	Sensory and Auditory Integration Therapy – Facilitated Communication
Great-West Healthcare	6/21/2007	07.352.01	Sensory Integration Therapy

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