

## **Auditory integration training for autism spectrum disorders 2004**

### ***Introduction***

Auditory integration therapy (AIT) is an alternative intervention for individuals with behavioral disorders, including autism. Individuals with autism display abnormal responses to sensory stimuli (ear covering, screaming) that may be due to auditory hypersensitivity or hyposensitivity. AIT is believed to improve abnormal sound sensitivity through “re-education” of the hearing process. The founders of AIT believe that auditory sensitivity is directly associated with behavior and learning problems. AIT involves listening to music through headphones during two half-hour sessions per day for 10 days. The music is delivered at modified high and low frequencies. Similar sound therapies exist, such as the Tomatis method and Samonas sound therapy.

### ***Research Summary***

The Australian Pediatric Pharmacology Research Institute at Royal Children’s Hospital in Melbourne, Australia, conducted a review of all existing research on AIT and sound therapies for autism spectrum disorders. The primary objective of this review was to identify and evaluate any evidence of the effects of AIT or other sound therapies in individuals with autism. The authors performed a thorough evaluation of available research to find valid, high quality studies involving sound therapies. The published review included six studies focused on AIT.

The included studies randomly assigned research participants to a treatment or control group. The treatment groups received AIT for 10 consecutive days with two 30-minute sessions per day. The control groups listened to unmodified music through headphones for the same time period as the treatment groups. The research participants were children ages 3-17 as well as adults; all participants were officially diagnosed with autism.

### ***Results***

Outcome measures assessed effects of AIT on behavioral problems, cognitive abilities, listening comprehension, sound sensitivity, and adverse effects of treatment.

All of the studies used standardized assessments to measure behavior improvements. The largest study included in the review used the Autism Behavior Checklist, a behavioral screening tool. Using this assessment, the researchers found no significant differences in behavior between the group receiving AIT and the control group. Three smaller studies did find some behavioral improvements after 3 months of AIT, however these improvements were not clinically significant. One research trial used direct observation to assess behavioral changes after AIT. Observational data collected from parents, teachers, and other observers did not show a benefit with AIT.

Current research on AIT demonstrates conflicting outcomes for improved cognitive abilities. In this review, the authors found one study reported no significant cognitive improvements for the AIT or control group while another study reported cognitive improvements for both groups. Inconsistent research findings question whether or not

#### **Reference:**

Sinha, Y., Silove, N., Wheeler, D., & Williams, K. (2004). Auditory integration training and other sound therapies for autism spectrum disorders. [Review]. *Cochrane Database of Systematic Reviews*, 1, 2004.

AIT can influence cognitive behaviors. None of the studies in this review found a significant effect on listening and comprehension, sound sensitivity, or adverse effects with AIT treatment.

### ***Conclusion***

This review failed to find strong scientific evidence to support sound therapies for people with autism. The American Academy of Pediatrics suggests the “limitation of the use of AIT for research studies only, due to concerns about the validity and theoretical basis of the therapy,” (Sinha et al., 2004). Based on the available research, AIT is an experimental treatment that has limited *proven* benefits for people with autism.

### **Additional Resources**

Auditory Integration Therapy Services

<http://www.auditoryintegration.net/>

Center for the Study of Autism – AIT Additional Information

<http://www.autism.org/ait2.html>

What is Berard Auditory Integration Therapy?

[http://www.auditoryintegration.net/AIT\\_home.html](http://www.auditoryintegration.net/AIT_home.html)

### Reference:

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