



## The National Autism Center's National Standards Report

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The National Autism Center released its National Standards Report, 22nd September 2009. It provides “comprehensive information about the level of scientific evidence that exists in support of the many educational and behavioural treatments currently available for individuals with Autism Spectrum Disorders (ASD)” (NAC, 2009, p.1). The report is designed to serve as a single, authoritative source of guidance for parents, caregivers, educators, and service providers as they make informed treatment decisions. The report is the culmination of the National Standards Project, a multi-year project that began with more than 6,400 research abstracts about autism treatments and concluded with a comprehensive National Standards Report. Forty-five scholars, researchers, experts in autism, and other leaders representing diverse fields of study were involved in the project. The National Standards Project was a systemic review of the behavioural and educational treatment literature involving individuals with Autism Spectrum Disorders (ASD) under the age of 22. For the purposes of this review, Autism Spectrum Disorders were defined to include Autistic Disorder, Asperger's Syndrome, and Pervasive Developmental Disorder — Not Otherwise Specified (PDD-NOS).

**Inclusion and Exclusion Criteria:** Articles were only included in the review if they had been published in peer-reviewed journals. Studies were included if the treatments could have been implemented in or by school systems, including toddler, early childhood, home-based, school-based, and community-based programs. Studies in which parents, care providers, educators, or service providers were the sole subject of treatment were not included in the review. Studies examining biochemical, genetic, and psychopharmacological treatments were excluded. However, curative diets were included because “professionals are often expected to implement curative diets across a variety of settings with a high degree of fidelity” and the treatment is intended to address the core characteristics of ASD (NAC, 2009, p 13). Studies were excluded if their purpose was to identify mediating or moderating variables such as outcome over time and hypotheses for treatment effects. Studies were also excluded if participants were over 22 years of age.

The report describes the *Scientific Merit Rating Scale* that was developed to objectively evaluate whether the “methods used in each study were strong enough to determine whether or not a treatment was effective for participants on the autism spectrum” ....The SMRS involves five critical dimensions of experimental rigor:

1. Research design
2. Measurement of the de[pendent variable
3. Measurement of the independent variable or procedural fidelity
4. Participant ascertainment
5. Generalization (NAC, 2009, p 16).

A score between 0 (poor score) and 5 (strong score) was assigned to each of these 5 dimensions which were then combined to yield a composite score (the SMRS score). A score of 3 or above indicated “sufficient scientific merit”. Scores of 2 provide “initial evidence about treatment effects” and scores of 0 or 1 indicate that “insufficient scientific rigor has been applied to the population of individuals with ASD .... [and] there is insufficient evidence to even suggest whether a treatment may or may not have beneficial, ineffective, or harmful effects” (p 23). *Treatment Effects Ratings* were also developed to determine whether the treatment effects were beneficial, ineffective, adverse or unknown (NAC, 2009, p 24). The report includes:

**11 “established” treatments** “that produce beneficial outcomes and are known to be effective for individuals (under 22 years) with an ASD”.

1. Antecedent Package
2. Behavioral Package
3. Comprehensive Behavioral Treatment for Young Children
4. Joint Attention Intervention
5. Modeling
6. Naturalistic Teaching Strategies
7. Peer Training Package
8. Pivotal response Treatment
9. Schedules
10. Self-management
11. Story-based Intervention Package

**22 “emerging” treatments** “that have some evidence of effectiveness, but still require more research”.

1. Augmentative and Alternative Communication Device
2. Cognitive Behavioral Intervention Package
3. Developmental Relationship-based Treatment
4. Exercise
5. Exposure Package
6. Imitation-based Interaction
7. Initiation Training

8. Language Training (Production)
9. Language Training (Production & Understanding)
10. Massage/Touch Therapy
11. Multi-component Package
12. Music Therapy
13. Peer-mediated Instructional Arrangement
14. Picture Exchange Communication System
15. Reductive Package
16. Scripting
17. Sign Instruction
18. Social Communication Intervention
19. Social Skills Package
20. Structured Teaching
21. Technology-based Treatment
22. Theory of Mind Training

**5 “unestablished” treatments** “that have little or no evidence of effectiveness”.

1. Academic Interventions
2. Auditory Integration Training
3. Facilitated Communication
4. Gluten- and Casein-Free Diet
5. Sensory Integrative Package

Limitations of the existing autism treatment research are discussed and the report encourages the scientific community to more aggressively pursue targeted treatment research. Educational and behavioural treatment literature published between 1957 and 2007 was included in the review. As a consequence, any clinical guidelines review will become outdated as new papers are published. (e.g. recent narrative and meta analysis reviews of Early Intensive Behavioural Interventions and sensory integration therapy. See factsheet 51). Future directions for the NSR included addressing limitations of the current report such as reviewing literature covering the lifespan, including effectiveness studies (treatments in real world settings), and including papers published in non-English journals

**The National Standards Report is available for download at:**

**[www.nationalautismcenter.org](http://www.nationalautismcenter.org)**

Reference: National Autism Center. (2009). *National Standards Report - Addressing the need for evidence-based practice guidelines for Autism Spectrum Disorders*. Massachusetts: National Autism Center.