

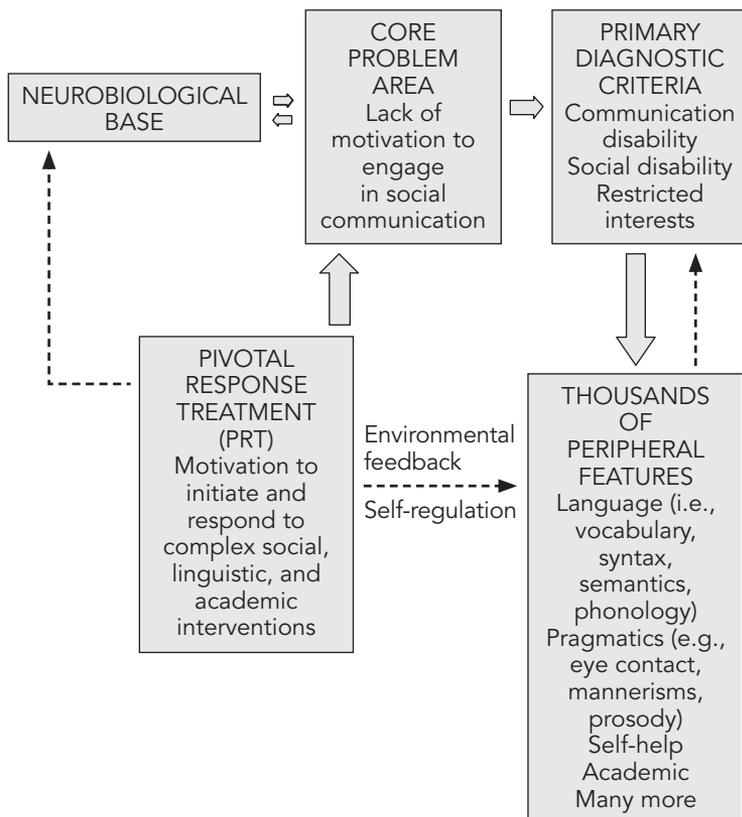


## Introduction

Pivotal Response Treatment (PRT) is one of the few evidence-based approaches for the treatment of autism. That is, the approach is supported by research that meets the standards set by many professional agencies and organizations, such as the American Psychological Association. That's important because supporting children and families affected by autism is a race against time. Families can't afford to repeatedly go up blind alleys with treatment procedures that sound good but have no evidence to support their effectiveness in helping children with autism. Each day more children are diagnosed with autism, and they need instruction and intervention in many different areas. Furthermore, early intervention is effective—partly because it keeps bad habits from getting started (habits that would be hard to break), but also because without intervention kids on the autism spectrum get worse, whereas with intervention they get better. Although it's never too late, the earlier any communication delays and social challenges are addressed, the sooner parents, teachers, and therapists can start helping the kids learn what they'll need to survive and thrive.

PRT focuses on core underlying areas that are critical for children with autism. Functionally, the major core area—which affects all other areas—is motivation to engage in social communication. That core area is linked both to underlying neurological bases and to thousands of individual behaviors that are affected by the motivational problem as the children develop. The figure on the next page shows the many interrelationships addressed by PRT.

It's also important to understand that the PRT procedures were developed over many, many years and that there are now hundreds of studies showing their effectiveness. PRT is based on behavioral intervention, a method developed in earlier work in the field of applied behavior analysis that is also supported by plenty of research that documents its effectiveness as an approach for autism. In general, for all behavioral interventions, the standards for documenting treatment effectiveness require multiple research studies



A model of pivotal response intervention.

conducted by several independent researchers using either randomized, controlled experimental designs or rigorous single-case experimental designs, or both. (See Chambless & Ollendick, 2001, for a general description of these standards.) In short, this means that not only have we succeeded with research conducted in our own clinics, but that other researchers, working in other clinics and using a variety of different experimental designs, have also found the same positive results. This duplication shows that there isn't bias on our part. It really works.

Another important point is that not only has the PRT “package” been shown to make real and significant changes, but every component of PRT has also been tested individually and found to be valuable in intervention (see R.L. Koegel, Koegel, & Camarata, 2010; R.L. Koegel, Koegel, Vernon, & Brookman-Frazer, 2010; National Autism Center, 2009; National Research Council, 2001; Odom, Boyd, Hall, & Hume, 2010a, 2010b; Simpson, 2005). As we'll repeat many times in this book, there are a lot of packaged autism interventions out there—some we've all heard of—for which the proponents haven't shown that the individual components work. Using those interventions may be wasting valuable time teaching behaviors that just aren't helpful for the child.

It's important to note that because PRT is scientifically based, it continues to evolve, with new components being added as they are discovered. This point is critical, because all the answers aren't in yet, and there are always improvements that can be made. As new ways to teach or to teach more effectively are found—so the kids will learn faster and have more fun—the methods will continue to change. As an example, as the PRT approach has been developed and refined over the years, it has gone by several different names. When it was first applied specifically to communication, as in the original studies focused on teaching first words, it was called the “Natural Language Paradigm,” or NLP for

short. It got that name because the motivational components incorporated into the treatment for communication resembled natural interactions with children, as opposed to the more structured, drill-type interventions that were commonly used at that time.

Through further research, it became clear that the approach was surprisingly effective in many areas beyond communication. Thus, the approach began to go by the name “Pivotal Response Treatment” to reflect its impact on thousands of behaviors within the overall condition of autism. The table summarizes the evidence supporting the comprehensive PRT package.

There are four primary reasons why empirical evidence is important when choosing which treatment approach to use.

1. Empirical evidence separates approaches that really work from approaches that are mere fantasy and hype or are simply less effective. Don’t be fooled by fancy brochures and treatment providers claiming to have the “latest and greatest” interventions for autism. That’s unlikely. Because nonscientific approaches may sound good on paper or in dramatic speeches by celebrities, one can be easily deceived by rhetoric and fancy sales pitches.

2. Certifying agencies, as well as credentialing and licensing bodies, are increasingly requiring professionals to use approaches that are backed by sound scientific evidence, making those who use non-evidence-based approaches increasingly vulnerable to lawsuits. Don’t get caught in that situation, as you’ll look extremely ill informed in court.

3. Insurance companies and other third-party funding agencies are refusing to pay for treatments that do not have scientific evidence to back their effectiveness. It may sound superficial, but someone has to pay for the treatment, and no one wants to pay for something that doesn’t work!

Summarized empirical support for Pivotal Response Treatment (PRT)

Study	Title	Notable treatment outcome(s)
<b>Original PRT studies</b>		
R.L. Koegel, O'Dell, and Koegel (1987)	A Natural Language Paradigm for Teaching Nonverbal Autistic Children	Children produced more imitative and spontaneous utterances in PRT condition than in traditional discrete trial training. Generalization of treatment gains occurred only in PRT condition.
R.L. Koegel, Koegel, and Surratt (1992)	Language Intervention and Disruptive Behavior in Preschool Children with Autism	Increased language responding and fewer disruptive behaviors occurred during the PRT condition compared to traditional discrete trial training.
L.K. Koegel, Koegel, Shoshan, and McNerney (1999), Phase 1	Pivotal Response Intervention II: Preliminary Long-Term Outcome Data	Looking through retrospective analysis, children with poor and favorable outcomes had comparable language ages and adaptive behavior scale scores at preintervention, but children who exhibited high levels of spontaneous initiations at preintervention had more favorable outcomes.
L.K. Koegel, Koegel, Shoshan, and McNerney (1999), Phase 2	Pivotal Response Intervention II: Preliminary Long-Term Outcome Data	Following PRT initiation training, children increased their adaptive and pragmatic scores to near chronological age level. They did not retain their diagnosis of autism or their special education placements. Social/academic functioning was comparable to that of typically developing peers.
L.K. Koegel, Carter, and Koegel (2003)	Teaching Children with Autism Self-Initiations as a Pivotal Response	Through PRT, children were successfully taught to use the queries "What happened?" or "What's happening?" during intervention. Children generalized the use of -ing and -ed to other verbs and increased their mean length of utterance and verb diversity.
R.L. Koegel, Shirotova, and Koegel (2009b)	Brief Report: Using Individualized Orienting Cues to Facilitate First-Word Acquisition in Non-responders with Autism	PRT with individualized orienting cues produced verbal communication gains in correct responding, correct phonemes, and independent word production that PRT without such cues did not.

(continued)

Summarized empirical support for Pivotal Response Treatment (PRT) (continued)

Study	Title	Notable treatment outcome(s)
R.L. Koegel, Vernon, and Koegel (2009)	Improving Social Initiations in Young Children with Autism Using Reinforcers with Embedded Social Interactions	PRT with embedded social interactions resulted in increased levels of child-initiated social engagement during communication, improved nonverbal dyadic orienting, and higher ratings of overall child affect compared to the nonembedded conditions.
<b>Independent replications of PRT effectiveness with original lab collaboration</b>		
Schreibman, Kaneko, and Koegel (1991)	Positive Affect of Parents of Autistic Children: A Comparison Across Two Teaching Techniques	Parents trained in PRT were observed displaying significantly more positive affect than parents trained in discrete trial training.
R.L. Koegel, Bimbela, and Schreibman (1996)	Collateral Effects of Parent Training on Family Interactions	Discrete trial condition resulted in no significant influence on interactions, while PRT resulted in positive parent-child interactions noted on ratings of happiness, interest, stress, and communication style during dinner-time probes.
R.L. Koegel, Camarata, Koegel, Ben-Tall, and Smith (1998)	Increasing Speech Intelligibility in Children with Autism	Significant gains observed in correct production of target sounds and speech intelligibility during the PRT intervention.
L.K. Koegel, Camarata, Valdez-Menchaca, and Koegel (1998)	Setting Generalization of Question-Asking by Children with Autism	Children learned in PRT to consistently and spontaneously initiate "What's that?" across treatment and generalization settings. Significant increase in vocabulary achieved due to item label acquisition.
Bryson et al. (2007)	Large Scale Dissemination and Community Implementation of Pivotal Response Treatment: Program Description and Preliminary Data	Preliminary data show that PRT providers who participated in large-scale, community training maintained fidelity of implementation across time and increased the functional verbal utterances of the participant children.

<p>Nefdt, Koegel, Singer, and Gerber (2010)</p>	<p>The Use of a Self-Directed Learning Program to Provide Introductory Training in Pivotal Response Treatment to Parents of Children with Autism</p>	<p>The majority of parents participating in the PRT Self-Directed Learning Program (DVD and accompanying materials) completed the program, demonstrated learning of specified procedures, and was observed to appear more confident during parent-child interactions.</p>
<p><b>Independent replications of effectiveness of PRT</b></p>		
<p>Laski, Charlop-Christy and Schreibman (1988)</p>	<p>Training Parents to Use the Natural Language Paradigm to Increase Their Autistic Children's Speech</p>	<p>After parent training in PRT at home and in a clinic setting, posttreatment increases in parent requests for vocalizations were observed, as were increases in children's verbal responsiveness during intervention and generalization.</p>
<p>Pierce and Schreibman (1995)</p>	<p>Increasing Complex Play in Children with Autism via Peer-Implemented Pivotal Response Training</p>	<p>Following peer-implemented PRT, children increased interactions to a high level of intervals and increased play and conversation initiations. Children exhibited increases in coordinated and supported joint attention behaviors following treatment.</p>
<p>Thorp, Stahmer, and Schreibman (1995)</p>	<p>Effects of Sociodramatic Play Training on Children with Autism</p>	<p>All children increased in all play behavior measures following PRT teaching of sociodramatic play. Play behavior gains maintained during generalization.</p>
<p>Stahmer (1995)</p>	<p>Teaching Symbolic Play to Children with Autism Using Pivotal Response Training</p>	<p>Modified PRT using symbolic play as a target behavior increased symbolic play and play complexity. Treatment gains were maintained during generalizations across toys, settings, and partners.</p>
<p>Pierce and Schreibman (1997)</p>	<p>Multiple Peer Use of Pivotal Response Training Social Behaviors of Classmates with Autism: Results from Trained and Untrained Peers</p>	<p>Peer-implemented PRT was successful in producing positive social behavior change across multiple peer implementers. The social behavior change was maintained during generalization with untrained peers.</p>

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Summarized empirical support for Pivotal Response Treatment (PRT) (continued)

Study	Title	Notable treatment outcome(s)
Sherer and Schreibman (2005)	Individual Behavioral Profiles and Predictors of Treatment Effectiveness for Children with Autism	Children profiled as predicted responders to PRT exhibited increases in language, play, and social behavior following PRT intervention.
Baker-Ericzén, Stahmer, and Burns (2007)	Child Demographics Associated with Outcomes in a Community-Based Pivotal Response Training Program	Following a 12-week PRT parent education program, all children showed significant improvement in adaptive behavior scale scores regardless of gender, age, and race/ethnicity of the children/families.
Vismara and Lyons (2007)	Using Perseverative Interests to Elicit Joint Attention Behaviors in Young Children with Autism: Theoretical and Clinical Implications for Understanding Motivation	Using the child's perseverative interests in a PRT model increased joint attention initiations.
Gillett and LeBlanc (2007)	Parent-Implemented Natural Language Paradigm to Increase Language and Play in Children with Autism	Parent-implemented PRT led to increases in overall rate and spontaneity of utterances for children. Children also showed an increase in appropriate play. Parents rated the intervention simple to implement and endorsed continued use of PRT.
Harper, Symon, and Frea (2008)	Recess Is Time-In: Using Peers to Improve Social Skills of Children with Autism	Peer implementation of PRT increased initiations and turn-taking initiations.

4. Serious problems can occur when approaches that have not been properly tested are employed: In addition to wasting the children's valuable time, untested procedures are often found to be risky or dangerous, and using them may create problems that are greater than the original symptoms of autism. Take the casein-free diet, for example. Many parents put their children on this diet, only to find that it results in low bone density after several years—and studies now show that it doesn't help the symptoms of autism. In short, remember that evidence-based procedures are essential, valuable, and available. *Beware of snake-oil salesmen!*

This book presents scientifically based and practical intervention procedures that can be implemented in everyday settings; are easy and fun to implement; and produce valuable treatment gains for children with autism, as well as benefits for the entire family's lifestyle. PRT has been used effectively for more than 25 years with hundreds of thousands of families. By focusing on several foundational areas of development in children, PRT results in life-changing improvements for children with an autism diagnosis. The following chapters will highlight each of the pivotal areas and provide details on effective implementation and expected outcomes.

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