

## Pivotal Response Treatment (PRT)

### Applied Behaviour Analysis (ABA) using:

#### Pivotal Response Treatment (PRT)

#### What is Pivotal Response Treatment?

Pivotal Response Treatment (PRT) is based on the belief that autism is by and large redressable and is not necessarily a permanent disorder, as was originally thought. Pivotal Response Treatment was developed at the University of California at Santa Barbara (UCSB) in the 1970s, by educational psychologists Dr. Robert Koegel and Dr. Lynn Kern Koegel. Lovass and Koegel demonstrated in a landmark study that children with autism could be taught, using a method called Discrete Trial Teaching, despite the prevailing belief that they could not be taught new skills. Discrete Trial teaching is based on the core principals of ABA.

However, Koegal and Lovass subsequently criticised this method as being too rigid and lacking the ability to motivate autistic children to learn and to generalise learned tasks to other areas of functioning that had not been specifically taught. Subsequently, Koegal developed an improved method known as the Naturalistic Language Paradigm (meaning that children with autism learned in a more natural way). Robert and Lynn Koegal and their colleagues conducted extensive research at the [Koegel Autism Research Center at the UCSB Gevirtz School of Education](#), and discovered that there are pivotal areas or skills which promote motivation to learn in children. With ongoing research and development this method evolved into Pivotal Response Treatment (PRT).

To date, PRT is one of the most extensively studied and validated early intensive behavioural treatments for children with autism. PRT is firmly rooted in Applied Behavioural Analysis (ABA). ABA is a cornerstone principle of Psychology. "ABA therapy or ABA" is often used to describe Discrete Trial Learning, which is an application of ABA theory, as is PRT and many behaviour modification techniques. PRT is play based and relies upon using the interests of the child to initiate involvement. Rather than targeting individual behaviours, as in Discrete Trial Learning, the PRT therapist targets "pivotal areas or skills" of development. Research as the [Koegel Autism Centre](#) has identified several pivotal areas that promote participation and motivation through child-directed play activities:

1. Motivation to learn
2. Initiation of activities.
3. Recognition and expression of feelings and emotions
4. The ability to respond to multiple signals, or cues.
5. Development of communication and language.
6. Positive social behaviours, such as turn-taking, and relief from disruptive self-stimulatory behaviours

By targeting these critical areas, PRT tends to produce broad improvements across other areas of sociability, communication, behavior and academic skill building. Motivation strategies are an important part of the PRT approach. These emphasise "natural" reinforcement. For example, if a child makes a meaningful attempt to request, say, a toy, the reward is the toy itself, not a piece of chocolate or other unrelated reward.

Children spend far more time with their parents than with their therapist. Hence, a strong emphasis is placed upon the role of parents as primary intervention agents.

Though used primarily with preschool and elementary school learners, [studies](#) show that PRT can also help adolescents and young adults. Indeed, autism-affected persons of all ages may benefit from its techniques. In all age groups, the learner plays a crucial role in determining the activities and objects that

will be used in a PRT exchange.

### Typical PRT therapy session

Prior to starting therapy, the skill levels of the child with autism is assessed by an expert Psychologist and a program is developed to help the child progress forward, utilising their existing skill set. Each program is tailored to meet the goals and needs of the individual learner and his or her school and home routines. A session typically involves various segments during which language, play and social skills are targeted with both structured and unstructured interactions. As the child progresses, the contents of each session evolves to accommodate more advanced goals and needs.

### Time commitment required

PRT program usually involves 25 or more hours per week for the learner, which involves training from the PRT therapist, as well as instruction for parents and other caregivers to follow through. Everyone involved in the child's life is encouraged to use PRT methods consistently. PRT can be described as a "lifestyle" adopted by the affected family.

### Biomedical Treatment and Nutrient Supplementation

Biomedical treatment for Autism refers to the process of redressing the anomalies in the patient's biochemistry through the use of specific nutrients. It is based on the pioneering work of Nobel Prize winner, Linus Pauling, who demonstrated that substances naturally occurring in the body (vitamins and micronutrients) can have a profound impact on health and body functions

#### **EXPECTED KEY BENEFITS OF BIOMEDICAL TREATMENT FOR AUTISM**

- Improvements in immune function, resulting in much healthier children who seem to be very resistant to coughs, colds, runny noses, ear infections and who seem to get over viral infections quicker than the rest of the family.
- Improvements in Gut and Bowel function. More normal stool frequency and consistency; reduction or elimination of lower abdominal pain or discomfort; reduction or elimination of loose stools or diarrhoea.
- Improved appetite and a wider variety of foods tried and consumed
- Better socialisation and initiation of communication with family members and at school; more typical social interactions and social play.
- Improved cognitive function; improved vocabulary and sentence structure; improved higher order functions.

### Behaviour Management

Behaviour management is used to modify unhelpful behaviours and replace them with more adaptive behaviour.

A Functional Behaviour Assessment (FBA) is usually conducted to identify the causes of challenging behaviours such as self-injury, aggression, defiance or destructive behaviours. The goal of a FBA is to determine the function of a challenging behaviour (i.e., why a specific behaviour is occurring) so an intervention can be put in place to reduce this behaviour and/or increase more adaptive behaviours.

Proactive strategies (strategies to prevent the onset or escalation of behaviours) together with reactive strategies (strategies implemented while a behaviour is occurring) are developed together with parents/carers with the objective to reduce future behaviours. Children are actively taught replacement behaviours, and are highly reinforced for not engaging in challenging behaviours and for showing more

appropriate adaptive behaviours

## Speech Therapy

Once autism is diagnosed, a speech therapist will assess the best ways to improve communication and enhance a person's quality of life. Throughout therapy, the speech pathologist works closely with the family, school, and other professionals. If someone with autism is nonverbal or has major trouble with speech, the speech therapist may introduce alternatives to speech.

Speech therapy techniques might include:

- Electronic Communication Devices
  - Signing or typing
  - Using picture boards with words, known as picture exchange communication systems (PECS) that start out using pictures instead of words to help a child learn to communicate
  - Using sounds to which a person is over- or under-sensitive to expand and compress speech sounds
  - Improving articulation of speech by exercising and strengthening lips or facial muscles
  - Having individuals sing songs composed to match the rhythm, stress, and flow of sentences
- Specific goals of speech therapy include helping the individual with autism:
- Articulate words well
  - Communicate both verbally and nonverbally
  - Comprehend verbal and nonverbal communication, understanding others' intentions in a range of settings
  - Initiate communication without prompting from others
  - Know the appropriate time and place to communicate something; for example, when to say "good morning"
  - Develop conversational skills
  - Exchange ideas
  - Communicate in ways to develop relationships
  - Enjoy communicating, playing, and interacting with peers
  - Learn self-regulation

## Occupational Therapy

Occupational therapy attempts to improve the quality of life for an individual with Autism. The main objective of Occupational therapy is to maintain, improve, or introduce skills that allow an individual to participate as independently as possible in meaningful like activities. Coping skills, fine motor skills, self-help skills, play skills and socialisation are all targeted areas for intervention. Through occupational therapy methods, an individual with Autism can be aided both at home and within the school setting by teaching activities including:

- Dressing
- Feeding
- Toilet training
- Grooming
- Social skills
- Fine motor skills
- Visual skills

Occupational therapy is usually part of a collaborative effort of medical and educational professionals, as well as parents and other family members. Through this collaboration, an individual with autism can move towards more appropriate social, play and learning skills needed to function successfully in everyday life.

## Picture Exchange Communication System

The Picture Exchange Communication System (PECS), teaches children with autism who have little or no communication abilities, how to communicate non-verbally. Children using PECS are taught to approach another person and give them a picture of a desired item in exchange for that item. By doing so, the child is able to initiate communication. The child with autism can use PECS to communicate a request, a thought, or anything that can reasonably be displayed or symbolised on a picture card. PECS works well in the home or in the classroom. (For more information contact 'www.Pecs Australia.com').

The Six Phases of the Picture Exchange Communication System Are:

- **PECS PHASE I: How to Communicate**  
The child with autism learns to exchange single pictures for items or activities they really want.  
PECS
- **PHASE II: Distance and Persistence**  
Still using single pictures, the child with autism learns to generalise this new skill by using it in different places, with different people and across distances. They are also taught to be more persistent communicators.
- **PECS PHASE III: Picture Discrimination**  
The child with autism learns to select from two or more pictures to request desired items. These can be placed in a communication book, a ring binder with Velcro strips where pictures are stored and easily removed for communication.
- **PECS PHASE IV: Sentence Structure**  
The child with autism learns to construct simple sentences on a detachable sentence strip using an "I want" picture followed by a picture of the item being requested. PECS
- **PHASE V: Answering Questions**  
The child with autism learns to use PECS to answer the question, "What do you want?"
- **PECS PHASE VI: Commenting**  
Now the child with autism is taught to comment in response to questions such as, What do you see?, What do you hear? and What is it? They learn to make up sentences starting with I see, I hear, I feel, It is a, etc.

PECS is thought to assist in the development of verbal language, decrease inappropriate behaviours, and improve socialisation.