

How is Autism Treated?

Treatment for autism is usually a very intensive, comprehensive undertaking that involves the child's entire family and a team of professionals. Some programs may take place in your home. These may be based in your home with professional specialists and trained therapists or may include training for you to serve as a therapist for your child under supervision of a professional. Some programs are delivered in a specialized center, classroom or preschool. It is not unusual for a family to choose to combine more than one treatment method.

The terms “treatment” and “therapy” may be used interchangeably. The word “intervention” may also be used to describe a treatment or therapy.

We've provided an overview of many different treatment methods for autism in this section of your kit. The descriptions are meant to give you general information. Your pediatrician, developmental pediatrician, or a social worker who specializes in the treatment of children with autism, can make suggestions or help you prioritize therapies based on your child's comprehensive evaluation. Once you have narrowed down some choices of appropriate therapies for your child, you will want to explore more comprehensive information before making a commitment to one. For many children, autism is complicated by medical conditions, biological issues and symptoms that are not exclusive to autism. Children with other disorders, such as Articulation Disorder, **Apraxia, Seizures, GI problems**, etc. might require some of the same therapies.

Examples of these treatments are **Speech & Language Therapy, Occupational Therapy**, or the care of a **Neurologist** or **Gastroenterologist**. For this reason, we've included information here to explain the treatments for the core symptoms of autism and the treatments for associated symptoms and biological and medical conditions. Intensive treatments for autism's core symptoms address the social, communication and behavioral issues at the heart of autism. Treatments for associated symptoms address challenges commonly associated with autism, but not specific to the disorder. If your child has biological or medical conditions, such as allergies, food intolerances, gastrointestinal issues or sleep disturbances, these will need to be treated too. Treatment programs may combine therapies for both core symptoms and associated symptoms. Your child's treatment program will depend on his needs and strengths. Some of these therapies may be used together. For example, if medical causes for sleep disturbances are ruled out, a behavioral intervention might be used to address them. Occupational Therapy or Speech & Language Therapy are often integrated into one of the intensive therapy programs described here as core symptom therapies. Many children benefit from receiving multiple therapies provided in the same learning format. The National Research Council recommends that, during the preschool period, children with autism should receive approximately 25 hours of structured intervention per week. Intervention can include time spent in a developmental program, speech-language therapy, occupational therapy, one-on-one or small group intervention, and parent-delivered intervention.



Therapies include a wide range of tools, services and teaching methods you may choose to use to help your child reach his or her potential. The recommended number of hours of structured intervention is 25 hours per week during the preschool period.

For school-age children the therapy may be provided during the school day and if necessary, there may be additional therapy provided outside of the school day. The type of services (i.e. Speech and Language Therapy), the duration of the service (i.e. 45 minutes), the frequency of the service (i.e. 3 days/week), as well as the location (in school) will be provided as part of your child's Individual Education Program

Many of the therapy methods described here are very complex and will require more research on your part before you get started. Whenever possible, observe the therapies in action. Talk to experienced parents and make sure you have a thorough understanding of what is involved before beginning any therapy for your child.



Treatment for the Core Symptoms of Autism

Most families use one type of intensive intervention that best meets the needs of their child and their parenting style. The intensive interventions described here require multiple hours per week of therapy, and address behavioral, developmental, and/or educational goals. They are developed specifically to treat autism. During the course of treatment, it may be necessary to reevaluate which method is best for your child.

Therapies are not always delivered in a “pure format.” Some intervention providers who work primarily in one format may use successful techniques from another format.

Before we get into the types of therapies available, it is helpful to take a step back and look at the bigger picture. Although research and experience have revealed many of the mysteries surrounding autism, it remains a complex disorder that impacts each child differently. However, many children with autism have made remarkable breakthroughs with the right combination of therapies and interventions. Most parents would welcome a cure for their child, or a therapy that would alleviate all of the symptoms and challenges that make life difficult for them. Just as your child’s challenges can’t be summed up in one word, they can’t be remedied with one therapy. Each challenge must be addressed with an appropriate therapy. No single therapy works for every child. What works for one child may not work for another. What works for one child for a period of time may stop working. Some therapies are supported by research showing their efficacy, while others are not. The skill, experience, and style of the therapist are critical to the effectiveness of the intervention.

Before you choose an intervention, you will need to investigate the claims of each therapy so that you understand the possible risks and benefits for your child. At first, all of these techniques, ABA, VB, PRT, DTT, ESDM, among others, may seem like alphabet soup to you. You may be confused now, but you will be surprised at how quickly you become “fluent” in the terminology of autism therapies.

For information on different treatment options, turn to the glossary in this kit, or visit www.AutismSpeaks.org and view the National Standards Project produced by the National Autism Center at www.nationalautismcenter.org/about.national.php

You should also see your pediatrician for more information, so that you can be confident you are making informed choices as you begin to narrow down your options.

Behavior analysis was originally described by B.F. Skinner in the 1930’s. You may have learned about Skinner and “operant conditioning” when you studied science in school. The principles and methods of behavior analysis have been applied effectively in many circumstances to develop a wide range of skills in learners with and without disabilities.



What is Applied Behavioral Analysis?

Since the early 1960's, applied behavior analysis, or ABA, has been used by hundreds of therapists to teach communication, play, social, academic, self-care, work and community living skills, and to reduce problem behaviors in learners with autism. There is a great deal of research literature that has demonstrated that ABA is effective for improving children's outcomes, especially their cognitive and language abilities. Over the past several decades, different models using ABA have emerged, all of which use behavioral teaching. They all use strategies that are based on Skinner's work. ABA is often difficult to understand until you see it in action. It may be helpful to start by describing what all of the different methods of ABA have in common. ABA methods use the following three step process to teach:

- An **antecedent**, which is a verbal or physical stimulus such as a command or request. This may come from the environment or from another person, or be internal to the subject;
- A resulting **behavior**, which is the subject's (or in this case, the child's) response or lack of response to the antecedent;
- A **consequence**, which depends on the behavior. The consequence can include positive reinforcement of the desired behavior or no reaction for incorrect responses. ABA targets the learning of skills and the reduction of challenging behaviors. Most ABA programs are highly-structured. Targeted skills and behaviors are based on an established curriculum. Each skill is broken down into small steps, and taught using prompts, which are gradually eliminated as the steps are mastered. The child is given repeated opportunities to learn and practice each step in a variety of settings. Each time the child achieves the desired result, he receives positive reinforcement, such as verbal praise, or something else that the child finds to be highly motivating, like a small piece of candy. ABA programs often include support for the child in a school setting with a one-on-one aide to target the systemic transfer of skills to a typical school environment. Skills are broken down into manageable pieces and built upon so that a child learns how to learn in a natural environment. Facilitated play with peers is often part of the intervention. Success is measured by direct observation and data collection and analysis – all critical components of ABA. If the child isn't making satisfactory progress, adjustments are made.

One type of ABA intervention is Discrete Trial Teaching (also referred to as DTT, "traditional ABA" or the Lovaas Model, for its pioneer, Dr. Ivar Lovaas). DTT involves teaching individual skills one at a time using several repeated teaching trials and reinforcers that may or may not be intrinsically related to the skill that is being taught.

Who provides traditional ABA or DTT?

A board certified behavior analyst specializing in autism will write, implement and monitor the child's individualized program. Individual therapists, often called "trainers," (not necessarily board certified) will work directly with the child on a day-to-day basis.



What is a typical ABA therapy session like?

■ Sessions are typically 2 to 3 hours long, consisting of short periods of structured time devoted to a task, usually lasting 3 to 5 minutes. 10 to 15 minute breaks are often taken at the end of every hour. Free play and breaks are used for incidental teaching or practicing skills in new environments. Done correctly, ABA intervention for autism is not a "one size fits all" approach consisting of a "canned" set of programs or drills. On the contrary, every aspect of intervention is customized to each learner's skills, needs, interests, preferences, and family situation. For those reasons, an ABA program for one learner might look somewhat different than a program for another learner. An ABA program will also change as the needs and functioning of the learner change.

What is the intensity of most ABA programs?

■ 25 to 40 hours per week. Families are also encouraged to use ABA principals in their daily lives.

*To find more information on ABA go to
The Association for Behavior Analysis International
www.ABAinternational.org
Behavior Analyst Certification Board
www.BACB.com*

What is the difference between Traditional ABA and other interventions that involve ABA, such as Verbal Behavior, Pivotal Response Treatment, and the Early Start Denver Model?

■ Verbal Behavior and Pivotal Response Treatment therapies use the methods of ABA, but with different emphasis and techniques. All of these methods use the three step process described above.

What is Pivotal Response Treatment?

■ **Pivotal Response Treatment, or PRT**, was developed by Dr. Robert L. Koegel, Dr. Lynn Kern Koegel and Dr. Laura Shreibman, at the University of California, Santa Barbara. Pivotal Response Treatment was previously called the Natural Language Paradigm (NLP), which has been in development since the 1970s. It is a behavioral intervention model based on the principles of ABA.

PRT is used to teach language, decrease disruptive/self-stimulatory behaviors, and increase social, communication, and academic skills by focusing on critical, or "pivotal," behaviors that affect a wide range of behaviors. The primary pivotal behaviors are motivation and initiation of communications with others. The goal of PRT is to produce



positive changes in the pivotal behaviors, leading to improvement in communication skills, play skills, social behaviors and the child's ability to monitor his or her own behavior. Unlike the Discrete Trial Teaching (DTT) method of teaching, which targets individual behaviors based on an established curriculum, PRT is child-directed. Motivational strategies are used throughout intervention as often as possible. These include varying tasks, revisiting mastered tasks to ensure the child retains acquired skills, rewarding attempts, and using direct and natural reinforcement. The child plays a crucial role in determining the activities and objects that will be used in the PRT exchange. For example, a child's purposeful attempts at functional communication are rewarded with reinforcement related to their effort to communicate (e.g. if a child attempts a request for a stuffed animal, the child receives the animal).

Who provides PRT?

■ Some psychologists, special education teachers, speech therapists and other providers specifically are trained in PRT. The Koegel Autism Center offers a PRT Certification program.

What is a typical PRT therapy session like?

■ Each program is tailored to meet the goals and needs of the child, and also to fit into the family routines. A session typically involves six segments during which language, play, and social skills are targeted in structured and unstructured formats. Sessions change to accommodate more advanced goals and the changing needs as the child develops.

What is the intensity of a PRT program?

■ PRT programs usually involve 25 or more hours per week. Everyone involved in the child's life is encouraged to use PRT methods consistently in every part of the child's life. PRT has been described as a lifestyle adopted by the affected family.

Where can I find more information on PRT?

UCSB Koegel Autism Center

www.education.ucsb.edu/autism

UCSD Autism Research Program

<http://psy3.ucsd.edu/~autism/prttraining.html>

What is Verbal Behavior?

■ Another behavioral (based on the principles of ABA) therapy method with a different approach to the acquisition and function of language is **Verbal Behavior** (VB) therapy. In his 1957 book, "Verbal Behavior," B.F. Skinner (see previous section on ABA) detailed a functional analysis of language. He described all of the parts of language as a system. Verbal Behavior uses Skinner's analysis as a basis for teaching language and shaping behavior.



Skinner theorized that all language could be grouped into a set of units, which he called operants. Each operant he identified serves a different function. He listed echoics, mands, tacts and intraverbals as the most important of these operants. The function of a “mand” is to request or obtain what is wanted. For example, the child learns to say the word “cookie” when he is interested in obtaining a cookie. When the child is given the cookie, the word is reinforced and will be used again in the same context. In a VB program, the child is taught to ask for the cookie any way he can (vocally, sign language, etc.). If the child can echo the word, he will be motivated to do so in order to obtain the desired object. The operant for labeling an object is called a “tact.” For example, the child says the word “cookie” when seeing a picture and is thus labeling the item. In VB, more importance is placed on the mand than on the tact, theorizing that “using language” is different from “knowing language.” An “intraverbal” describes conversational or social, language. Intraverbals allow children to discuss something that isn’t present. For example, the child finishes the sentence, “I’m baking...” with the intraverbal fill-in “Cookies.” Intraverbals also include responses to questions from another person, usually answers to “wh-“questions (Who? What? When? Where? Why?). Intraverbals are strengthened with social reinforcement.

VB and classic ABA use similar behavioral formats to work with children. VB is designed to motivate a child to learn language by developing a connection between a word and its value. VB may be used as an extension of the communication section of an ABA program.

Who provides VB?

- VB therapy is provided by VB-trained psychologists, special education teachers, speech therapists and other providers.

What is the intensity of most VB programs?

- VB programs usually involve 30 or more hours per week of scheduled therapy.
- Families are encouraged to use VB principals in their daily lives.

*For Information on VB go to
Cambridge Center for Behavioral Studies
www.behavior.org/vb*

What is the Early Start Denver Model (ESDM)?

■ The Early Start Denver Model (ESDM) is a developmental, relationship-based intervention approach that utilizes teaching techniques consistent with applied behavior analysis (ABA). The goals are to foster social gains – communicative, cognitive, and language – in young children with autism, and to reduce atypical behaviors associated with autism. ESDM is appropriate for children with autism or autism symptoms who are as young as 12 months of age, through preschool age. The



content of intervention for each child comes from assessment using a comprehensive ESDM Curriculum Checklist which covers all domains of early development: Cognitive Skills, Language, Social Behavior, Imitation, Fine and Gross Motor Skills, Self-help Skills and Adaptive Behavior. Adults delivering ESDM focus on behaviors involved in capturing and holding children's attention, fostering their motivation for social interaction through highly enjoyable routines, using joint play activities as the medium for treatment, developing nonverbal and verbal communication, imitation, and joint attention, and using reciprocal, turn-taking exchanges inside joint activity routines to foster social learning. Based on a NIH-funded clinical trial, ESDM has been shown to be effective for increasing IQ, language, social skills, and adaptive behavior when delivered for at least one year.

Who provides ESDM?

■ ESDM can be provided by ESDM-trained behavior analysts, special education teachers, speech therapists and other providers. Parents can also be taught to use ESDM strategies.

What is the intensity of most ESDM programs?

■ ESDM programs usually involve 20-25 or more hours per week of scheduled therapy. Families are encouraged to use ESDM strategies in their daily lives.

What is a typical ESDM session like?

■ ESDM is designed to be highly engaging and enjoyable for the child, while skills are systematically taught within a naturalistic, play-based interaction. Some skills are taught on the floor during interactive play while others are taught at the table, focusing on more structured activities. As the child develops social skills, peers or siblings are included in the therapy session to promote peer relationships. ESDM can be delivered in the home, the clinic, or a birth-to-three or developmental preschool setting.

To find more information on ESDM:

ESDM Manual: Rogers, SJ., & Dawson, G. (2009). Play and Engagement in Early Autism: The Early Start Denver Model. New York: Guilford.

ESDM curriculum checklist: Rogers, SJ and Dawson, G. (2009) The ESDM Curriculum Checklist.

Information about training in the ESDM model can be found at this website:

www.ucdmc.ucdavis.edu/edsl/esdm/training.html

What is Floortime (DIR)?

■ **Floortime** is a specific therapeutic technique based on the **Developmental Individual Difference Relationship Model (DIR)** developed in the 1980s by Dr. Stanley Greenspan. The premise of Floortime is that an adult can help a child expand his circles of communication by meeting him at his developmental level and



building on his strengths. Therapy is often incorporated into play activities – on the floor. The goal of Floortime is to help the child reach six developmental milestones that contribute to emotional and intellectual growth:

- *Self regulation and interest in the world*
- *Intimacy or a special love for the world of human relations*
 - *Two-way communication*
 - *Complex communication*
 - *Emotional ideas*
 - *Emotional thinking*

In Floortime, the therapist or parent engages the child at a level the child currently enjoys, enters the child's activities, and follows the child's lead. From a mutually shared engagement, the parent is instructed how to move the child toward more increasingly complex interactions, a process known as "opening and closing circles of communication."

Floortime does not separate and focus on speech, motor, or cognitive skills but rather addresses these areas through a synthesized emphasis on emotional development. The intervention is called Floortime because the parent gets down on the floor with the child to engage him at his level. Floortime is considered an alternative to and is sometimes delivered in combination with ABA therapies.

Who provides Floortime?

■ Parents and caregivers are trained to implement the approach. Floortime-trained psychologists, special education teachers, speech therapists, occupational therapists may also use Floortime techniques.

What is a typical Floortime therapy session like?

■ In Floortime, the parent or provider joins in the child's activities and follows the child's lead. The parent or provider then engages the child in increasingly complex interactions. During the preschool program, Floortime includes integration with typically developing peers.

What is the intensity of most Floortime programs?

■ Floortime is usually delivered in a low stimulus environment, ranging from two to five hours a day. Families are encouraged to use the principals of Floortime in their day to day lifestyle.

To find more information on Floortime go to:

Floortime Foundation

www.Floortime.org

Stanley Greenspan

www.StanleyGreenspan.com

Interdisciplinary Council on Developmental and



What is Relationship Development Intervention (RDI)?

Like other therapies described in this handbook, RDI is a system of behavior modification through positive reinforcement. RDI was developed by Dr. Steven Gutstein as a parent-based treatment using dynamic intelligence. The goal of RDI is to improve the long-term quality of life of individuals with autism by helping them improve their social skills, adaptability and self-awareness. The six objectives of RDI are:

- **Emotional Referencing:** The ability to use an emotional feedback system to learn from the subjective experiences of others.
- **Social Coordination:** The ability to observe and continually regulate one's behavior in order to participate in spontaneous relationships involving collaboration and exchange of emotions.
- **Declarative Language:** The ability to use language and non-verbal communication to express curiosity, invite others to interact, share perceptions and feelings and coordinate your actions with others.
- **Flexible Thinking:** The ability to rapidly adapt, change strategies and alter plans based upon changing circumstances.
- **Relational Information Processing:** The ability to obtain meaning based upon the larger context; Solving problems that have no "right-and wrong" solutions.
- **Foresight and Hindsight:** The ability to reflect on past experiences and anticipate potential future scenarios in a productive manner.

The program involves a systematic approach to working on building motivation and teaching skills, focusing on the child's current developmental level of functioning. Children begin work in a one-on-one setting with a parent. When they are ready, they are matched with a peer at a similar level of relationship development to form a "dyad." Gradually, additional children are added to the group, as well as the number of settings in which children practice, in order to help the child form and maintain relationships in different contexts.

Who provides RDI?

Parents, teachers and other professionals can be trained to provide RDI. Parents may choose to work together with an RDI-certified consultant. RDI is somewhat unique because it is designed to be implemented by parents. Parents learn the program through training seminars, books and other materials and can collaborate with an RDI-certified consultant. Some specialized schools offer RDI in a private school setting.

What is a typical RDI therapy session like?

In RDI, the parent or provider uses a comprehensive set of step-by-step, developmentally appropriate objectives in everyday life situations, based on



different levels, or stages, of ability. Spoken language may be limited in order to encourage eye contact and non-verbal communication. RDI may also be delivered in a specialized school setting.

What is the intensity of most RDI programs?

- Families most often use the principles of RDI in their day to day lifestyle. Each family will make choices based on their child.

Where can I find more information on RDI?

Connections Center

www.RDIconnect.com

What is Training and Education of Autistic and Related Communication Handicapped Children (TEACCH)?

■ TEACCH is a special education program, developed by Eric Schopler, PhD and his colleagues at the University of North Carolina in the early 1970s. TEACCH's intervention approach is called "Structured Teaching." Structured Teaching is based on what TEACCH calls the "Culture of Autism." The Culture of Autism refers to the relative strengths and difficulties shared by people with autism that are relevant to how they learn. Structured Teaching is designed to capitalize on the relative strengths and preferences for processing information visually, while taking into account the recognized difficulties. Children with autism are assessed in order to identify emerging skills, and work then focuses on these skills to enhance them. In Structured Teaching, an individualized plan is developed for each student. The plan creates a highly structured environment to help the individual map out activities. The physical and social environment is organized using visual supports so that the child can more easily predict and understand daily activities and as a result, respond in appropriate ways. Visual supports are also used to make individual tasks understandable.

What does TEACCH look like?

■ TEACCH programs are usually conducted in a classroom setting. TEACCH-based home programs are also available and are sometimes used in conjunction with a TEACCH-based classroom program. Parents work with professionals as co-therapists for their children so that TEACCH techniques can be continued in the home.

Who provides TEACCH?

■ TEACCH is available at the TEACCH centers in North Carolina, and through TEACCH-trained psychologists, special education teachers, speech therapists and other providers in other areas of the country.



To find more information on TEACCH go to: *TEACCH Autism Program*
www.TEACCH.com

What is Social Communication/ Emotional Regulation/ Transactional Support (SCERTS)?

SCERTS is an educational model developed by Barry Prizant, PhD, Amy Wetherby, PhD, Emily Rubin and Amy Laurant. SCERTS uses practices from other approaches including ABA (in the form of PRT), TEACCH, Floortime and RDI. The SCERTS Model differs most notably from the focus of “traditional” ABA by promoting child-initiated communication in everyday activities. SCERTS is most concerned with helping children with autism to achieve “Authentic Progress,” which is defined as the ability to learn and spontaneously apply functional and relevant skills in a variety of settings and with a variety of partners. The acronym “SCERTS” refers to the focus on:

- “SC” Social Communication - Development of spontaneous, functional communication, emotional expression and secure and trusting relationships with children and adults.
- “ER” Emotional Regulation - Development of the ability to maintain a well-regulated emotional state to cope with everyday stress, and to be most available for learning and interacting.
- “TS” Transactional Support - Development and implementation of supports to help partners respond to the child’s needs and interests, modify and adapt the environment, and provide tools to enhance learning (e.g., picture communication, written schedules, and sensory supports). Specific plans are also developed to provide educational and emotional support to families, and to foster teamwork among professionals.

What does a SCERTS session look like?

The SCERTS Model favors having children learn with and from other children who provide good social and language models in inclusive settings, as much as possible. SCERTS is implemented using transactional supports put in place by a team, such as environmental accommodations, and learning supports, like schedules or visual organizers.

Who provides SCERTS?

SCERTS is usually provided in a school setting by SCERTS-trained special education teachers or speech therapists.


Where can I find more information on SCERTS?

SCERTS


www.SCERTS.com




Treatment for Biological & Medical Conditions Associated with Autism

 The next section of this handbook covers a number of what are frequently called “related services.” These services are therapies that address symptoms commonly associated with autism, but not specific to the disorder.


Speech-Language Therapy (SLT)

 Speech-Language Therapy (SLT) encompasses a variety of techniques and addresses a range of challenges for children with autism. For instance, some individuals with autism are unable to speak. Others seem to love to talk. They may have difficulty understanding information, or they may struggle to express themselves. SLT is designed to coordinate the mechanics of speech and the meaning and social value of language. An SLT program begins with an individual evaluation by a speech-language pathologist. The therapy may then be conducted one-on-one, in a small group, or in a classroom setting. The therapy may have different goals for different children. Depending on the verbal aptitude of the individual, the goal might be to master spoken language or it might be to learn signs or gestures to communicate. In each case, the aim is to help the individual learn useful and functional communication. SLT is provided by Speech-Language Pathologists who specialize in children with autism. Most intensive therapy programs address speech-language therapy as well.

Occupational Therapy (OT)

 Occupational Therapy (OT) brings together cognitive, physical and motor skills. The aim of OT is to enable the individual to gain independence and participate more fully in life. For a child with autism, the focus may be on appropriate play, learning, and basic life skills. An occupational therapist will evaluate the child's development as well as the psychological, social and environmental factors that may be involved. The therapist will then prepare strategies and tactics for learning key tasks to practice at home, in school, and other settings. Occupational therapy is usually delivered in 30 minute to one hour sessions with the frequency determined by the needs of the child. Goals of an OT program might include independent dressing, feeding, grooming, and use of the toilet, as well as improved social, fine motor and visual perceptual skills. OT is provided by Certified Occupational Therapists.

Sensory Integration (SI)

 Sensory Integration (SI) therapy is designed to identify disruptions in the way the individual's brain processes movement, touch, smell, sight and sound, and help he or she process these senses in a more productive way. It is sometimes used alone, but is often part of an occupational therapy program. It is believed that SI does not teach higher-level skills, but rather enhances sensory processing abilities, allowing the child to be more available to acquire higher-level skills. Sensory Integration therapy might be



used to help calm your child, to help reinforce a desired behavior, or to help with transitions between activities. Therapists begin with an individual evaluation to determine your child's sensitivities. The therapist then plans an individualized program for the child, matching sensory stimulation with physical movement, to improve the way the brain processes and organizes sensory information. SI therapy often includes equipment such as swings, trampolines and slides. Certified Occupational and Physical Therapists provide Sensory Integration Therapy.

Physical Therapy (PT)

■ Physical Therapy (PT) is focused on any problems with movement that cause functional limitations. Children with autism frequently have challenges with motor skills such as sitting, walking, running or jumping. PT can address poor muscle tone, balance and coordination. A physical therapist will start by evaluating the developmental level and abilities of the child. Once they identify the individual's challenges, the physical therapists design activities that target those areas. PT might include assisted movement, various forms of exercise, and orthopedic equipment. Physical therapy is usually delivered in 30 minute to one hour sessions by a Certified Physical Therapist, with the frequency determined by the needs of the child.

Social Skills

■ Individuals with autism have a great deal of difficulty with social interactions. In recent years, social skills training, in both one-on-one and peer group settings, has become a very common treatment for facing this particular challenge. Social skills taught during training sessions range from simple skills like eye contact, to more difficult skills like inviting a peer for a play date. Studies have shown that this type of intervention program can significantly improve social competence and social skill development. Though social skills training is not an official or certified form of therapy, professionals like social workers, speech therapists, and psychologists often focus largely on improving social skills when treating both children and adults with autism. In addition, parents, family members, and other caregivers can be taught effective ways to help improve the social skills of their loved ones with autism inside and outside the home on a regular basis.

Picture Exchange Communication System

■ Picture Exchange Communication System (PECS) is a learning system that allows children with little or no verbal ability to communicate using pictures. PECS can be used at home, in the classroom or in a variety of other settings. A therapist, teacher or parent helps the child to build a vocabulary, and to articulate desires, observations or feelings by using pictures consistently. The PECS program starts by teaching the child how to exchange a picture for an object. Eventually, the individual is shown how to distinguish between pictures and symbols and use them to form sentences. Although PECS is based on visual tools, verbal reinforcement is a major component, and verbal communication is encouraged. Standard PECS pictures can be purchased as a part of a manual, or pictures can be gathered from photos, newspapers, magazines, or other books.

Auditory Integration Therapy

■ Auditory Integration Therapy (AIT), sometimes called Sound Therapy, is sometimes



used to treat children with difficulties in auditory processing or sound sensitivity. Treatment with AIT involves the patient listening to electronically modified music through headphones during multiple sessions. There are different methods of AIT, including the Tomatis and Berard methods. While some individuals have reported improvements in auditory processing as a result of AIT, there are no credible studies that demonstrate its effectiveness or support its use.

Gluten Free, Casein Free Diet (GFCF)

■ Many families of children with autism are interested in dietary and nutritional interventions that might help some of their children's symptoms. Anecdotal evidence suggests that removal of gluten (a protein found in barley, rye, and wheat, and in oats through cross contamination) and casein (a protein found in dairy products) from an individual's can be helpful for reducing some symptoms of autism. The theory behind this diet is that proteins are absorbed differently in some children. Children who benefit from the GFCF diet experience physical and behavioral symptoms when consuming gluten or casein, rather than an allergic reaction. While there have not yet been sufficient scientific studies to support the effectiveness of the GFCF diet for reducing symptoms of autism, many families report that dietary elimination of gluten and casein has helped regulate bowel habits, sleep activity, habitual behaviors, and contributed to the overall progress of their children. Because no specific laboratory tests can predict which children will benefit from dietary intervention, many families choose to try the diet with careful observation by the family and the intervention team.

Families choosing a trial of dietary restriction should make sure their child is receiving adequate nutrition by consulting their pediatrician or a nutrition specialist. Dairy products are the most common source of calcium and Vitamin D for young children in the United States. Many young children depend on dairy products for a balanced, regular protein intake. Alternative sources of these nutrients require the substitution of other food and beverage products, with attention given to the nutritional content. Substitution of gluten free products requires attention to the overall fiber and vitamin content of a child's diet. Vitamin supplements may have both benefits and side effects. Consultation with a dietician or physician is recommended for the healthy application of a GFCF diet. This may be especially true for children who are picky eaters.

What about Other Medical Interventions?

■ Right now you are eager to do everything possible to help your child. Many parents in your position are eager to try new treatments, even those treatments that have not yet been scientifically proven to be effective. Your hopes for a cure for your child may make you more vulnerable to the lure of untested treatments. It is important to remember that just as each child with autism is different, so is each child's response to treatments. It may be helpful to collect information about a therapy that you are interested in trying, and speak with your pediatrician, as well as your intervention team members, in order to discuss the potential risks/benefits and establish measurable outcomes as well as baseline data. If you talk to the parents of older children with autism, they can provide you with a history of therapies and biomedical interventions that have been promised to be cures for autism over the years. Some of them may have been helpful to a small number of children. Upon further study, none of them, so far, has



turned out to be a cure for the vast majority. We do know that many children get better with intensive behavioral therapy. There is a large body of scientific evidence to support this theory. It makes sense to focus on getting your child engaged in an intensive behavioral program before looking at other interventions.

Is There A Cure?

Is recovery possible? You may have heard about children who have recovered from autism. Although relatively rare, it is estimated that approximately 10% of children lose their diagnosis of autism. The factors that predict which children lose their diagnosis are unknown. Children initially diagnosed with autism who lose their diagnosis often have residual difficulties in the areas of hyperactivity, anxiety, and depressive symptoms. Recovery from autism is usually reported in connection with intensive early intervention, but it is unknown how much or which type of intervention works best, or whether the recovery can be fully credited to the intervention. You may also hear about children who reach “best outcome” status, which means they score normally on tests for IQ, language, adaptive functioning, school placement, and personality, but have mild symptoms on some personality and diagnostic tests. Recent epidemiology studies estimate that approximately 60% of children with autism have IQ’s above 70 by age 8 (70 is the cut-off point for developmental delay). Presently, there is no reliable way of predicting which children will have the best outcomes. In the absence of a cure or even an accurate prognosis of your child’s future, do not be afraid to believe in your child’s potential. All children with autism will benefit from intervention. All will make very significant, meaningful progress.

How Do I Choose the Right Intervention?

The two articles that follow may provide helpful information for you as you choose between methods of therapies for your child.

Alleviate Stress by Actively Pursuing the Right Intervention

From Overcoming Autism by Lynn Kern Koegel, PhD and Claire LaZebnik

It’s scary to have to question your own child’s potential, but the best way to relieve your fears is to take action with productive interventions. The first step is to be informed. Talk to people you trust – parents who’ve been there, experts in the field, doctors you have a relationship with, and so on. There are a lot of fly-by-night procedures that prey on distraught parents who will do anything for their child. Make sure that the interventions you’re using are scientifically sound and well documented. Make sure they’ve been tested with many children with autism and that they’ve been replicated by other experts and clinics. Also, make sure you understand their limitations – some interventions only work on a small number of symptoms or on a small subgroup of children with autism. If you’re going to spend time and money for interventions, be informed about the degree and extent of the change they may bring about.



Understanding Your Child's Learning Style

From Does My Child Have Autism? by Wendy Stone, PhD, & Theresa Foy DiGeronimo, M.Ed

Finding the right intervention program begins with an understanding of your child's learning style – which is quite different from the learning style of other children. You probably realize this as you've tried to get your child with autism to wave bye-bye using the same teaching strategies you used with your other children – that is, demonstrating the action, providing a verbal prompt by saying "wave bye-bye" and even moving his or her hand to demonstrate what to do. But when that approach didn't seem to be working, you probably started to think that your child was being stubborn or uncooperative. After all, you're teaching simple skills using methods that worked very well for your other children. But the reality is that your child isn't being bad; he or she just has a different learning style from your other children. This difference in learning styles isn't apparent only when you try to teach children with autism; it's also evident in the way they learn (or don't learn) on their own. There are lots of things that children without autism seem to learn effortlessly, without being taught, but that children with autism don't pick up on as easily. For example, young children without autism somehow learn, without explicit teaching, how to use a pointing gesture to let you know what they want or to indicate where they want you to look. They learn to follow your point or eye gaze to figure out what you're looking at or what you're interested in. They figure out on their own how to use eye contact and facial expressions to convey their feelings—as well as to understand the meaning of your facial expressions and tone of voice. Social-communicative behaviors and skills like these just don't come as naturally to young children with autism and often need to be taught explicitly.

