TREATMENT OPTIONS FOR AUTISM

After a child receives a diagnosis of autism, the immediate question many parents ask is "how can we help?" Unfortunately, the answer is not a simple one. Many different types of treatment exist; however, they are not all accessible to families. Furthermore, some treatments may not have been scientifically proven to be effective, and some are even potentially harmful. It can be a daunting task for parents to sort through treatment options and choose from what is available and best for their child.

Also, it is important to remember that no single therapy works for every child or family. What works for one family may not work for another. Sometimes a blended approach works best. Above all, the skill and experience of the service provider is critical to the effectiveness of the intervention. This handout provides parents with a beginning understanding of different approaches for treating autism.

COMPREHENSIVE PROGRAMS

There are a number of evidence based, comprehensive programs that treat the core symptoms of autism. These interventions are typically intensive, requiring specialized training and multiple hours per week of therapy. Programs typically address a wide variety of behavioral, developmental, and educational goals. These programs are developed specifically to treat core symptoms of autism and are individualized to the child. Research suggests that children should receive at least 25 hours per week of structured intervention. This 25-hour recommendation can include parents working with their own children, under the guidance of professionals. Below is a sample of some of the most well-known comprehensive treatments for individuals with autism.

Applied Behavioral Analysis. Applied behavior analysis, or ABA, is one of the most commonly used and well-studied intervention strategies for individuals with autism. ABA is an umbrella term to describe the methodology used by clinicians called "learning theory." At its core, learning theory involves reinforcing desirable behavior and decreasing unwanted behavior through the use of a three-part contingency: the antecedent – behavior – consequence. The antecedent is a stimulus that occurs before a behavior and a consequence follows a behavior. The word consequence in this context is not the same as punishment. It is a stimulus that *either* increases *or* decreases the likelihood that the behavior will occur in the future. In ABA treatments, targeted skills and behaviors are broken down into small steps, taught using

prompts, and practiced in a variety of settings such that they are able to then be used in a natural environment. Data collection and data-based decision-making are critical components of ABA. Most ABA programs target a variety of skills including language, play, social behavior, communication, and academic skills, and work to decrease disruptive and self-stimulatory behaviors.

Treatment programs with ABA methods as a major influence include:

Discrete Trial Instruction. Discrete Trial Instruction (DTT, or "The Lovaas method") is a highly structured and repetitive teaching method where each teaching session is divided into multiple trials. Each trial consists of a series of instructions (e.g. "show me"," give to me") and prompts (verbal, gestural, physical, etc.) made to a child, typically done at a table setting. Correct responses are reinforced with verbal praise, food, toys, or a combination. The reward may or may not be related to the skill being taught.

Pivotal Response Treatment. Pivotal Response Treatment (PRT) is a behavioral intervention that focuses on increasing "pivotal" behaviors that affect a wide range of behaviors, especially motivation and initiation of communication with others. PRT is a child led intervention, meaning that therapists follow the child's lead in determining what activities are motivating to the child. Direct and natural (e.g. a child is rewarded for communicating by receiving the item they are requesting) reinforcement is used.

Verbal Behavior. Verbal Behavior Therapy (VB) is a behavioral intervention that is primarily focused on language acquisition. B.F. Skinner developed this method by conducting an analysis of the various components of language he later termed "operants." Echoics (repeating what is said), mands (requesting), tacts (labels), and intraverbals (social communication between two people) are the four main operants. In a VB program, a child who is learning to "mand," for example, is taught to ask for an object using vocals, pictures, or sign language and then reinforced by obtaining the object. VB is designed to motivate a child to learn language by understanding the connection between using a method of communicating and its reinforcing value.

The Early Start Denver Model. The Early Start Denver Model (ESDM) is an evidence-based behavioral intervention that is heavily developmental and relationship-based. The intervention is primarily for very young children, through preschool age, with autism. ESDM uses a comprehensive curriculum, including all domains of early development: Cognitive

Skills, Language, Social Behavior, Imitation, Fine and Gross Motor Skills, Self-help Skills and Adaptive Behavior. Teaching is done through the use of joint adult-child play activities.

Floortime. Floortime is a parent-based, relationship-based treatment approach that focuses on training parents to build upon their child's strengths and abilities through interacting and creating a warm relationship. During floortime, parents create what are called "circles of communication" with their child and expand them to help their child develop emotionally and intellectually. While playing on the floor, parents are coached to follow their child's lead and challenge their child to expand his or her play and social interactions.

Relationship Development Intervention. Relationship Development Intervention (RDI) is a parent-based treatment focused on training parents to improve their child's social skills, adaptability, and self-awareness. There are six objectives including Emotional Referencing (learning from the subjective experiences of others), Social Coordination (regulating one's behavior in order to participate in relationships), Declarative Language (using verbal and nonverbal communication to interact with others), Flexible Thinking (adapting to changes), Relational Information Processing (obtaining meaning based upon the larger context and problem solving), and Hindsight and Foresight (reflecting on past experiences and anticipating future experiences). These six objectives form the basis for what is called "dynamic thinking." During the intervention, there is parent education, followed by an assessment of both the child and the child-parent relationship, and an individualized teaching plan. The treatment is aimed at building parent-child relationships in a slow, step-by-step manner so that a close and trusting relationship can be established, and can be used as a building block for social connections with others such as peers.

Training and Education of Autistic and Related Communication Handicapped Children. The Training and Education of Autistic and Related Communication Handicapped Children (TEACCH) model is an educational program of "Structured Teaching" that uses an individual's strengths, preferences for routines, and visual information processing style to work on areas of difficulty. Individuals with autism are assessed in a variety of domains including play, communication, social, motor, and adaptive skills, and an individualized plan is developed for each person. Structured teaching includes creating a highly structured and visually clear environment to help the individual understand expectations and function more independently and appropriately.

RELATED TREATMENTS

The following treatments are commonly used to address deficits that are associated with autism but are not part of the core set of deficits often associated with the disorder. These treatments may or may not be necessary or beneficial for your child. Use guidance from assessments and professionals that know your child to determine which of these therapies are appropriate.

Speech-Language Therapy (SLT). Speech-Language Therapy (SLT) is a treatment for any child with language or communication delays, and is commonly used for children with autism. Goals depend on an individualized assessment of speech, language, and social language deficits. Different children have different goals, and can be taught in individual or group formats. The emphasis for children who cannot speak at all may be learning verbal language, but also may be learning alternative forms of communication such as using pictures, signs, electronic devices, or gestures to communicate. Picture Exchange Communication System (PECS), for example, may be taught. PECS is a communication system that provides children who have little or no verbal ability with a way to communicate using pictures. Parents should seek out a Speech-Language Pathologist who specializes in individuals with autism for their child.

Occupational Therapy (OT). Occupational Therapy (OT) is a treatment that focuses primarily on helping individuals improve their independence and daily functioning. For a child with autism, the focus may be on appropriate play, basic life skills, motor skills, coordination and body awareness, and adaptive strategies, including coping with transitions and emotional regulation. Many occupational therapists also conduct sensory integration therapy that helps the brain process and organize sensory information. Occupational therapy goals depend on an individualized assessment. Different children have different goals, and can be taught in individual or group formats. Occupational therapy is provided by a Certified Occupational Therapist.

Feeding Therapy. Feeding therapy is a treatment in which children progress through stages of oral motor skills to learn to chew, swallow, and enjoy a wide variety of foods. Children with autism frequently have restricted diets due to rigid food preferences, sensory sensitivities, and oral motor delays. Goals are developed around an initial assessment of factors contributing to limited food intake, including physiology, sensory processing, gross and fine motor skill development, the child's behavior, and family dynamics. Treatment typically addresses medical, motor, and behavioral barriers to successful feeding. Feeding therapy is usually delivered by a pediatric feeding specialist.

Social Skills Therapy. Social skills therapy is typically an individual or group treatment approach in which children learn and practice appropriate social skills in a group of other children with similar challenges. Social skills therapy can begin at a very early age and is appropriate for adults as well. Skills taught can range from making eye contact to having reciprocal conversations to building and maintaining successful relationships. Teaching parents

and other family members to help the individuals generalize skills to other people and settings is an important component of the therapy. Social skills therapy can be taught by a range of professionals including social workers, speech therapists, resource teachers, and psychologists.

Individual psychotherapy. Individual psychotherapy is a treatment approach that focuses mainly on addressing any co-existing psychiatric symptoms or disorders in an individual with autism. Common co-morbid conditions include anxiety, depression, obsessive–compulsive disorder, panic disorder, Tourette's syndrome, and disruptive behaviors. Talk therapy can be of limited usefulness for individuals with significant language or intellectual impairment, but can be very helpful in helping family members learn how to deal with these conditions and the associated stress of caring for an individual with autism. Individual psychotherapy can be helpful for higher functioning individuals with autism, however, treatment approaches are most likely modified to fit with the unique strengths and weaknesses of the client. Psychotherapy can also be helpful in providing education about autism to individuals and their families, and offering a place of support and acceptance of the diagnosis. Individual psychotherapy is delivered by mental health professionals including social workers, psychologists, and psychiatrists.

MEDICAL/BIOLOGICAL TREATMENTS

Individuals with autism spectrum disorder frequently suffer from co-morbid psychiatric (e.g. anxiety, depression, attention-deficit/hyperactivity disorder) and medical (i.e. gastrointestinal problems, sleep disturbances, and seizures) conditions. These conditions are treated both medically and behaviorally and are the target of numerous research initiatives.

Psychiatric medication. To date, there are no medicines approved to treat the core symptoms of autism, however recent advances in scientific research about the underlying biology of autism is leading to an increase in the number of clinical trials of medications that may address these core symptoms. Currently, medications are used to treat associated symptoms of autism. Most medicines used in individuals with autism are "off label," meaning that they are FDA approved for other, sometimes related conditions, but have not been studied and approved specifically for individuals with autism. Such use of "off label" medications is quite common in the field of medicine. Psychiatric medication is typically prescribed by a pediatrician, developmental pediatrician, or psychiatrist.

Treatment for gastrointestinal disorders. Gastrointestinal disorders (GI) are one of the most common medical conditions associated with autism. Common GI problems include chronic constipation or diarrhea, food allergies, gastroesophageal reflux disease, and inflammatory

bowel conditions. Treatment is dependent on a thorough assessment of the cause. Treatment often includes a combination of behavioral strategies such as dietary changes/restrictions/supplements, keeping a dietary diary, and toileting behaviors and medications. Some families believe that a gluten-free and casein-free diet (GFCF) is effective in reducing core and associated symptoms of autism including physical and behavioral disturbances. It is possible that this diet helps some individuals and not others. Due to its lack of proven efficacy, parents are encouraged to closely monitor the effects of the diet and to consider the potential downsides of dietary and nutritional restriction. Professionals who aid in managing GI problems include pediatricians and family doctors, GI specialists, nutritionists, and dieticians.

Nutritional Supplements. Using nutritional supplements have become increasingly popular among families of individuals with autism. There is a body of research that supports the use of Vitamin B6 and Magnesium for individuals with autism, and a smaller body of research that show the benefits of vitamin/mineral and fatty acid supplements for autism. Much more research is needed in this area. Any use of nutritional supplements should be done under the care of a knowledgeable physician.

Treatment for Sleep problems. Sleep problems are very common in children with autism, and can lead to learning and behavioral challenges. Problems can include difficulty falling and staying asleep and waking excessively early in the morning. There are a number of possible reasons for sleep problems in those with autism, including biological differences in the area of the brain that regulates sleep as well as medical (e.g. GI problems, seizures) and psychological (e.g. anxiety, depression) issues that interrupt sleep. Sleep problems should be reported to your child's pediatrician as well as to a behavioral specialist who can provide strategies to address sleep problems. Examples of behavioral strategies include carefully attending to your child's sleep environment, bedtime routines, and nap schedule, and training your child to fall asleep on his own. At times, a referral to a sleep specialist who can perform further assessment such as a sleep study is necessary. Some individuals benefit from medications to help improve their sleep.

Treatment for Seizures. Seizures are more common in individuals with autism than in the general population. Studies suggest that 15-30% of individuals with autism also suffer from recurrent seizures. Although the evidence is not clear, some researchers believe that the brain differences in individuals with autism cause them to be more susceptible to seizures. Seizures can begin at any age. Individuals who are suspected of having seizures should be evaluated by a pediatric neurologist. The most effective treatment for seizures is medication. Medication will not cure seizures but can prevent or reduce their occurrence. In extreme cases, where medication does not work, doctors may try vagus nerve stimulation, a treatment that sends

electrical pulses into the brain to prevent seizures, or may surgically remove areas of the brain causing the seizures.

CHOOSING TREATMENTS

Deciding on what treatments are best for your child can be a difficult and overwhelming process. There are a variety of evidence-based approaches available, as well as less well-known approaches that may not be scientifically proven but are advertising success for children with autism. In the worst case, there are some treatments that may not be effective at all or may be harmful to your child. Below is a set of questions that can help guide you in making a decision about treatment. Reach out to trusted professionals as well. They often know the best treatments available in your local area and can help you think through the decision. Remember that not every treatment works for every child and family.

Questions for the provider:

- How successful has this treatment been for other children?
- What is your/the staff's experience working with individuals with autism?
- What credentials do the treatment providers have?
- How are goals developed and are they individualized for my child?
- What symptoms of autism do you treat?
- How is progress determined/documented? Do you take data?
- What method/strategies do you use?
- What evidence exists to support the method/strategies used?
- How to do you handle behavior problems?
- Will the program prepare me to continue the therapy at home?
- What is the cost and time commitment?
- Are there any potential risks of the program?

Questions for yourself:

- What level of family training/participation is involved?
- Does this method fit my family vision and lifestyle?
- How much stress will this put on my family and me?
- How will I handle the cost and time commitment?
- Are other family members in agreement? How will this affect them?