

# ASD—About Medicines and Integrative, Complementary, and Alternative Therapies

Treating children with autism spectrum disorder (ASD) often involves a comprehensive program that addresses the education, development, and behavior of the child. Here is information from the American Academy of Pediatrics about the different supports and services for ASD including medicines and alternative therapies.

## Medicines

Medicines have not been shown to change or improve the core symptoms of ASD; however, they may help address symptoms that affect a child's daily functioning and their ability to make developmental progress.

Medicines may help when behaviors interfere with progress in a child's supports and services program. Such behaviors may include hyperactivity, inattention, irritability, aggression, self-injury, repetitive behaviors, mood disturbances, anxiety, and behaviors related to gastrointestinal issues or sleep problems. The use of medicine is sometimes considered when these behavioral symptoms are judged to be interfering with a child's learning, socialization, health and safety, or quality of life and the child is not responding enough to behavioral supports and services.

Occasionally, medicine may initially be needed when the safety of others or the child's safety is at risk. Sometimes a child may have an additional diagnosis, such as depression or a seizure disorder, that may need to be treated with medicine.

Commonly used classes of medicines include atypical or second-generation antipsychotics (such as risperidone and aripiprazole), stimulants (such as methylphenidate and dextroamphetamine), selective serotonin reuptake inhibitors (such as fluoxetine),  $\alpha$  2-adrenergic agonists (such as clonidine and guanfacine), sleep-inducing medicines (such as trazodone), and certain antiseizure medicines.

Risperidone and aripiprazole are the only 2 medicines approved by the US Food and Drug Administration (FDA) for treatment of irritability (aggression, meltdowns, or self-injury) in children with ASD. Both medicines are in the class of drugs known as atypical antipsychotics. Risperidone has been approved for use in children and adolescents with ASD aged 5 to 16 years, and aripiprazole has been approved for use in children and adolescents with ASD aged 6 to 17 years. These medicines have not been shown to improve core symptoms of autism, including social communication and repetitive or stereotypic behavior. Children treated with these medicines should be monitored closely for potential side effects such as sedation, excessive weight gain, hyperglycemia (high blood glucose [blood sugar] levels), and abnormal twisting movements of their face or upper body.

Before starting a medicine in a child, it is important to look for medical factors that might cause or contribute to the behavior. For example, the child may have a hidden medical reason for their discomfort, such as constipation or an ear infection, that is causing agitation. There may also be environmental factors, such as changes in school routines, that are upsetting to the child and causing

disruptive outbursts. An FBA may help with determining the cause of new disruptive behaviors and with making decisions about medicines.

In recent years, larger, better-designed studies have been done to determine which medicines help children with ASD and associated behavior problems. For example, several studies have shown risperidone to be very effective for the management of meltdowns, aggression, or self-injurious behavior in children with ASD. Melatonin, an over-the-counter supplement, may help regulate sleep. Doctors are guided in the use of medicine by not only research studies involving children and adults with ASD but also studies on people with related disorders such as ADHD, obsessive-compulsive disorder, depression, and anxiety. If symptoms of these disorders are also present in a child with ASD, stimulants, antidepressants, antianxiety agents, and other medicines might be considered if behavioral strategies are not successful alone.

It is always important to consider the potential benefits and side effects when deciding on medicine options. Such decisions are best made in partnership with doctors, therapists, teachers, and, most important, parents. It is best to rely on more than one source for information concerning the effectiveness of various medicines commonly used in children with ASD because no medicine has been helpful in all patients.

Target behaviors must be measured or assessed to determine how effective the medicine is. It is also important to monitor for side effects. Only one medicine or treatment change should be made at a time. The medicine dose often has to be adjusted depending on how well it is working and whether there are any side effects. A medicine is continued only if benefits outweigh any negative effects. Some medicines may be used for a limited time, until a child learns new skills or behaviors, and other medicines may be needed for a longer time or indefinitely. Although few medicines will directly enhance language and social skills, the goals of most medicines are to allow the child to benefit more fully from educational and behavioral supports and services, be included in settings with typically developing children, and improve their functional independence.

## **Integrative, Complementary, and Alternative Therapies**

The most effective supports and services for ASD include a comprehensive, intensive program of educational, developmental, and behavioral therapies. However, progress may be slow and, because researchers have not been able to explain what causes ASD, many families may try other therapies that may not have been scientifically studied. These types of treatments are called *integrative, complementary, and alternative therapies*. When these therapies enter conventional medical care, they are often called *integrative medicine*.

Many families learn about these therapies on the internet, in books and magazines, and from other parents of children with ASD. It may be difficult to tell which therapies have scientific support and which don't. It is important to understand all the potential benefits and risks of any chosen therapy. Some natural therapies can have serious side effects. Parents should discuss any use of integrative, complementary, and alternative therapies with their child's doctor.

Popularity of these therapies varies over time and depends on practitioner availability in a given region, insurance coverage, or school offerings.

All supports, services, and therapies for ASD should be adequately monitored. Parents should inform their child's doctor about all therapies their child is using. Families should work closely with their child's doctor and intervention team to

- Determine the specific symptoms or behaviors they hope will change or improve with any therapy.
- Determine a method to monitor these symptoms or behaviors, for example, daily ratings.
- Collect baseline data before therapy is started.
- Continue data collection when therapy is started.
- Continue data collection for long enough to account for outside changes, for example, sick child, change in family schedule.
- Have a “blind” observer also collect data, such as a therapist who does not know about the treatment change, if possible.
- Make only one therapy change at a time.

Visit [HealthyChildren.org](https://HealthyChildren.org) for more information.

Adapted from the American Academy of Pediatrics patient education booklet, *Understanding Autism Spectrum Disorder (ASD)*.

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