

AUTISM SPECTRUM DISORDERS: AS UNDERSTOOD SO FAR

1. What is Autism?

Autism is a Neuro-developmental disorder **affecting the communication and social skills with or without restricted and repetitive behavior patterns**. It manifests in early childhood and persists into adulthood.

2. What are the contributory factors of Autism?

Autism is a **neurobiological** disorder of **genetic** origin. Although the exact cause at the genetic level is not yet known, research strongly points towards chromosome 7. A number of other chromosomes including chromosome 2, 3 and 15 have also been implicated.

3. Are there any environmental factors which contribute to the development of Autism?

A number of factors like certain food ingredients, history of allergies in the mother, heavy metals like lead, mercury, etc. have been suggested as possible causes; however none have been proved to be causative through scientific research. Vaccines have been implicated in the past to be causative, but research has conclusively proved that **there is no association between any of the vaccines and autism** and all vaccines can be safely administered.

4. What are the early pointers towards Autism?

The early signs and symptoms are:

1. Poor reciprocal **social smile**
2. Poor **eye contact**
3. Poor communication:
 - a. **Language delay**
 - b. Lack of pre-linguistic **gestures** e.g. pointing, waving, showing, etc.
 - c. Lack of verbal expressions like â oh oh, huh, etc.
4. Poor/inconsistent **response to name** (in the presence of normal hearing as manifested by response to other environmental sounds) Failure to point towards object of interest & failure to look towards object pointed at a distance
5. **Play:**
 - a. Absence of pretend play/ imaginative play
 - b. Failure to participate in imitative social play e.g. peek-a-boo
 - c. Failure to mingle with others and preference towards solitary play
 - d. Odd play e.g. lining up of toys in a particular fashion, etc.
6. Lack of recognition of parent's voice
7. Failure to develop **peer relationships** appropriate to developmental level
8. Lack of wide range of **facial expressions**

5. How can Autism be diagnosed?

A child with symptoms suggestive of autism should be **screened** with tests such as **M-CHAT & CARS**. A definitive **diagnosis** can then be arrived at with the gold standard diagnostic tests viz. **ADI-R and ADOS**. **In India, the National Institute for the Mentally Handicapped, Secunderabad, (AP) has brought out another scale called Indian Scale for Assessment of Autism (ISAA).**

6. What are ADI-R and ADOS?

ADI-R and ADOS are the **gold standard tests for diagnosis of autism**.

ADI-R (Autism Diagnostic Interview - Revised) is a **parent-based semi-structured interview** and ADOS (Autism Diagnostic Observation Schedule) is a **semi-structured behavioral observation of the child**. These tests can diagnose autism as well as identify the present behavioral issues and areas of concern.

7. How early can autism be diagnosed?

The features of autism are present at a very young age. Autism can be **suspected in the first year** of life in an infant who does not have a good reciprocal social smile and eye contact, has delayed babbling and insufficient gestures and who responds inconsistently to name. However, the gold standard tests can be applied only **after completion of 2 years of age; hence a definitive diagnosis can be arrived at only then**.

8. Why are Children with Autism oversensitive to touch and/or sound?

Children with Autism can have a number of sensory processing or sensory integration differences. They may be **over responsive- or under responsive** to any of the 6 sensory modalities and consequently may demonstrate one or more of the following symptoms:

- i. **Auditory:** Fear of loud sounds such as mixer, pressure cooker whistle, temple bells, etc., distress to sounds like coughing, sneezing, crying, etc., ability to hear sounds not generally perceived by others, etc. Banging utensils or toys, drumming on walls or furniture, throwing objects, etc.
- ii. **Visual:** Intolerance to bright colored objects (toys, clothes, etc.), bright sunlight, fear of dark places, etc. Staring at rotating objects, looking at things and people from the corner of the eyes, self-spinning, etc.
- iii. **Tactile:** Dislike being touched or hugged, toe-walking, discomfort towards certain textured clothes, refusal to eat with hands, intolerance to activities like brushing teeth, bathing, combing or cutting hair, etc. Repetitive touching of people, certain textures, walls, fringes, etc.
- iv. **Gustatory:** Refusal to eat or very fussy eater Developmentally age inappropriate mouthing
- v. **Olfactory:** Intolerance towards certain smells, ability to perceive smells not normally perceived easily. Repetitive sniffing of people or objects
- vi. **Vestibular:** Fear of swings, merry-go-rounds, etc. Self spinning, repetitive running in circles, rocking, etc.

9. Can poor eye contact be equated to Autism? What is the cause of this poor eye contact?

Although it is largely true that **Children with Autism in general have a poor eye contact** as compared to the rest of the pediatric population, it is not an all or none phenomenon. Poor eye contact can also be **due to other conditions** like social anxiety, social phobia or a shy child. At the same time, there can be **kids who have Autism but have a relatively fair eye contact**. These kids may look at others in the eye, but may **not be able to modulate the eye contact appropriately** for initiating, regulating or terminating social interaction.

There are 2 possible reasons for poor eye contact in autism:

As these children have poor social skills, they may either **not feel the need to communicate** with others or may **not know the right way** to do so, hence they may not integrate gaze and other modes of communication.

The other reason may be related to their sensory differences wherein looking continuously at somebody in the eye may be **visually overburdening/ over stimulating for them**.

10. What are the associated features/ conditions in autism?

Autism may be associated with mental retardation, seizures, large head circumference and neuropsychiatric conditions like anxiety, ADHD, OCD, etc.

11. Are all Children with Autism mentally retarded?

No, Children with Autism is not mentally retarded. Around **60%** of Children with Autism will have some degree of mental retardation. The others have an average or even above average IQ.

Similarly, all Children with Autism do not necessarily demonstrate the other associated features/conditions mentioned in the previous answer.

12. Why do kids with Autism have a delay in developmental areas other than communication and social-emotional?

As mentioned above, those kids who also have a degree of **retardation** associated may have a global developmental delay due to the same.

The delay may be partly contributed by their **sensory differences**. For example, a child with a tactile over-responsive may not learn to walk normally or a child with kinesthetic or vestibular differences may have a difficulty in crawling, jumping or climbing stairs, thus affecting the gross motor skills.

A third reason could be the **lack of their interaction** with other children or adults, which greatly **reduces the number of learning opportunities** available to them and hampers the achievement of new skills.

13. Do all Children with Autism have some special abilities?

Autism kids can have special abilities which are exceptionally above their own skills and also above other kids of their age like making complicated calculations orally, telling the day based on the date of any year in the past or future, or exceptional developed reading, painting or musical skills. These are termed **savant skills**. However, these will not be present in all children with autism. The incidence is estimated to be around **1 to 3 in every 10 Children with Autism**.

14. Is Autism curable?

Autism is not curable, in the sense that some features related to communicative and social interactive problems may persist into adulthood. However, **with therapy**, especially if intervened early, the **symptoms definitely improve**. The level of improvement is not the same for every child and depends upon the severity of the condition, the intensity of therapy and the socio-communicative opportunities available at home. Most of these kids can become **independent in their self-care activities through proper early intervention**.

15. What are the therapies available for autism?

Autism is managed with **behavioral therapy and Sensory Integration Therapy**. A number of behavioral strategies and programs are available like DTT (Discrete Trial Therapy), ABA (Applied Behavior Analysis), PECS (Picture Exchange Communication System) and ESDM (Early Start Denver Model). These therapies work best if started at an early age (before 3 years of age).

16. Can Children with Autism speak after undergoing this kind of therapy?

The development of speech again **depends on the degree of severity** of autism. About one third children with autism do not develop speech and remain mute throughout life. These children have to be taught to communicate through alternative means of communication like gestures and pictures. Among the **two-thirds who develop speech**, the level of speech varies widely.

17. Does speech therapy help?

The above mentioned behavioral therapies themselves target the communicative skills as well and separate speech therapy sessions are not required. However, those children with a good vocabulary but a **persistent pronunciation problem may benefit** from it. In any case, **only speech therapy will not be effective unless coupled with appropriate behavioral therapy**.

18. Why are most Children with Autism started on occupational therapy?

An occupational therapist will provide **sensory integration therapy** for Children with Autism with the above mentioned sensory deficits. This is required because the sensory issues may hamper the interaction of the child with the therapist, the exploration and

appropriate use of toys and materials and thereby the acquisition of new skills. It also improves the sitting tolerance and attention span.

19. How long does a child have to continue the therapy?

The duration of therapy cannot be predicted for a given child and most will require **some help either at a centre or at home throughout life.**

20. Are there any alternative options available (other than behavioral therapy)?

There are **no medicines** available for treating autism. However, some Children with Autism may have associated psychiatric problems like anxiety, OCD, ADHD, etc. If any of these are very severe to the extent of hampering his functioning and learning, medications can be considered an option for those symptoms.

Dietary modifications in the form of GFCF (gluten free casein free) diet has been suggested, but not proven scientifically. It may work for some children, but reports available are inconsistent. **We do not recommend any dietary modifications.**

Alternative streams of medicine also claim to have treatment options available, but due to a lack of knowledge regarding those, **we do not recommend** them.

21. Can these children go to a regular school?

Those Children with Autism who have a **normal intelligence** and who have acquired the **necessary language skills** can be admitted to a regular school. Many of them perform well academically. Even for those who cannot be integrated into a normal school, special schools are available which help them due to the **structured routine** and the **interactive opportunities** that are available there. It is **definitely not advisable to restrict these children at home.**

22. Can they earn a livelihood and lead an independent life as adults?

The pre-requisite to be able to lead an independent life is the acquisition of the **basic self-help skills** which need to be taught. This is the primary aim of all the therapy programs and most of the Children with Autism will develop these with some effort. Those individuals with Autism who have completed the **basic schooling** can definitely earn a livelihood. Even those, who cannot go to a normal school, can be taught many **vocational skills** which will help them get employed.

23. What is the role of a general pediatrician in the management of autism?

The child's pediatrician can play a very important role in the **screening** for autism. Pediatricians can advise **periodic developmental follow-up visits** during the first few years of life. With the increasing incidence of childhood autism, they need to have a **high degree of suspicion** of autism in children presenting to them with speech delay and **refer them to a developmental pediatrician as early as possible.** They can also **spread awareness** about this condition among parents during the routine and developmental follow-up visits.

24. What can parents do to provide Children with Autism a good life?

Parents are the most important future-shapers of Children with Autism. Beginning with a **regular developmental follow-up** of their child to **getting the child assessed** if a problem is suspected to **promptly initiating the child into a therapy** program if autism is diagnosed, it is the responsibility of the parents to avoid any undue delay in this process. They also need to **learn the basic principles of managing** children with Autism, more so in our country where there is an acute shortage of well-established centers and trained therapists. It is up to them to **provide more time and a highly stimulating home environment** in which more learning opportunities are available.

25. What can society do to help children with autism and their families?

Society has to **empathetic** towards Children with Autism and their families.

Other **family members** can help parents in sharing responsibilities, so that parents can spend more time with these children. They can also show consistency while interacting with these children as advised by the therapists.

Schools can help by integrating these kids into a normal school. **School teachers** can be trained in dealing with these children in a classroom setting and helping them to develop academic skills as well as interactive skills with peers.

Neighbors can help by giving more opportunities to these children to mingle with non-Kids with Autism.

NGOs can help by providing financial aid to families of Kids with Autism as well as by helping them obtain school admission and employment.

The **Government** also needs to legalize certain exemptions at school and inclusion of autism in the gamut of health problems receiving all kinds of necessary facilities.

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