



KLS Wellness

Institute for Integrative Therapies

— NAVI MUMBAI —

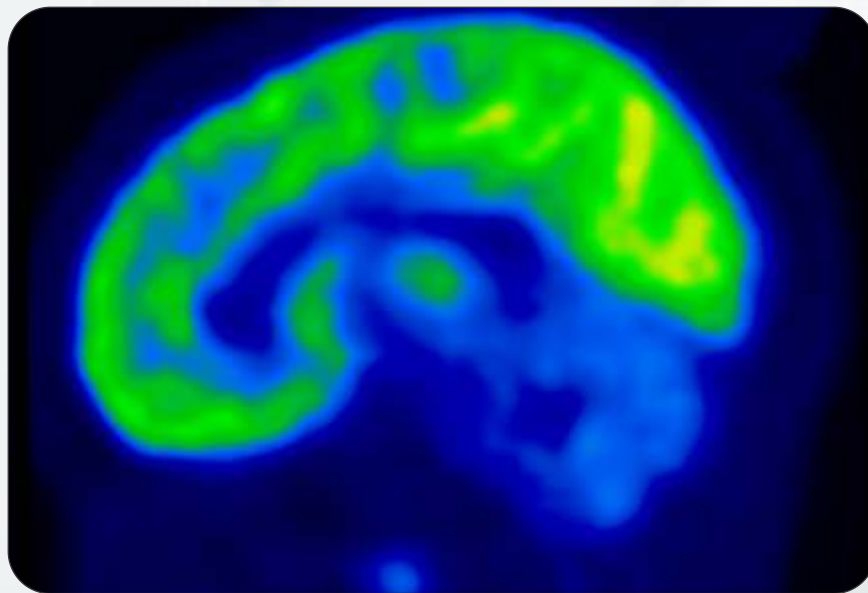
Integrative Therapies for Autism



What are **Autism Spectrum Disorders?**

Autism Spectrum Disorders (ASD) are a group of neurodevelopmental disorders that present a range of social, communication, and behavioral challenges within the first few years of a child's life.

The plain MRI and CT scan brain reports are usually normal in these kids but functional problems are noticed in PET CT brain. There are few hypometabolic areas visualized in the PET scan of the brain of autistic children which corresponds to the symptoms the child has.



The integrative approach to autism at KLS wellness institute, sanpada navi mumbai, includes Hyperbaric Oxygen Therapy (HBOT), Ozone Therapy, Acupressure therapy, Gut cleansing, Shirodhara, Chelation therapy, Supplement therapy, etc.

The therapies are known to impact children with autism in a holistic manner.

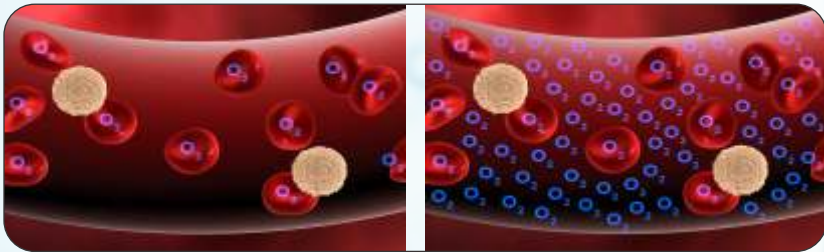
Hyperbaric Oxygen Therapy For Autism

What is Hyperbaric Oxygen Therapy?

Hyperbaric oxygen therapy involves breathing 100 percent oxygen in an enclosed chamber for around an hour. It is an excellent approach for autism as it increases the oxygen delivery to the brain and body.

How does HBOT work ?

In normal atmospheric pressure (1 ATA), our cells receive oxygen only through red blood cells but in the Hyperbaric chamber, the oxygen seeps into the plasma and reaches those areas where normally red blood cells are not capable of reaching.



Administration of hyperbaric oxygen therapy leads to new blood vessel formation, and neuronal recovery in children with autism. These new blood vessels are able to carry blood more efficiently into the hypoxic areas of the autistic brain – flooding it with oxygen which also helps in improving brain metabolism and reducing inflammation in the damaged areas of the brain of autistic children.

HBOT also exerts antidepressant effects, similar to those exerted by Serotonin, the “happy chemical” of the body, thus improving the function of the damaged brain areas of autistic kids and eventually may improve the child’s behavioral symptoms and independent skills.

How is it done?

In a hard and transparent monoplace hyperbaric oxygen therapy chamber, the child is made to lie down with a parent for around an hour. The child can watch his favorite cartoon, rhymes or songs on the monitor which is placed outside, on the top of the chamber.

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Ozone Therapy For Autism

What is ozone therapy?

Ozone is a naturally occurring gas made up of 3 oxygen atoms. Ozone therapy is a medical gas therapy that uses a mixture of oxygen and ozone (98:2) to supply a higher amount of oxygen to tissues at cellular level.

Medical ozone is an excellent

- Antioxidant
- Anti inflammatory
- Anticoagulant (blood thinner)
- Germicidal
- Metabolic regulator

How does ozone therapy work?

Ozone therapy improves the oxygenation of tissues at a cellular level by increasing the oxygen carrying capacity of the blood. Ozone is a powerful antioxidant; it enhances the antioxidant capacity and decreases oxidative stress in autistic kids. This helps to improve the immunity of the child so that the child falls less prey to infections. Ozone is a powerful germicidal too as it helps to curb viral, bacterial, parasitic and fungal infection in the body and gut of autistic kids and helps in gut detox.

In autistic kids, there are certain areas of the brain which are hypofunctioning due to less oxygen supply. Ozone therapy increases cellular metabolism and improves oxygenation of these hypoxic areas in the brain. Many autism symptoms are observed due to inflammation in the gut and in some areas of the brain. Ozone also has anti-inflammatory properties. It reduces inflammation in various organs of the body, improving overall health of autistic individuals.

How is it done?

Ozone therapy for autistic children is given via ear or rectal route or through both routes. Neither of the administrative routes of ozone therapy for autism is painful nor does it cause any discomfort. In both ear insufflation and rectal route the parent or guardian can accompany the child with autism.

Ear insufflation is given through a stethoscope which is inserted in the child's ear. For the rectal route, a small tube is inserted into the rectum while the gaseous ozone is injected via a syringe or ozone rectal bag. This process can take up to 10 - 15 mins, during which the child can be kept entertained by watching a video, etc.

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- "Ozone therapy in multiple disabled children." Buch, Rajeshwari. Proceedings of the 5Th WFOT Meeting. 2016.
- "Minor ozonized autohemotherapy in a 2 year old boy with speech delay and cytomegalovirus infection: a case report." Karima, Hirani. Ozone Therapy Global Journal 8.1 (2018): 165-169.
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Acupressure For Autism

What is Acupressure therapy?

It is essentially a method of signaling the body to “turn on” its own self-healing or regulatory mechanisms by applying tolerable pressure on certain points on the body or meridians.

How does it work?

Children with autism often face issues with sleep patterns, hyperactivity and focusing attention due to sensory arousal. Research shows that acupressure therapy reduces sensory arousal, which enhances sleep quality, reduces nightly waking, and decreases sleep latency, i.e. time of falling asleep. For children with autism, it is an effective form of stimulation used to help relax the body. Acupressure therapy reduces neuropathic pain by increasing local blood circulation and promoting lymphatic drainage. Acupressure therapy stimulates pressure receptors underneath the skin which has been known to optimize the functioning of the vagus nerve, which induces a state of relaxation of the body.



For children with autism acupressure therapy relieves stress, tension and anxiety, reduces hyperactivity, improves attention, alleviates chronic pain, and soothes proprioceptive issues. Stimulation of pressure receptors via acupressure may also increase serotonin and dopamine levels – body's natural 'happiness' hormones which in turn reduces depressive tendencies in kids with autism.

Acupressure is increasingly employed for autism spectrum disorder to help with symptoms like speech and language difficulties, behavioral challenges, anxiety and sleep issues.

How is it done?

Therapists use their fingers or special devices to apply pressure to acupoints or meridians on the autistic child's body in a calm environment. The children initially resist the treatment but later become calm and relaxed.

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- Efficacy and safety of massage therapy for autism spectrum disorders. A protocol for systematic review and meta-analysis Sheng Guo, MD, a Ke-Lin Zhou, MD, b Shuo Dong, MD, b Xiao-Na Xue, MD, a Pei-Dong Wei, MD, a Jing-Yi Yang, MD, a Guo-Bing Fu, MD, a Zhen-Bo Liu, MD, a and Xia Cui, PhDc

Shirodhara For Autism

What is Shirodhara ?

SHIRODHARA is a classical and a well-established traditional procedure of slowly and steadily pouring medicated oil or other liquids on the forehead followed by shiroabhyanga (massaging head, neck and shoulder).

How does it work ?

The level of stress is high in autistic children which leads to hyperactivity; decrease in attention and concentration; and issues with sleep pattern. Shirodhara followed by head massage in autistic kids stimulates the release of dopamine (pleasure hormone) and suppresses the excess cortisone and adrenaline (stress hormones) which results in inducing a relaxed state of awareness and establishing a dynamic psycho-somatic balance. Thus, it benefits in improving sleep patterns; speech or communication skills; focus; attention; concentration; productivity; increasing physical strength and improving appetite in kids with autism.



NOTE - Shirodhara can be attempted only in autistic kids who have sound understanding to lie down quietly for some time until the treatment is done.

How is it done?

The child is made to lie down comfortably on the back. The height from where the dravya (medicated liquid) is poured should be 4-6 inches from the forehead. Temperature of the dravya should be maintained throughout the procedure at 38- 40 degree C. The treatment takes about 30- 40 mins time to complete.

REFERENCES

- Ayurvedic approach-shirodhara for improving reaction time of attention deficit hyperactivity disorder affected children. Singhal HK, Neetu, Kumar A, Rai M. Ayu. 2010 Jul;31(3):338-42. doi: 10.4103/0974-8520.77169. PMID: 22131736; PMCID: PMC3221068

Gut cleansing for autism

What is Gut cleansing?

The gut microbiota has been found to affect brain function through the neuroendocrine signaling, neuroimmune signaling, and bacterial metabolites. The recent finding of the microbiota-gut-brain axis indicates the bidirectional connection between our gut and brain, demonstrating that gut microbiota can influence many neurological disorders such as autism.

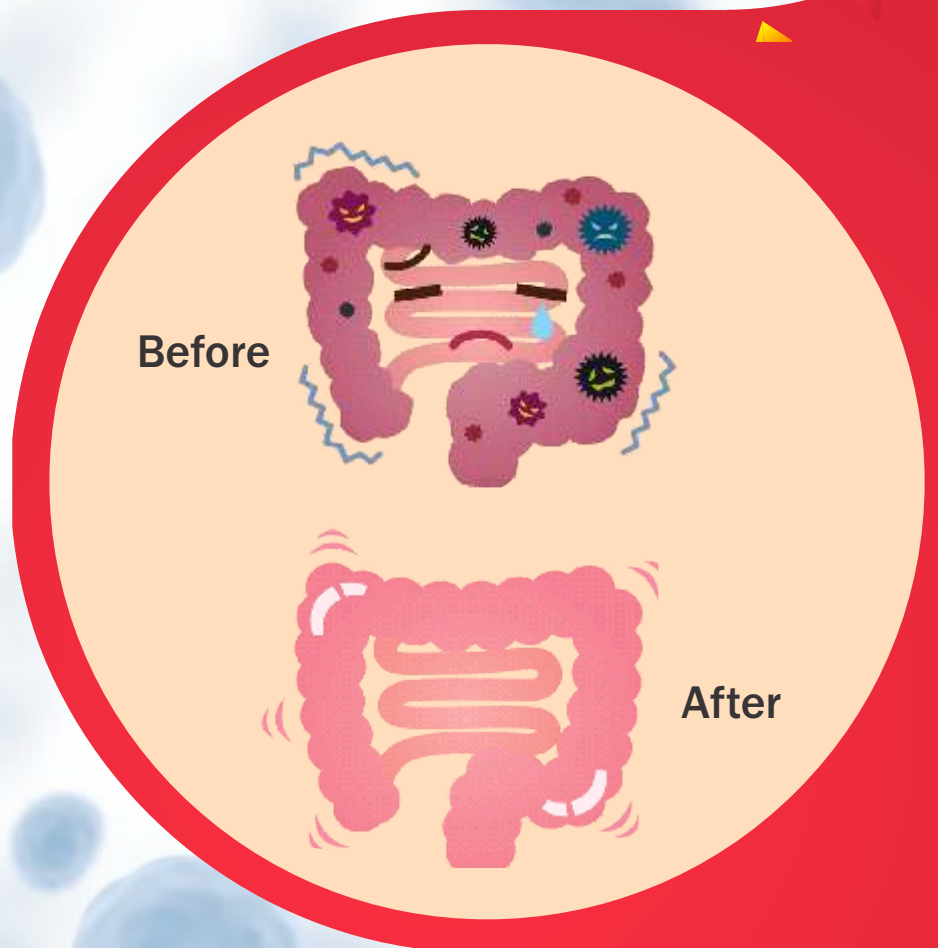
How does it work ?

Autistic children are disproportionately affected by gastro intestinal issues such as bloating, cramps, diarrhea or constipation. Several studies suggest that children on the spectrum have atypical gut bacteria. Also, the majority autistic children have fungal growth especially yeast in the gut which may interfere with nutrient absorption. These all factors are also considered as one of the causes of behavioral issues present in autistic kids.

Cleansing the gut helps in disimpaction of fecal matter, better absorption of nutrients and also removing unwanted gut bacteria and fungal growth which further improves autistic symptoms overall.

How is it done?

The gut microbiota can be evaluated by a simple fecal test known as gut microbiome test. Gut cleansing is done with the help of oil enema and ozone therapy and supplemented with the right diet and probiotics suggested in the results of gut microbiome test.



Chelation therapy for Autism

What is chelation therapy?

Chelation therapy involves administering a chelating agent orally that binds to heavy metals, such as lead, mercury, etc which is then excreted through urine.

How does it work ?

One of the causes of autism is related to accumulation of lead , mercury or other toxic heavy metals from immunization , food, medicine or other environmental influences. The agents most commonly used are Dimercaptosuccinic acid (DMSA) and 2-3-dimercaptopropane-1-sulfonate (DMPS), Calcium Disodium ethylenediamine-tetraacetic acid (Ca-EDTA), etc. The removal of heavy metals from the body of autistic kids helps in improving behavioral issues , speech , sleeping patterns in kids with autism.



How is it done?

The heavy metals can be picked up through urine challenge tests as well as through hair or nail analysis. Depending on the level of heavy metals, the chelator is chosen and administered for a course of time; preferably for kids, an oral chelating agent is used. These oral chelators along with supplements help to extract heavy metals from its reservoirs in the body to the blood , binds on it and pushes it out through urine.

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Supplement therapy for Autism

What is supplement therapy?

Supplement therapy for autism is supplying required vitamins, minerals and antioxidants in which the child is deficient in. These supplements include Vit D, Iron, B complex, Calcium, DHA, probiotics, etc.

How does it work?

Autistic children may be deficient in few essential vitamins, minerals and antioxidants. Several studies showed that supplementing them with right nutrition helps in improving the behavioral and sensory issues in autistic kids.



Vitamin D has been found to have an effect on the neurotransmitters in the brain. It assists the brain with forming new connections and strengthening connections that are already present. In a recent study, it was found that children with autism who received a daily vitamin D supplement observed a decrease in the core symptoms associated with autism, including impairment in social interaction, communication and engaging in repetitive behaviors.

Iron – Iron plays a key role in various metabolic processes including oxygen transportation throughout the body and brain. Deficiency of iron in the body leads to lethargy and lack of appetite in children, hence iron supplementation is provided if required.

Omega 3 fatty acids are essential for brain and eye development in humans. Two types of Omega 3s are found in seafood, while the third type is found in plant oils. Children with autism have low levels of omega 3 fatty acids in their systems. In a 2007 randomized control trial study, some marginal benefits were found in children with autism who took fish oil supplements.

B complexes, especially B6 and B12 – acts on specific pathways within the brain, which results in providing fuel or power for certain brain processes. It also plays an important role in neuronal synchronization and attention. A 2016 randomized control trial study showed that the children who received the supplement clinically improved in several behavior and sensory categories, including social responsiveness.

Vitamin C – plays an important role in the human body, as it supports the production of neurotransmitters (chemicals that help our cells communicate) and helps protect the body against free radicals. Vitamin C is also essential for a healthy immune system. It also helps in iron absorption. One study found that children with autism who took Vitamin C supplements were observed to have a significant reduction in stereotypical behaviors such as rocking, flapping hands, and pacing.

Probiotics – Many children with autism struggle with gastrointestinal (GI) issues, such as stomach pain, constipation, and diarrhea. Gut bacteria found within the GI tract actually act as messengers, sending signals and communicating with different parts of the body, including the brain. It is thought that an imbalance in this bacteria in the gut can have an effect on areas such as mood, attention, stress, and sleep in autistic kids.

Melatonin – is a hormone produced in the body that is responsible for regulating our sleep/wake cycles. Often, children with autism have difficulties with sleep. Supplementing children with the right dose of melatonin for a short interval can help regulate their sleep cycle.

How is it done?

In KLS we investigate for deficiency of these vitamins and minerals through blood work up once the child is admitted for the treatment and based on the results we start with supplement therapy orally for a particular time period.

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- Robea MA, Luca AC, Ciobica A. Relationship between Vitamin Deficiencies and Co-Occurring Symptoms in Autism Spectrum Disorder. *Medicina (Kaunas)*. 2020 May 20;56(5):245. doi:10.3390/medicina56050245. PMID: 32443822; PMCID: PMC7279218.
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Diet for Autism

Gluten Containing Grains



Gluten Free Grains



Casein Containing Foods



Alkaline Water



Diet in autism plays a very important role in modifying the behavioral issues present in autistic kids. Children with Autism could be selective with certain foods or they may have limited food choices or Food intolerances. This could lead to various gastric problems such as constipation, loose motions, bloating, or nutritional deficiencies.

Gluten Free Casein Free Diet: Gluten is found in Wheat, Oats, Rye whereas Casein is found in Milk and Milk products such as Yoghurt, cheese, cream etc. There is a hypothesis which states that children with autism could not digest gluten or casein containing foods properly. This leads to formation of peptides like gluteomorphins and casomorphins. These peptides cross the blood brain barrier and result in behavioral changes or delayed social skills.

Foods like Rice, Sago, Jowar, Ragi, Bajra, quinoa can be used as they do not contain gluten. Dairy Free products like Almond milk, Coconut milk, Camel milk, Soya Milk can be incorporated in place of Dairy products.

Reducing processed food in the diet also helps in improving the concentration level. Fresh fruits and vegetables should be given everyday. Honey, dates, or Jaggery can be used instead of Sugar. The texture of the food should be changed as per child's preference. KLS has a team of dietitians who specialize in forming diet plans and guiding parents to help autistic kids incorporate as much nutrients from food as is required for their good health and nutrition . Regular consumption of Alkaline Water protects gut mucosal lining, reduces constipation and helps in better nutrient absorption in autistic kids.



All these Integrative therapies together help to promote overall well-being of the child by catering to their specific needs while giving them holistic developmental care. The autistic child is thoroughly evaluated by a team of experts from these fields in-house. They work in cohesion to develop a comprehensive plan of care for the kid that tackles various facets of the child's personality, and plays to the child's strengths. This wholesome therapeutic approach improves stereotypical behavior, cognition, attentiveness, metabolism, and socio-emotional functioning of the child.



Parents Care Package – Complimentary For Parents

Parenting children with autism spectrum disorder (ASD) can be more stressful and challenging than parenting children with typical development. Parents, especially mothers of children with ASD frequently reported higher levels of anxiety, higher levels of depression, sleeplessness and more health-related problems.

To help parents cope up with the stresses, KLS offers a parent care package so that parents will also be able to rejuvenate whilst their children take benefit of therapies offered here. This includes



Counseling



Weight machines



Cosmetology



Shirodhara



Back massage-1 session



Head massage-1 session



Foot reflexology-session



Whole body relaxation
massage-session



Supplements

REFERENCES

- Parenting Stress and Resilience in Parents of Children With Autism Spectrum Disorder (ASD) in Southeast Asia: A Systematic Review Ilias Kartini, Cornish Kim, Kummar Aurette S., Park Miriam Sang-Ah, Golden Karen J.;FrontiersinPsychology(2018) <https://www.frontiersin.org/articles/10.3389/fpsyg.2018.00280>
- Mental Wellbeing of Family Members of Autistic Adults Renske Herrema,1 Deborah Garland,2 Malcolm Osborne,3 Mark Freeston,4,5 Emma Honey,4,5 and Jacqui Rodgers1

Other treatment program offered at KLS

- Anti ageing integrative program - (1 week program / 2 week program)
- Spine integrative program - (2 week program)
- Joint Pain management
- Gut detoxification program
- Weight loss program

Other Services at KLS



IV Micronutrient Therapy



Infrared Sauna



Whole Body Cryotherapy



Colon Hydrotherapy



Yoga Meditation



Rehabilitation



Aesthetic Treatment



Coolsculpting

Our Wellness Institute



Reception



Comfortable Rooms



Rehabilitation Area



Accommodation Floor





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