

## Autism & Neurofeedback

There are many ways to treat autism spectrum disorder (ASD). They include applied behavior analysis (ABA), special diets including vitamin supplements, psychiatric medication, chelation and hyperbaric oxygen.

Deficits created by ASD are wide ranging, and include a lack of social skills, emotional difficulties, and problems with sensory integration such as being overly sensitive to smells, sounds or textures.

One of the major problems in treating ASD is the cost/benefit ratio. The most obvious example of this is the side effects of psychiatric medication, such as sedation that arises when there is a need to reduce an individual from being too agitated such as in classroom settings. Other 'costs' are the difficulties imposed on parents such as trying to stick to a narrow diet, or avoiding situations in public settings that cause 'meltdowns.'

A different approach to working with ASD – which research has shown has the highest benefit and the lowest 'cost' is called neurofeedback (also known as EEG biofeedback). What such research has found has included ASD individuals improving in skills including:

- ✚ attention
- ✚ cognitive flexibility
- ✚ executive skills
- ✚ IQ gain on average of 9 points
- ✚ language skills
- ✚ planning skills
- ✚ sensory integration issues
- ✚ social skills
- ✚ verbal inhibition
- ✚ visual-spatial abilities

A major difference in contrast to other approaches for working with ASD is that neurofeedback does not have side effects. This is the opposite of other therapies and most notably drugs. It may be possible to reduce medications used such as SSRIs for mood problems, or stimulants for attention problems. There is some research that has found that improvement in executive and social functions persists for at least a year.

Everyone is different, and how much improvement can result for anyone will vary. However, research is finding that neurofeedback can be surprisingly helpful in improving brain dysregulation pertaining to ASD.



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