

The Pragmatism of Mild Hyperbaric Oxygen Therapy in Autism Spectrum Disorders: Lessons from the Hopson Quadruplets

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with
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What can the experiences of family with a set of quadruplets and an older daughter teach us about hyperbarics and autism? If you ever get a chance to meet the Hopson family you will immediately be struck by the tremendous love and enthusiasm this family shares. Most of us would be overwhelmed by the idea of having quadruplets. I know I was amazed with the work load this family was experiencing when I first met them 2 years ago. At that time, two of the quadruplets were moderately to severely autistic.

But if quadruplets teach you anything, they teach you patience and perseverance, and this is a family where mom and dad draw upon their strong faith to help them with both autism and parenting quadruplets and another daughter. It requires patience and perseverance to implement a mild HBOT (1.3 atmospheric pressure) program for any child with autism—let alone two children—when there are three other children to care for.

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There is no longer any doubt that autism prevalence has increased dramatically in the last decade. Traditional medical thinking presumes the disorder is life-long and not reversible. Typically parents are told to ‘cope with it’ and offered no hope. Yet the combination of behavioral and biomedical intervention clearly improves, sometimes dramatically, many children with autism.

The Hopson family has experienced the benefits of this integrated approach, and gives mild HBOT significant credit for helping their children. The International Child Development Resource Center (ICDRC) was able to provide the Hopson family with the free use of a mild HBOT chamber for home use early in 2006. The credit for this blessing really goes to Doctor Dave Weldon, a US Congressman from Florida, whose advocacy for autism on Capital Hill helped ICDRC receive a very significant Federal grant. But now for the parent’s story from mom’s perspective.



At left:

The Hopson Quadruplets (Philip, Elizabeth, Katherine, Caroline), their mom Debbie and big sister Sarah

Debbie Hopson (Mom)

My husband, Allen, and I have five children, Sarah, who is 11 years old, and five-year-old quadruplets—Elizabeth, Phillip, Caroline, and Katherine. Almost three years ago, two of the quadruplets were diagnosed with autism. We started almost immediately doing Applied Behavioral Analysis (ABA) under the direction and design of a Board Certified Behavior Analyst (BCBA).

In addition, for the past two years, we have been doing biomedical treatments designed and prescribed by Doctor Bradstreet. For the past four months, we have been blessed to have been able to use a hyperbaric chamber and have been very pleased with the results!

Phillip had been on methyl B-12 shots for the past one-and-one-half years. We had several instances when Phillip had missed several consecutive doses which proved to us without a doubt that the shot was definitely helping him. We learned he had to have it on a daily basis. However, after using the hyperbaric chamber twice-a-day for about five weeks, we realized that he did not need the shot in addition to the chamber. We have now been without the shot for two months and he has done terrific!

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Prior to mild HBOT, Elizabeth was significantly farther behind Phillip in most areas, especially in expressive language. Her gains after using the chamber for these past four months have exceeded her brother’s. She now has better communication skills with much more self-control in her aggressiveness, and is proving to be much more social than her brother! We have also been able to stop both her methyl B-12 shots and all of her supplements. The only thing we are still using is a digestive enzyme.

She loves going in the hyperbaric chamber and loves telling people about it. When we have visitors in our home, she meets them at the door, grabs their hand,

and tells them to "come and see my spaceship." She considers it serious business and will not rest until they go upstairs to see the "spaceship"!

I send pictures out frequently to family and friends and one of my best friends just last week told me that both she and her eighteen year old daughter noticed a huge difference in how Elizabeth looked compared to when they saw her last, which was about a month before we received the hyperbaric chamber. She told me that the look in Elizabeth's eyes was totally different!! It was as if she had awakened from a slumber.

We are so excited about the changes that are happening in our children and are so blessed to have been able to borrow a hyperbaric chamber to help our children!!!

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Obviously this is not a controlled study, but when a family is carefully evaluating their children's progress with an ABA program and a sudden increase in skills and improvement in behaviors occurs immediately following the introduction of mild HBOT, it is reasonable in a disorder like autism to attribute the improvements to the new intervention. And these are not unusual reports from families using mild HBOT for autism.

Still it is important to note the FDA has not approved the use of mild HBOT for autism. It is considered an "off-label" use of this equipment. Physicians are allowed to prescribe both medications and therapies "off-label" if they believe it is warranted and if they provide informed consent about its use.

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- *bowel function,*
- *better sleep,*
- *increased eye contact,*
- *more focus,*
- *improved connectedness to family members,*
- *increased rate of acquisition of new skills and*
- *better language skills"*

There are several active research programs looking at the application of mild HBOT to autism and soon we will enjoy much better data. At this time, however, my clinical observations are that the majority of children with autism respond favorably to mild HBOT. We typically see improvements in bowel function, better sleep, increased eye contact, more focus, improved connectedness to family members, increased rate of acquisition of new skills and better language skills.

Exactly what mild HBOT is doing in autism is unknown, but these improvements speak to a significant degree of reversibility within what was once considered an untreatable disorder. *Stoller* observed similar and impressive changes in a 15-year old child with fetal alcohol syndrome (1). *Rossignol and Rossignol* also observed improvements in some children with autism (2) and they further presented the favorable response of a larger population of children with autism to the

national *Autism One conference in May, 2006* (3).

Taken together the perspective of mild HBOT in autism remains quite optimistic and represents a safe option to be considered by families and clinicians.

References:

1. Stoller KP. Quantification of neurocognitive changes before, during, and after hyperbaric oxygen therapy in a case of fetal alcohol syndrome. *Pediatrics*. 2005 Oct;116(4):e586-91. Epub 2005 Sep 15.
2. Rossignol DA, Rossignol LW. Hyperbaric oxygen therapy may improve symptoms in autistic children. *Med Hypotheses*. 2006;67(2):216-28. Epub 2006 Mar 22.
3. Rossignol, DA. [http://autismone.org/download 2006.cfm](http://autismone.org/download%202006.cfm)

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