

Does HBOT really work?

<http://www.autismweb.com/forum/viewtopic.php?t=7173&start=0&postdays=0&postorder=asc&highlight=>

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From Jim Neubrandner, M.D.

As most of you already know about me, very rarely do I take time out of my already too busy schedule to write anything to be posted on the Internet. However, there are times that I just cannot keep quiet when I see that what is being propagated as truth is far from being accurate. Tonight is such a time and I will say that I am deeply troubled by what I hear parents are being presented as facts. Therefore I will make a few comments that are pertinent. I will also say that I am not about to take the time to be exhaustive and state everything I know about the subject. Hopefully most parents will be able to see from the few things I say that there is much more to the story than what superficially appears as “the facts”.

Let me start by saying that the belief that HBOT works because of angiogenesis (the growth of new blood vessels) is just a small part of the equation as to why HBOT works in different children. It is only one possible mechanism out of the many, only a few of which will be discussed below. If this mechanism of new blood vessel growth were the only mechanism as to why HBOT would work or not work, then the statements about new blood vessel growth shown to be present with 1.5 ata but not at 1.3 may be valid. However, such a statement is nothing more than poppycock! Rick has repeatedly asked the proponents that 1.3 does not produce the capillary growth for studies documenting these strong statements. To date we have found no such study. In fact, according to the work of at least one physician, pressures of 1.3 have shown improved blood flow. Though “unpublished”, the results of this study are no different than my findings of methyl-B12 showing efficacy clinically but not yet published! At this time Rick and I have personally monitored over 250,000 methyl-B12 injections and over 1 million doses indirectly from other clinicians and parents and there is no doubt that this “unproven therapy” really works well!

With that being said, please note that when physicians, more specifically me, are put into categories and classifications because they belong to a certain group, e.g. DAN which is stated by some in a demeaning manner, that such physicians do not know oxygen and gas laws and principles, is a cheap shot that I would expect to see in political races and not in forums dedicated to helping parents make wise choices. I am a diver trained in gas laws and who has monitored thousands of hours of therapy in HBOT chambers without incident and am appalled that such statements continue to go unchallenged by myself or by my colleagues.

It does not necessarily matter what I say, because most of you “should say” give us the science. Therefore, just a few of the multiple mechanisms that are written in the literature and show the multiple reasons HBOT may work beyond angiogenesis include: 1) blood flow increases independent of new blood vessel growth due to the competing mechanisms of vasodilation and vasoconstriction; 2) pressure increases, not oxygen tension, decreasing inflammatory cytokines in children on the autistic spectrum shown to have neuroinflammation and GI inflammation; 3) up-regulation of key antioxidant enzymes thereby blunting the effects of the known oxidative stress that this subset of children demonstrate; 4) increased oxygenation to functioning mitochondria; 5) increased production of mitochondria; 6) indirect improvement of heme delivery of oxygen delivery to the tissues secondary to impaired production of porphyrins; 7) decrease of bacteria systemically and in the gut; 😊 decrease of viral load systemically and possibly in the intestinal mucosa; 9) increased production of stem cells; 10) the possibility of oxidation to help rid the body of petrochemicals; 11) the possibility of oxidation to rid the body of mercury and heavy metals.

Because multiple mechanisms all can be operative in autism, and because no one mechanism seems to “answer all the questions” for any one child, it once again is nothing more than poppycock to propose that one mechanism is the reason to use hard chambers over soft. As was so elegantly stated by Lane Scott (to the effect

of), “Use what works!” To date Rick and I have monitored thousands of dives and we can both say emphatically, and have the clinical documentation to prove it, that 1.3 works and works well for approximately 80% of children. The “magic 40 dives” is nothing more than a number that has been “iconized” and in reality no such number exists. HBOT, high pressure or low pressure, is nothing more than a treatment, one that most likely should be as ongoing as insulin, thyroid, eating, and drinking! It should also be noted that high pressure treatments have a totally different “overall mechanism of action” as does low pressure treatments and both may be necessary for a specific child in order to obtain maximum results! High pressure mechanism deals with mass action and total concentration whereas low pressure deals with time. The only error with low pressure, should there be any error, which there really is not, is that the treatments are too short. Based on gas laws and the partial pressure of oxygen, the higher the pressure and/or the higher the oxygen concentration, the shorter the treatment can be without getting into the issues of oxygen and CNS toxicity, It should be noted that high pressure treatments (which I believe in very much and have many patients ready to start sessions within a couple of weeks) in no way “pushes more oxygen across the cell membrane”. Nor does higher pressures with shorter treatment times increase cell membrane permeability – only more time allows this phenomenon to occur. Biochemical reactions are not sped up by higher concentrations because each has its own finite speed of reaction. The only thing we can change is how many dormant/idling cells we activate and how long we keep them making biochemical substrate into product. Therefore one must not confuse the overall mechanism of concentration of oxygen – extremely valuable to certain disease states – with the overall mechanism of total time of treatment – extremely valuable for maintenance and to maximize biochemical reactions and treatment times!

Based on my clinical experience and my extensive study of the subject of hyperbaric therapy, I can unequivocally state that the High Pressure – Low Pressure War is nothing more than a totally stupid mind game, often confusing parents looking to us to deliver truth. And truth it is that you should have – facts, not fallacy, fiction, finances, or ‘fricking around’ with your emotions or intelligence! Charisma does not equal truth! Strong statements do not equal truth! Personal vendettas do not lead to truth! Mental masturbation does not equal truth! Truth only comes from those of us willing to look not only at “known science” but beyond what science says to what parents see when what they see is compared by the same evaluation tools and reviewed by unbiased observers. Rick and I will give you that. We do not have all the answers but anyone who knows Rick’s dedication to the boards, and anyone who knows how much a pain in the - I am for gathering data while allowing no other changes to be made during a clinical trial, will admit that we will give you the honest scoop, whatever it is as we find it, whether or not it is good for us or devastating to us financially! Therefore you can take this statement from both Rick and me to the bank – it is just as stupid for the tires to call the gas tank unimportant as it is for anyone to make blanket statements while criticizing others and implying what they are saying is scientific and proven when it is “selective disclosure!”

I will end this by saying, HBOT works! Hard or soft, high or low, each works for its own set of reasons. Some kids may react better to one treatment over another but most children will do well with either treatment.

NOTE: We do not advocate doing 2 Biomedical treatments at the same time. I do not think AIT and HBOT would apply as HBOT is a biomed treatment and the other is a therapy.
