

## Dr Freedenfeld - BioChat

Q: With regard to HBOT (hyperbaric oxygen therapy), we are doing mild HBOT and have done 30 "dives" so far. Is there a minimum number of dives that we need to do to get the best result? How will we know when we have done enough? Are there specific things we should watch for in terms of improvements? Thank-you

A: I don't think there is a minimum. It's very individualized with the child being treated. Some children have results with the first few treatments even; but other children need more sessions. It depends on how much damage has been done to the brain. We usually see increase in awareness, language. Doing the chelation and supplements at the same time is a good combination. Chelation seems to often work better with HBOT; IVIG seems to work better with HBOT too.

Q: should chelation be done and kid be metal-free before second round of hbot for best results?

A: We usually chelate for a good 6 months before adding the HBOT. They don't need to be metal free before starting the hbot.

Q: What type of HBOT chamber do you use? What are your indications for HBOT use-or can it help most ASD kids?

A: There are single person or multi person hard chambers. We use flexible chamber because we get good benefit from the lower pressure.

Q: what is the mechanism that causes improvement with hbot? what "warrants" HBOT? Is there a certain set of symptoms that make one a good hbot candidate?

A: Hyperbaric is helpful to any of the kids, but is not necessary for all the kids. If we see someone not showing good improvement, we'll try hbot. Ideally we want to put the child in the chamber 5 days a week. It's time consuming, and costly, so we want to make sure there is a good reason to do it. As far as who would benefit, all the children who had other birth defects, brain damage, cerebral palsy. We would put those children into hbot early in the treatment.

Q: What are the common results from HBOT? and how expensive is it?

A: Increased awareness, increased language, starting to speak. Some charge \$250 per dive. Others charge as low as \$60/dive. Common fees are between \$125 and \$150.

Q: Maybe you mentioned this before I signed in, but how many dives does it usually take-on average-to show improvement? I understand every child is different so "results may vary".

A: We often find results even with the first dive. But realistically you want to commit to 10-15 dives, then assess what kind of benefits you're getting. The best benefits will be after 30/40 dives.

Q: Can HBOT help multiple chemical sensitivity?

A: Yes, it can (sorry, I missed the rest of this answer, I think Dr F said you might need to work on other treatments besides hbot too)

Q: How safe (fire hazard and over oxygenating or pressuring kid) and effective is home-based hbot? Also, if a chamber is set up at home, do we need to get oxygen tanks from suppliers on a regular basis? Would the protocol still be 5x a week and at 1.5 atm for an ongoing 40 dives with a week to a month gap in between the rounds? Basically, can hbot be an ongoing home treatment?

A: The chambers are extremely safe. We use oxygen from an oxygen concentrator, which takes oxygen from the air. Kids go 5x week at the office. You can use the same type of chamber at home, 7 days a week. The chamber is fully-adjustable from inside.

Q: my 4 yr old son is undergoing a td dmps chelation since june 05, and is dumping metals. he is chewing paper since last 2 days? is this yeast. he is on nystatin,candex,no fenol and antifungal herbs including garlic

A: When children have a regression in behaviors, look back in your notes to see what changed now; and what changed in the past to help it clear in the past.

Q: for those of us not familiar w/ hbot, where can we get good info on how to treat our children?

A: You can go to a website that sells them.  
Oxyhealth.com

If you do hbot at the same time as chelation, many times there are better results from chelation. I generally start kids on chelation first, then put them on hbot. A few of our kids have gotten really hyper if we do hbot before starting chelation.

[Hilary adds: also see [www.hbotmanual.com](http://www.hbotmanual.com), and the yahoo group HboTherapyForAutism]

Q: Hi, My son was recently very ill, we stopped td-dmps. We've been starting very slowly and had built up to 12 drops, would you recommend starting back

down very low, or just picking up where we left off? It was definitely affecting him, he's been very stimmy, especially on the days he gets drops.

A: Generally we don't back down, but with any individual if you feel a full dose is too much, then certainly back down and go gradually.

Q: 1) can you explain a bit more how might hbot help asd kids (the science at a parent level)? , 2) can you talk about Modified Citrus Pectin benefit and dosage, etc, 3) When you say of Vit C that a "Preferred form may be a fully reduced L isomer." Is that the same as ascorbate, ie magnesium ascorbate and calcium ascorbate?

A: When using a hbot chamber, we're pressurizing oxygen. The oxygen combines with serum. It can get through much narrower spaces. If there are inflammatory diseases, the oxygen is blocked...but now with the smaller oxygen in serum, it gets through to spots it couldn't get to before. Citrus Pectin is the white part on the inside of an orange peel. A special modification, where the pectin is micronized to a specific size molecule, it can clear out arteries; it binds to heavy metals; can even help cancer. The product with the right concentration is Pectosol – 1 or 2 rounded tsp a day. Most vitamin C is made from corn, l-isomer from beans or potatoes. The l-isomer is the best form. Yes, same as ascorbate

Q: Are you seeing good pulls of mercury from TD DMPS?

A: yes, we are seeing good results. With TD-DMPS the thought is we're losing our heavy metals through the skin with TD-DMPS.

Q: We recently discovered my daughter has a leaky gut-we saw no improvements with b12 shots before, but after we work on the gut,could we hope for better results if we repeat b12 again?

A: Everything will work better if the leaky gut is improved. A treatment you try early on that didn't work might work after the gut is healed.

Q: Does it matter if the groups of dives are separated? We presently have 10 sessions scheduled in October, but it will probably be next year before scheduling (and budget) will allow more.

A: You'll find the improvements are best if you keep them close together. It builds upon itself.

Q: My son has lots of bad facultatively anaerobic bacteria in his gut. We have tried 1000 things to get rid of it but haven't been able to. Since this bacteria thrives with and without oxygen what effect will hyperbaric treatment have on the bacteria? Will it get rid of it, make it worse, or likely have little effect?

A: Great question. I don't know for sure. I don't think it would have an effect, but if you do it, let me know.

Q: 1)What is your opinion on td-dmsa and are you seeing good results with that? 2)How does it compare with td-dmsa? 3) What is your opinion on ndf-plus and other natural chelators? 4) How can chelation side-effects like stimming be treated? 5) How long can we provide hbot for asd kids at home, is there a point when we should stop?

A: For many years I used DMSA before DMPS. It's very weak. Not sure if it would be better now as transdermal. I had one patient that loved NDF+. We tried it with a bunch of other patients, saw no benefits. I see stimming side effects with a lot of therapies we try. My suspicion is we're improving brain reception, the stimming is a way of diffusing high-stress input. Like we pace the floor or wring our hands. There is no limit to how long you can use hyperbaric oxygen. One famous man (inventor of atomic bomb?) used hyperbaric every day after he had his stroke, helped him get up and go to work.

Q: My son is 11 and chews on just about anything - PICA issues. Any suggestions to get this to stop? He is on a variety of supplements/minerals that he tested low for but it hasn't helped much. We do give him zinc which I have heard is often linked to this behaviour. He doesn't have any yeast or bacteria issues that we know of. Nothing has turned up in any of his test results. It did get worse after we started MB12 shots which is a positive/negative we think. Thanks

A: We've tried gaba, tryptophan as relaxants, nothing is consistently beneficial for the chewing issues.

Q: along with TD DMPS which other chelating agents or methods you recommend ex: NDF plus , EDTA . do you do LDN , any results

A: We rectal suppositories for younger kids. Other chelators can be helpful – you can try DMSA or EDTA. Low dose naltrexone is very interesting. We're seeing good results, mostly in socialization.

Q: What is your opinion of Dr. Yasko's RNA therapy?

A: I think it's very interesting, but I haven't had personal experience with it.

Q: As far as practices for safe pregnancy go, what tests would you recommend for mom prior to trying to conceive? I have been chelating for 8+ months. Lead was originally elevated- now appears to be chelated out. Anything else important to check testwise?

A: It depends on your history – if you were exposed to pesticides; if you have a family history that puts you at a higher risk; etc. The pesticides and such won't chelate out – the best way to detox in that case is infrared sauna. You want to eat healthy, have a healthy environment. We have resources that can help with environmentally safe lawn products, cosmetics, house cleaning, etc.

Q: OK i cant remember where i had read the fact that oxygen therapy is also an excellent treatment for Cancer because cancer can not live in pure oxygen... And that someone won a noble prize for that discovery.. Is this true? 2) DO you find home hbot treatments to be as positive as going to a clinic to have it done

A: HBOT and ozone therapy have helped in treating cancer.

Q: Hello Dr. Freedomfeld -- my son is 3 and we are using glyconutrients; we have seen a positive increase in speech and articulation, but a very negative increase in screaming, short tempers, etc. what's the science behind glyconutrients?

A: The science goes back about 15 years. Aloe plants have polymannose. Ambrotose has polymannose and a bunch of other sugars too. The cell membrane needs to be healthy to have cells communicate well. Glyconutrients help the cell membrane to be healthy.

Q: 1) Is DMPS-IV a safe provocative agent for challenge test on a kid? 2) what are the precautions a pregnant mother should take for herself and newborn if her first child has already been diagnosed with autism

A: 1) The IV DMPS is very safe. We've used it for 15 years.  
2) You need to test for toxic burden. The placenta is a good chelator – unfortunately baby gets a higher dose of toxins than mom. So we want to get the toxins out of mom before the baby is exposed.

Q: are there any considerations in terms of preparing kids for hbot? for example, do vits/minerals need to be up to certain levels, or does gut have to be at a certain level of healing, to get max benefit?

A: The vitamins/minerals and gut issues should be addressed early on in treatment. Start with gut healing. Try all other treatments/therapies after that.

Q: Are there specific supplements you recommend or prefer when chelating? Brand names, brainchild, etc. Also, my son always has a bad reaction to vit. A in any form and at any dose. Do you have any idea what could cause this? The best answer I've heard was maybe it was so powerful an antioxidant that it was stirring up the bad stuff. Thanks.

A: Adults have often much higher levels of mercury/heavy metals and need a more comprehensive approach. Children have smaller amounts of

mercury/heavy metals, but while their brain is developing. The basic nutrients we give in the DAN! approach are fundamental. We try to bind heavy metals in the gut. Heavy metals go out through the liver, and are excreted. I use things like betacol (sp?) that binds to mercury; an algae, sodium alginate; or chlorella. There has been some concern that chlorella could be a source of mercury itself, however. Anyway, you want to use binders; and have a good antioxidant (vit C, vit E, coenzyme Q10). Vitamin C reduces the charge of mercury. Alpha-lipoic acid will help to release mercury from inside the cells – but can also cause yeast.

Q: 1) Given that "Cilantro may help promote clearance of mercury from the brain" do you recommend it for any asd kids? What is your thinking about the mercury that might be naturally in the cilantro? 2) Given that L-Tryptophan "increases serotonin levels and makes the receptors more active", what conditions encourage you to recommend it for a child? 3) How long a trial is suggested for glyconutrients? 4) Have you heard of any contraindication for the use of hbot, for example I've read that emphysema is a no for hbot. Specifically child has hypoplasia of the cerebellular vermis and hence my question. PS Thank you for being here for us!

A: I use cilantro more in adults. It tastes nasty, kids don't like it. I believe it does help to clear mercury from the brain. I don't think you risk introducing mercury with cilantro.

I like tryptophan, we use it a lot. Some kids get hyper with it through.

For glyconutrients, try for 3-4 months, if you don't see results, give it up. The company will tell you to try for 9 months, and double the dosage if you don't see results – that gets very expensive.

Contradictions for HBOT – a blocked ear is the most common. The parent or child can't clear. If you can't pop your ears, it's painful, and there even could even be bleeding.

Don't know about the hypoplasia question – I'll look into it.

Q: (I missed the starting part of this chat so hopefully not repeating previous Q): How can we start the hbot therapy? do we have to purchase a chamber ourself, or need to go to a facility or clinic center? who sells this chamber you know by any chance?

A: The best thing would be to try the chamber before buying one. Go to a facility, test it out.

Q: Do you suggest using modified citrus pectin alongside chelation? Also, is light bleeding for unknown reasons in early pregnancy (not implantation bleeding) somehow linked to ASD? If so, how?

A: MCP is a wonderful chelator in and of itself, and can be added to any other chelation process.

I'm not aware of light bleeding being related to ASD. Usually light bleeding is transient.

Q: If there's been high exposure to pesticides due to planes spraying on a farm very close is the sauna the best option? Is there anything else you suggest? Is there anyway to test for pesticides in your system? Do you get rid of mercury first, pesticides, or do you get rid of both at the same time?

A: One lab in Texas, Accuchem Labs, does all the testing for the Federal Govt, they are the best place to test.  
It would be ideal to sit in a sauna first, then do a blood test.

Q: Sorry if this has been asked. I have had problems with the sound and had to log out. What is your opinion on genetic testing and how important is it in the treatment of our kids? Thank you so much for being here tonight.

A: I don't do genetic testing anymore. It wasn't useful to me.

Q: I have a couple of questions: 1. My daughter does not digest fats well at all even with enzymes, would this mean her liver is not functioning properly? how does this effect chelation and what do you recommend? 2. Can you discuss ozone? what is it, how does it work, what results are seen?

A: Are you seeing fat globules in stools? The normal enzymes we give aren't high in lipase, you might want to try an enzyme with lipase. Or try lecithin which produce bile salts to break down the fats.  
Ozone is a gas, produced by lightening. Oxygen – O<sub>2</sub>. Ozone – O<sub>3</sub>. O<sub>3</sub> is very unstable. Gives up that third oxygen molecule very easily. Ozonated proteins that occur simulate cytokines, turn on healing processes. Can use ozone for cardiovascular disease, arthritis, damaged arteries, to kill viruses, treat bacteria, kill lyme disease, etc.

Q: We just purchased a mild HBOT Vitaeris model for the home, after doing 10 successful sessions in a clinic. Are there any children that I shouldn't allow in the chamber, contraindications? Asthma??? Thanks!!

A: You want to make sure they have good ear function. Make sure they can pop their ears. Otherwise you shouldn't have a problem. Asthma shouldn't be a problem. The pressure will squeeze things, so shouldn't cause a problem.

Q: (1)4yr old chelating td dmps! do you recommend cysteine or 5htp..... (2) can MB12 shots feed yeast, i see a yeast flared up, irregular bowel moment, loose stools, when we give MB12 shot and chelation drops on the same day

A: 5htp – this is the precursor to tryptophan. I don't like 5htp – it doesn't cross the blood brain barrier well, so doesn't make serotonin. Sometimes more hyper than calm.

Cysteine – have to be careful of gut bugs. Cysteine is the best precursor to glutathione.

MB12 cannot feed yeast, not that I know of.

Yes you can get MB12 and chelation drops on the same day.

Q: If a child who has multiple disabilities including enlarged ventricles of the Brain, Encephalopathy, Oxyencephalopathy, seizure disorder (only with fever) HE is on phenobabetol. Vsd repair of the heart, Hypotonia and he is also under the autism spectrum would you recomend hbot treatment. Or what treatment do you recomend? And how much does a home hbot machine cost roughly the top of the line

A: Brain damaged children are very-well treated with hyperbaric oxygen. Be careful if on anti-epileptic medicine - you can actually develop more seizures. I think hbot is a great treatment for brain damaged children or those with seizures. The cost – smallest is about 8000. That comes with the compressors to pressurize, but the oxygen is a separate investment. Another 1000 for the oxygen compressor.

Q: I am 30 weeks pregnant and have a history with preterm labor - 6 wks preemie with my nt son, and preterm labor at 29 wks with my asd son. I took terbutaline for 3 months with my asd son to keep him in until 2 wks before his due date. I am now having some incidents with preterm labor with this baby. I am dilated to 1-2 cm, but labor seems to have stopped. I am very hesitant to use drugs to stop the labor. Do you know of any link between Terbutaline and asd? Is there a safer way to stop labor if it becomes necessary?

A: I'm not aware of a relationship (terbutaline and ASD). The other way to stop preterm-labor is with magnesium and alcohol.

Q: 1) how long should we do fir sauna before testing with Accuchem labs? 2) any other suggestions for brain inflammation? PS: thank you from my heart for helping us and our kids

A: Sit in the sauna for 20-30 minutes, then within a couple hours do the blood test.

Inflammation – any of the anti-oxidants, coenzyme Q10, melatonin, alpha lipoic acid, actose,

Q: I was considering getting a home HBOT chamber. My almost 4-yr old has been chelating for 6 mos (TD-DMPS & NDF) and is doing very well. Excreting lots of mercury and lead, pretty much recovered, and healthy gut, according to latest testing. Based on what you said before about HBOT being really for kids

who are slow- or non-responders, would you recommend HBOT for this type of a child? Would HBOT just speed up the brain recovery process, or do something qualitatively different that time and therapy alone won't take care of? Also, my son has auditory neuropathy (congenital hearing loss) in his right ear. Would this be a contra-indication against use of HBOT? Thank you so much!!!!

A: The auditory neuropathy should not be a contraindication. If he's nearly recovered, and doing well, neuro-typical, then hbot is a big expense. If you can afford it, and get that last percentage gain, great.

Q: Can you get rid of the mercury first and then work on getting rid of pesticides? If a mother has amalgam fillings on almost every tooth while being pregnant could this make tourette syndrome a larger risk? Is there any connection between mercury fillings and a baby not being active at all while being pregnant?

A: Yes, you can get rid of metals first, then pesticides, or work them both at the same time.

If you have fillings while pregnant, tourette's may well be related to mercury poisoning.

I'm not aware of the relationship (mercury fillings and not active)

Q: What has you experience been with GABA? I know it will not cross the blood/brain barrier. Also, do any companies lease or rent HBOT chambers for home use?

A: I've had mixed results. I'm not terribly impressed with it for children. In older people we use high doses, and see good stuff. Theanine will stimulate the gaba receptors, and can be used as an alternative.

I'm not aware of any company that rents or leases hbot chambers.

Q: Do you feel that Alpha Lipoic Acid crosses the blood brain barrier? I'm asking, as the greatest pull of metals we saw was with oral DMSA and ALA. Now I'd like to use oral DMPS with ALA. Thanks again!!

A: ALA definitely crosses the blood brain barrier.

Q: 1. If the few amalgams that are present have been removed and would getting pregnant a 9months to an year from then still have mercury effects on fetus? 2. Could you tell more about the cooling device used with hbot, is it attached to the unit, where is it placed and what is it used to cool?

A: The cooling device is placed on the tubing, the tubing runs through the cooling device. If the ambient air outside the chamber is already cool, you don't need the cooling device.

The amalgams are a source of tomorrow's mercury. The more amalgams, the more body burden.

If you remove the amalgams, it doesn't mean you removed the body burden. IV-DMPS is a good challenge to find out how the body burden is.