[**OMD Comment on "The Number of Placebo Controlled, Double Blind, Prospective, and Randomized Strabismus Surgery Outcome Clinical Trials: None!"**](http://www.mainosmemos.com/2012/12/omd-comment-on-number-of-placebo.html)

One of my ophthalmological colleagues (Dr. *EA Pennock)* commented on my editorial, "[*The Number of Placebo Controlled, Double Blind, Prospective, and Randomized Strabismus Surgery Outcome Clinical Trials: None!*](http://www.mainosmemos.com/2012/02/number-of-placebo-controlled-double.html)".

This is a bit long, but should be informative. I have not edited his commentary in anyway. Please read and note my [comments]:

*One can't ignore the studies regarding anesthesia and the potential for future cognitive impairment. This is a work in progress and the pediatric specialties are following closely. Like anything in medicine (and you should be well-versed since you received an "Excellence in Medicine" award) you have to consider the risk-vs.-benefit ratio.*

[While the risk involved in strabismus surgery is small, you are right that it cannot be ignored. Is the benefit always worth the risk when 1/3 of those who have had the surgery need a second surgery and 1/3 of those a third surgery? Do not misunderstand me here, I have recommended surgical intervention for those with strabismus, but only after I have conducted vision therapy to improve all the foundation visual skills. DM]

*If I have a young patient with a 40 PD decompensated exotropia who is in danger of developing irreversible amblyopia*

[Research clearly shows that this dated and worn out concept of irreversible amblyopia is not only no longer true, it never was true. As an expert in this area I assume you are aware of this. Please do a PubMed search for a review article by Dennis Levi, OD, PhD. Actually, just click[here](http://www.ncbi.nlm.nih.gov/pubmed?term=levi%20d%2C%20amblyopia)for several of Dr. Levi's studies in this area. Note that he and his colleagues conduct “perceptual learning” which is really vision therapy by another name. DM]

*and loss of stereoacuity, 30-40 minutes of anesthesia for strabismus surgery is not going to prevent him or her from getting into Harvard.*

[You might be right if it only took one surgery...but what about the cumulative effect of 3 surgeries? What about other surgeries the child may have for one reason or another over their lifetimes? DM]

*NB vision therapy and patching will not touch a 40 XT]. People need to be properly educated, look at all of the facts, and not over-react.*

[I agree, you should really look at all the facts. Start with amblyopia for one! DM] *"The Number of Placebo Controlled, Double Blind, Prospective, and Randomized Strabismus Surgery Outcome Clinical Trials: None!" Not entirely false*

[Thanks for acknowledging the truth present in my editorial, I really appreciate it! [DM]*,*

*but there have been many published outcome trials*

[This does not appear to be true according to Cochrane's Reviews (see below) where I sought most of the information in my editorial. There are not only few clinical trials but most according to Cochrane are of poor quality or show poor outcomes. DM]*.*

*Search PubMed. As far as placebo-controlled and double-blinded--that's just ludicrous and not really feasible.*

[Isn't that interesting? This is the same thing optometrists said when you told us we needed clinical trials when it came to vision therapy. Somehow we managed with the many CITT studies. So are you admitting you cannot do "good" clinical trials in the area of strabismus surgery? DM]

*The patients will know whether they had surgery. The blinded examiners will also be able to figure out who had surgery and who did not. The only way to blind/mask it is to take one cohort and put them under anesthesia, make an incision, and go through the motions i.e. sham surgery. Another option would be to operate on a cohort of patients without strabismus--to compare outcomes. I'm certain that both scenarios are unethical and any IRB (institutional review board) would not be amused.*

 *Speaking of which, I have yet to come across a well-designed and executed vision therapy study without multiple confounding variables. The CITT does not count, though it is legitimate*

[I am thrilled that you think this study is legitimate...but I'm puzzled why you say it does not count? Does it not count because you say so or do you have some science to back up your comment about this "legitimate" clinical trial? DM]*.*

*Its results are often inappropriately extrapolated for all vision therapy. The CITT addressed only a specific problem, namely convergence insufficiency.*

[The few clinical trials concerning strabismus surgery are also inappropriately extrapolated for all surgical interventions one can use with strabismus. There are also multiple ways one can go about conducting the surgery, right? I have been told by your colleagues that strabismus surgery is as much "art" as it is "science". Is this true? DM]

*It did not look at dyslexia*

[Find articles about reading and vision by clicking [here](http://www.covd.org/Portals/0/VisuallyBasedReadingDisability.pdf). DM]*,*

*headaches*

[Headaches are often associated with uncorrected refractive errors ([Headaches Associated With Refractive Errors: Myth or Reality?](http://onlinelibrary.wiley.com/doi/10.1046/j.1526-4610.2002.02077.x/abstract;jsessionid=B18CD0AD69D6E0D04B548386E7F4B488.d01t02?deniedAccessCustomisedMessage=&userIsAuthenticated=false) , [The Correlation Between Migraine Headache and Refractive Errors](http://journals.lww.com/optvissci/Abstract/2006/02000/The_Correlation_Between_Migraine_Headache_and.10.aspx)) and binocular vision dysfunction ([Is all Asthenopia the Same?](http://journals.lww.com/optvissci/Abstract/2003/11000/Is_all_Asthenopia_the_Same_.8.aspx) , [Asthenopia in Schoolchildren, Orthoptic and Ophthalmological Findings and Treatment)](http://link.springer.com/article/10.1007/s10633-005-4722-4?LI=true) You should also be aware that one of the symptoms eliminated after vision therapy is headaches as noted in the CITT study, right? DM],

*cortical blindness*

[Are you familiar of any of the research in the area of vision rehabilitation? I'm giving a presentation during the Pediatric Cortical Visual Impairment Conference this year at the Children's Hospital in Omaha, NE this April. Although I was only going to discuss vision therapy for those with cortical blindness in a limited fashion, I'm sure the other presenters will do so in more detail. I hope to see you there*.*DM],

*reading comprehension,*

[Besides the articles concerning vision and reading noted above, a colleague of mine recently published*,*[*Association between reading speed, cycloplegic refractive error, and oculomotor function in reading disabled children versus controls*](http://www.ncbi.nlm.nih.gov/pubmed/22926252), and found that ... *there are significant associations between reading speed, refractive error, and in particular vergence facility. It appears sensible that students being considered for reading specific IEP status should have a full eye examination...in addition to a comprehensive binocular vision evaluation*..*..*DM]

*esotropia,*

[Throwing in everything except the kitchen sink is an old, tired argument methodology that ophthalmology uses to confuse the issues. Shame on you for digging this one up to support your statements about strabismus surgery. Dyslexia, headaches, etc*.*are not relevant to this discussion at all*.*If you stick to the point, you might make a better, more believable statement. DM]

*and so forth.*

[Here is a listing of hundreds of articles concerning vision therapy. Happy reading!

[Summary 1](http://www.covd.org/Portals/0/ResearchClinicalStudies.pdf)
Completed in July, 2009, this paper presents over 350 abstracts from 77 journals.
 [Summary 2](http://www.covd.org/Portals/0/2010%20Research%20Summaries.pdf)
Completed in October, 2010, this paper presents 35 additional abstracts.

Maybe, once you review these hundreds of articles, you might be changing your opinion on at least some of your feelings regarding vision therapy. DM]

*Moreover it only looked at convergence/orthoptic exercises,*

[You should know that clinical trials tend to be narrowly focused. You do understand how clinical trials are conducted, right?DM]

*not syntonics,*

[The use of light for therapy is well founded in several areas of medical care. Click [here](http://www.covd.org/Portals/0/EditorialEssay_SyntonicPhototherapy.pdf)for more information on syntonics. DM]

*yoked prism,*

[The use of yoked prisms has been invaluable in the case of brain injury*(*[Vision Disturbances Following Traumatic Brain Injury](http://www.ncbi.nlm.nih.gov/pubmed/12036500)*),*improving asthenopia*(*[The use of yoked base-up and base-inprism for reducing eye strain at the computer.](http://www.ncbi.nlm.nih.gov/pubmed/8888830)), and can improve vision function and reduce symptoms. Click [here](http://agapelearning.eyehub.com/index.cfm?content.display&pageID=179).]

*low powered reading glasses,*

[Although not a direct comparison, whoever thought a sub-clinical dose of aspirin could have an effect that reduces your chance of heart attack? This is an area where we do need additional studies but take a look at[Behavioral effects of low plus lenses,](http://www.ncbi.nlm.nih.gov/pubmed/7208239)and using low plus to reduce myopia*(*[Decrease in Rate of Myopia Progression with a Contact Lens Designed to Reduce Relative Peripheral Hyperopia: One-Year Results](http://www.iovs.org/content/52/13/9362.short)).

 *pinhole glasses,*

[We agree on this one. Most ODs and OMDs, would agree this is a scam. But both professions have members that promote interventions that need to be carefully evaluated like when the ophthalmologist, Dr. Bates says "palming" can slow down myopia development. DM]

*flashing lights,*

[Not sure what you mean by "flashing lights". DM]

*and the myriad other exercises that often cost patients thousands of dollars out-of-pocket.*

[It's a good thing you never charge for your services, right? You **do**charge every time you ***repeat***a strabismus surgery, don't you? Fees should not be an issue here, but a discussion for another day. Once again you are reaching beyond the topic to muddle the issues involved. DM]

*Orthoptic exercises and surgery can both have excellent results in the hands of a skilled therapist and surgeon, respectively.*

[Optometric Vision Therapy and surgery can both have excellent results in the hands of a skilled optometrist, surgeon, and therapist... no argument here! You do have to be open to all avenues of therapy, however, and not closed minded and prejudicial. DM]

*I hope this cleared up some misconceptions.*

[I hope I helped to clear up some of your misconceptions as well. DM]

*EA Pennock, MD*

Dear Dr. Pennock:

I do appreciate the time you took to respond to my concerns regarding strabismus surgery (even the sarcasm). I believe we both wantwhat is best for our patients. I also believe that we both want to see a great deal more science behind our treatment paradigms.

My concern is that your colleagues seldom acknowledge the short comings of strabismus surgery, while bashing optometric vision therapy without taking the time to review the current research in this area.

My concern is that your colleagues often demand of optometry a level of evidence not demanded of themselves.

My concern is when ophthalmology bans optometrists from their meetings because of professional pettiness and a meanness of spirit, our patients are the ones who suffer.

Several of my awesome colleagues have addressed many of these issues as well. Please see:

[**Facts and Fallacies about Vision Therap**](http://visionhelp.wordpress.com/category/facts-and-fallacies-about-vision-therapy/)**y**, [**Ophthalmology,  Dyslexia**](http://visionhelp.wordpress.com/?cat=8880)

 I would also suggesting reading:

[**MDs Talk about Vision Therapy**](http://www.covd.org/LinkClick.aspx?link=355&tabid=264)
MDs discuss Vision Therapy as an effective medical treatment.

[**Vision Therapy: Information for Health Care and Other Allied Professionals**](http://www.covd.org/Portals/0/Vision-Therapy%20-%20JOPS%20AAO%20%26%20AOA.pdf)
A joint organizational policy statement of the American Academy of Optometry and the American Optometric Association

 [**Clinical Management of Binocular Vision: Heterophoric, Accommodative, and Eye Movement Disorders**](http://www.amazon.com/Clinical-Management-Binocular-Vision-Accommodative/dp/0781777844/ref%3Dsr_1_2?s=books&ie=UTF8&qid=1356649369&sr=1-2&keywords=binocular+vision)by[**Mitchell Scheiman**](http://www.amazon.com/Mitchell-Scheiman/e/B001HO9P5O/ref%3Dsr_ntt_srch_lnk_2?qid=1356649369&sr=1-2)**and Bruce Wick**

[**Foundations of Binocular Vision: A Clinical Perspective**](http://www.amazon.com/Foundations-Binocular-Vision-Clinical-Perspective/dp/0838526705/ref%3Dsr_1_3?s=books&ie=UTF8&qid=1356649369&sr=1-3&keywords=binocular+vision)**by Scott Steinman, Barbara Steinman and Ralph Garzia**

[**Anomalies Of Binocular Vision: Diagnosis And Management,**](http://www.amazon.com/Anomalies-Binocular-Vision-Diagnosis-Management/dp/0801669162/ref%3Dsr_1_6?s=books&ie=UTF8&qid=1356649377&sr=1-6&keywords=binocular+vision)**by Robert P. Rutstein OD MS and Kent M. Daum OD MS PhD**

[**Binocular Anomalies: Diagnosis and Vision Therapy**](http://www.amazon.com/Binocular-Anomalies-Diagnosis-Vision-Therapy/dp/0750673699/ref%3Dsr_1_9?s=books&ie=UTF8&qid=1356649377&sr=1-9&keywords=binocular+vision)**by John R. Griffin MOpt OD MSEd, J. David Grisham OD MS FAAO**

You should also see the comments and other presentations by[**Susan Barry**](http://www.stereosue.com/)**,**PhD**. [Read](http://www.amazon.com/Fixing-My-Gaze-Scientists-Dimensions/dp/0465009131/ref%3Dsr_1_1?ie=UTF8&s=books&qid=1264796623&sr=8-1)**[***Fixing My Gaze***](http://www.amazon.com/Fixing-My-Gaze-Scientists-Dimensions/dp/0465009131/ref%3Dsr_1_1?ie=UTF8&s=books&qid=1264796623&sr=8-1)**,**read her[**Psychology Today**](http://www.psychologytoday.com/blog/eyes-the-brain)blog, and check out her [**YouTube**](http://www.stereosue.com/see-videos/)channel as well.

I should also mention the [American Optom*e*tric Association'](http://www.aoa.org/)s Clinical Guidelines *....*

[**Care of Patient with Amblyopia**](http://www.aoa.org/documents/CPG-4.pdf)**,**[**Care of the Patient with Strabismus: Esotropia and Exotropia**](http://www.aoa.org/documents/CPG-12.pdf)**,**[**Care of the Patient with Accommodative and Vergence Dysfunction , and**](http://www.aoa.org/documents/CPG-18.pdf)[**Care of the Patient with Learning Related Vision Problems.**](http://www.aoa.org/documents/CPG-20.pdf)

Finally, Cochrane had other reviews of strabismus intervention used by OMDs that I might not have mentioned in the editorial:

**Cochrane's Reviews on Strabismus Treatment**

 [**Treatment for a type of childhood strabismus where one or both eyes intermittently turn outwards**](http://summaries.cochrane.org/CD003737/treatment-for-a-type-of-childhood-strabismus-where-one-or-both-eyes-intermittently-turn-outwards)

*......The one included*[*study*](http://summaries.cochrane.org/lexicon/9#study)*in this*[*review*](http://summaries.cochrane.org/lexicon/9#review)*compared surgery on one eye to surgery on both eyes for the basic type of X(T) and found that surgery on one eye was more effective. There are many studies of X(T) in the current literature but the methods used do not allow reliable interpretation of the results. Furthermore there is a worrying lack of evidence regarding the natural history of X(T) and poor validation of measures of severity. There is a clear need for further randomised studies to provide more reliable evidence for the management of this condition......*

[**Different treatments for a squint (deviation of the eye) that occurs within the first six months of life**](http://summaries.cochrane.org/CD004917/different-treatments-for-a-squint-deviation-of-the-eye-that-occurs-within-the-first-six-months-of-life)

*The*[*review*](http://summaries.cochrane.org/lexicon/9#review)*did not find any randomised trials that compared treatment to another treatment or to no treatment.*

Let's not forget about the use of *....*

[**Botulinum toxin for the treatment of strabismus**](http://summaries.cochrane.org/CD006499/botulinum-toxin-for-the-treatment-of-strabismus)

*...This*[*review*](http://summaries.cochrane.org/lexicon/9#review)*found four randomised controlled trials that compared botulinum toxin to another treatment or to no treatment. The results showed no prophylactic use for botulinum toxin in sixth nerve palsy, poor effect in adult horizontal strabismus without binocular use of the eyes, and no difference in response for retreatment of infantile esotropia or acute onset esotropia. It was not possible to determine dose effect because of the different types and doses of botulinum toxin used in each*[*trial*](http://summaries.cochrane.org/lexicon/9#trial)*.*Complications from the use of botulinum toxin (Botox™ or Dysport™) included transient ptosis and vertical deviation and combined rates for these complications ranged from 24% to 55.54%. *This*[*review*](http://summaries.cochrane.org/lexicon/9#review)*identified a need for more randomised controlled trials to provide further reliable evidence on the effective use of botulinum toxin for the treatment of strabismus....*

Please take a moment to study the many resources I have provided.

I suppose that we could continue to argue any number of points......

I would suggest, however, that we come together as individuals and as learned professions. I suggest that we put aside our political differences and territorial behaviors; stop the pettiness and work together for the benefit of our patients, as equals.

I know optometry has been and is willing to do this. Can you say the same for ophthalmology? DM