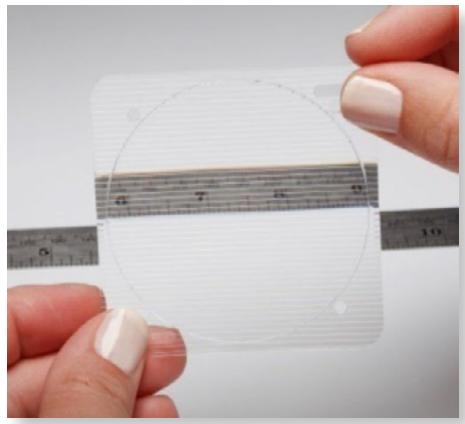
EDITORIAL

Press on Prism

Leonard J. Press, OD, FAAO, FCOVD, *Editor-in-Chief*

Don't confuse the title of this editorial with the 3M Company's trademarked name for Fresnel prism, "Press-On". https://goo.gl/Z4FWOb



My purpose in this piece is to share a few thoughts about the use of prism, particularly as related to learning. As you may be aware, I formally sold my optometric practice in April, 2017, but will continue to see patients on a regular basis as well as being the site supervisor for our residency program administered through the Southern College of Optometry. Parenthetically our new practice owner is a former student extern, Dr. Laura Knapp, a testament to the synergistic fruits of labor in vision development and rehabilitation between private practices and optometric institutions. By coincidence our practice is situated geographically at the nexus of three booming Orthodox Jewish Communities in Monsey (New York), Brooklyn (New York), and Lakewood (New Jersey), and I mention this specifically because prism has become a buzz word in these circles.

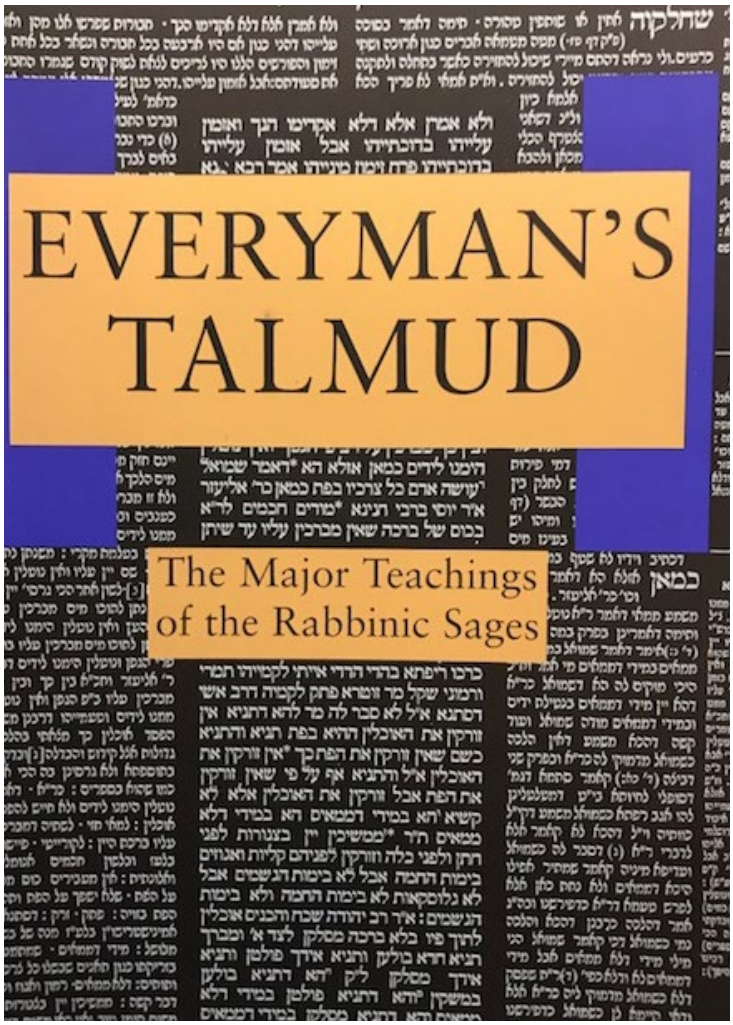
Prism is an attractive treatment option for patients because it is a form of wearable therapeutic optical technology. In lesser amounts, when ground into a lens or attained by decentration, no one but the patient knows that prism has been incorporated which addresses potential concerns about cosmesis. Rules of thumb and various criteria exist to determine whether prism can be beneficial, along with derivations for the amount and orientation of prism. Yet optometric heritage warns that prism should not be positioned as a cure-all, hence the aphorism about the judicious application of lenses and prisms.

It is tempting to think that if a little bit of prism is good, more is better, until one is reminded of the analogy to medication and its dosages. Hence the importance of assessment and measurement to see if prism is indicated. The use of prism has been advanced as an aid to reducing the impact of learning problems, postural skews. and visual field loss, ranging well beyond their original use to lessening eye strain and compensating for double vision. Here we should make a distinction between higher power prism used in the vision therapy room including yoked prism, typically between 5^ and 15^ and lower amounts of prism. Dr. Robert Fox has provided a nice overview in this regard.

Theories abound as to why low power prisms are effective, mirroring theories about why low plus power lenses are effective. A strong proponent for prescribing low power prism is Dr. Merrill Bowan, coining the phrase "miniprism" or "microprism".

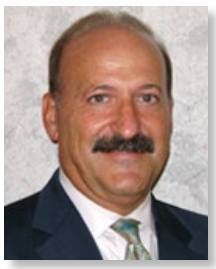
One of Dr. Bowan's theories is that a low amount of prism, typically 1^ BI OU, is effective in reducing the phenomenon of image aliasing. He provides a neurophysiological rationale for this, along with a grid to elicit the phenomenon and probe the effects of prism.

This brings us back to the Orthodox Jewish population mentioned earlier, and the Talmud - the principal compilation used for learning in this community. Expectations for mastery of the material in its printed form are high, particularly among boys. However the arrangement of the print, its variation in font size, and visual crowding combine to induce a form of textual aliasing, and in some instances even illusory motion to susceptible users.



To my knowledge there has never been a controlled study to investigate the effects of low power prism lenses on reducing textual aliasing, and that would be welcome. In the interim, anecdotal reports of improvement through prism have been compelling. How long should a patient anticipate needing prescriptive prism? How often should the doctor re-evaluate the prism to determine the need for a change in power, symmetry, or base orientation? These are determinations that are as much an art as a science, though there is no need to be apologetic about that. Most of our clinical advances flow through the confluence of art and science.

As our practices collectively wade into these waters, I am reminded of the classic Mosby volume edited by Dr. Susan Cotter in 1995, "Clinical Uses of Prism: A Spectrum of Applications". It would not be an exaggeration to state that now, twenty-two years later, the spectrum of applications has widened considerably.



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