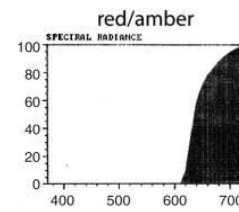


Biotyping and Advanced Filters Part 2

Dr. Cathy Stern, OD, FCOVD, FNORA, FCSO
Optometric Syntonic Phototherapy 201
CSO June 8, 2023

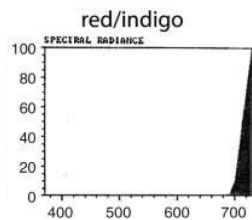
1

Alpha Delta (amblyopia)



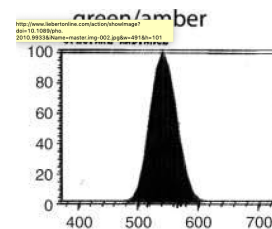
2

Alpha Omega (emotional)



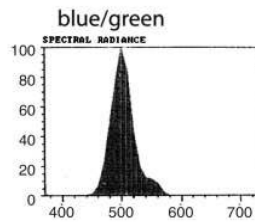
3

Mu Delta (chronic)



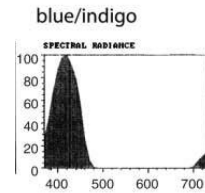
4

Mu Upsilon (acute)



5

Upsilon Omega (pain)



6

Photobiomodulation

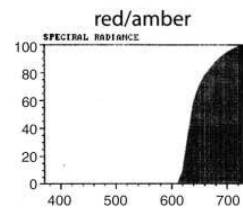
For AMD – 650nm + 810nm (IR)
decreased the effects of light induced retinal stress
abolished microglial invasion of the retina
led to decreased cell death and inflammation

For Dry AMD – 650nm
improved VA
significant improvement in Visual Field

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Alpha Delta (amblyopia)



8

Slowing Myopic Progression

While modalities such as low dose atropine, orthoK, and DIMS lenses are 30-60% effective in slowing myopia progression they DO NOT restrain axial length growth (AL)

Studies with 650nm

decreased axial length

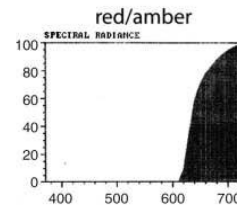
induced hyperopia

25% demonstrated decreased axial length

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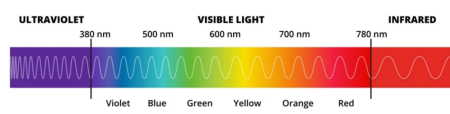
Alpha Delta (amblyopia)



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Amblyopia

Adolescent and adult patients with amblyopia ranging from 20/400 to 20/30 were treated for 30 seconds, three to four times per week for 2 weeks with 780 nm light.



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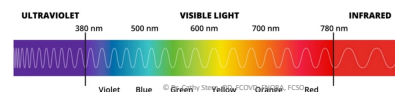
11

Amblyopia

Adolescent and adult patients with amblyopia ranging from 20/400 to 20/30 were treated for 30 seconds, three to four times per week for 2 weeks with 780 nm light.

Amblyopia – 90% increased 3 lines of acuity

With Strabismus – 89% increased 2.7 lines of acuity



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Glaucoma

Ongoing clinical study of Repeated Low Level Red Light Therapy (RLRL)
On visual field damage in POAG
wavelength not specified
terminology similar to myopia studies so likely 650nm range

Slowed retinal ganglion cell growth
May help to regenerate tissue damaged by glaucoma

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Migraine Headaches

Green light (520nm +/- 10nm) found to be effective

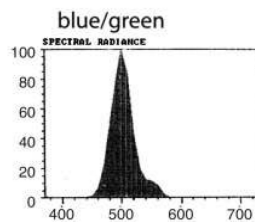
Significantly reduces photophobia
Reduced the intensity and severity of migraine attacks

See allaylamp.com

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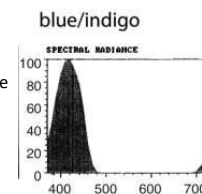
Mu Upsilon (acute)



15

Upsilon Omega (pain)

Would light with greater blue be more helpful?



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We Have Been There Before !

Syntonics Phototherapy is looking even better in terms of its effectiveness for myopia, eye disease and headaches

While the red end has been used extensively, newer studies are emerging looking at green and blue light

While new instruments and lights will be coming to treat these patients, you already have the tools in your practices

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Dr. Cathy Stern, OD, FCOVD, FNORA, FCSO
doctorstern@gmail.com

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