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Acuity and Color Acuity Screening for Infants and Children.

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Summary:

Dyop™ rotation can be used to measure visual acuity in infants and young children despite their not being verbal and/or being able to read. Infants and children are predisposed to focus on rotating versus static images, and will continue to focus on rotating images as the rotation location alternates from one side of a display to the other, and as the images get incrementally smaller.

Background:

A Dyop™ (short for Dynamic Optotype™) is a uniformly rotating calibrated image whose diameter, stroke width, contrast, and rotation provide a method for determining visual acuity.

Individuals with known symptoms of dyslexia (“red-dominant”) are able to detect Blue-on-Black Dyop™ image rotation at a distance further than an identical diameter Green-on-White Dyop™ image. Individuals who knew they did NOT have symptoms of dyslexia (“green-dominant”) detect Green-on-White Dyop™ image rotation at a further distance than an identical diameter Blue-on-Black Dyop™ image.

Of the 27 respondent, and 3 non-repondent, test subjects ages 6 months to 12 years of age, 22 were able to detect and track the Green-on-White Dyop™ images at a 24 inch viewing distance but had to move to an 18 inch viewing distance to detect rotation of the Blue-on-Black Dyop™ images, indicative of “green-dominant” vision and NOT having dyslexia-type symptoms. Of the respondent test subjects, 5 were able to detect and track the Blue-on-Black Dyop™ image at a 24 inch viewing distance but had to move to an 18 inch viewing distance to detect rotation of the Green-on-White Dyop™ viewing distance indicative of “red-dominant” vision and potential dyslexia-type symptoms.

http://www.dyop.org/documents/Dyop_InfantColorScreening.html

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Conclusion:

Based upon test responses, the Dyop™ Color Acuity Screening Test can effectively be used to screen for acuity and color perception almost regardless of the age or verbal skills of the test subject.