

A New Way To Detect AMD

The principles of chromatic aberration can help you detect changes in your patients' vision.

by Dominic Cianciullo, O.D.

The Casa Vision Screener is a tri-colored eye chart designed to detect physiologic or pathological changes in vision using the principles of chromatic aberration. It's comprised of a chart that displays black letters in 20/40 type (the minimum requirement for driving in most states) against a colored background in red, green and yellow, each of which are refracted differently in the eye.

The screener is useful for diagnosing several patient groups. Older presbyopic patients will see the yellow wavelength more clearly, even with hypermetropia. Myopic shifts often associated with cataract formation and diabetes will result in better vision against the red background.

The patient sits ten feet from the chart, with his or her spectacle prescription in place and observes how clear his or her vision is in each colored section. Clarity in one color, with respect to the others, relays information about the visual state of the patient.

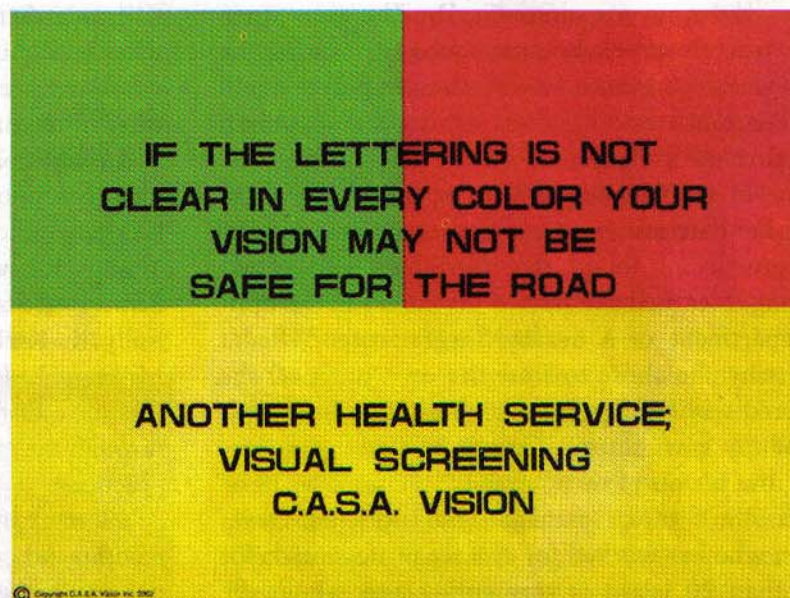
Hyperopic patients experience better vision in the green part of the chart and myopic patients in the red section. Clearer vision in the yellow section of the chart indicates a patient has some form of astigmatism, whether mixed, hyperopic or myopic.

It is interesting to note that color vision anomalies do not affect the results of the screener.

In clinical studies, we also noted that squinting of the eyes (pin-hole effect) cannot "override" the effect of chromatic aberration. Although squinting will improve a patient's vision, the relative clarity of one color in reference to another is the same.

AMD screening

In our clinical studies, we have noted a hyperopic shift in patients who are in the early stage of wet AMD. This hyperopic shift is characteristic of a shallow elevation of the sensory retina at the macula. The amount of hypermetropia in early stage, wet AMD is usually



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Patients sit in front of the screener, either in the office or at home on their computer. Their visual clarity in each color provides information about the patient's visual state.