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OUT DAMNED CHART! OUT, I SAY!

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"The nurse said he was 20/20. I never dreamed Jimmy had anything wrong with his eyes. Maybe that's why he complains of headaches when he reads."

A familiar story. All too often a 20/20 rating on the Snellen Chart is accepted as convincing evidence that a Child's eyes are free from defects. Quite the opposite may be true.(1)

The Snellen Chart which has not changed since it was designed in 1862 is the only visual screening test used in practically all schools. The chart consists of rows of letters that vary in size. The largest are at the top with each succeeding row containing letters that are measurably smaller. Beside each row is a number indicating the distance from the chart that the average eye can identify letters of that size. A fraction is used to express visual acuity. If, for example, a child is able to read the 20/20 line, it means at 20 feet he reads letters designed to be read at 60 feet. The numerator of the fraction always remains 20 since it indicates the distance from the chart at which the child stands.

The Snellen Chart and the manner in which it is administered are rife with shortcomings. First of all, the test is administered at a distance of 20 feet. No information is given to tell us how well the child's eyes will function at book reading distance. Because the nurse who gives the test does so in monocular fashion, there is no assessment of binocular function. This is important. A child does not read one page with a left eye and another with the right eye. Reading is a binocular act. Other shortcomings stem from memorization of the chart and from squinting the eyelids to pass the test. This latter method is a practice helpful to the myope who is able to reduce the size of the pupil and thus temporarily improve his/her visual acuity.

Under the best of circumstances, which conditions are screened by the Snellen Chart? Unbelievably, the visual anomaly most frequently detected is myopia (nearsighted-

ness), a condition very often associated with good readers; secondarily, amblyopia (reduced vision, usually in one eye, which occurs in only 3% of the population). Except in extremely severe cases, hyperopia (farsightedness), a visual anomaly most incompatible with good reading at nearpoint, (2) escapes detection. This also is true of astigmatism and fusion difficulties which usually affect reading skill adversely. (3,4)

Because of the gross inadequacies of the Snellen Chart, thousands of children in our schools have visual problems of which parents and teachers are completely unaware. The handicaps and losses are overwhelming and the most tragic aspect of the situation is that we have the means to correct the problem. The solution is simple. Throw out the Snellen Chart! There's been a new breakthrough in visual screening! (5)

The new screening procedure is known as the Walton Modified Telebinocular Technique (MTT). It was developed by Dr. Howard Walton, Southern California College of Optometry, and is capable of detecting all visual problems screened by the Modified Clinical Technique (MCT) which evolved through the joint cooperation of optometry and ophthalmology. The MCT is accepted by both groups and has been considered the best visual screening procedure. However, the MCT requires eye care practitioners to administer the tests, whereas the MTT can be administered by school nurses or school personnel who hold a teaching credential and have completed a course in visual screening of at least six clock hours.

The following table delineates the effectiveness of the Snellen Chart, Modified Telebinocular Technique (MTT) and the Modified Clinical Technique (MCT). It clearly shows the MTT to be as effective as the highly regarded MCT which, as stated, is impractical because a team of vision specialists is needed to administer it.

EFFECTIVENESS OF SCREENING PROCEDURES

Snellen Chart	Modified Telebinocular Technique (MTT)	Modified Clinical Technique (MCT)
<u>Sensory</u>	<u>Sensory</u>	<u>Sensory</u>
Myopia Hyperopia	Myopia Hyperopia low	Myopia Hyperopia low

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	moderate	moderate
Astigmatism	Astigmatism	Astigmatism
	low	low
	moderate	moderate
high	high	high
	Stereopsis	Optional
	Color Perception	Optional
	Fusion	Fusion
	far	far
	near	near
	Suppression	Suppression
	Anisometropia	Anisometropia
Amblyopia	Amblyopia	Amblyopia
<u>Motor</u>	<u>Motor</u>	<u>Motor</u>
	Lateral and	Lateral and
	Vertical	Vertical
	phorias (Muscle im-	phorias (Muscle
	balance)	imbalance)
	far	far
	near	near
	tropias (deviation	tropias (deviation
	of the eyes)	of the eyes)
	far	far
	near	near

In summary, it is evident that the widely used Snellen Chart is markedly inferior to the MTT. The MTT is as effective as the highly regarded, but far less practical, MCT. School districts that are looking for more thorough and valid vision screening will find that the MTT meets their needs.

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