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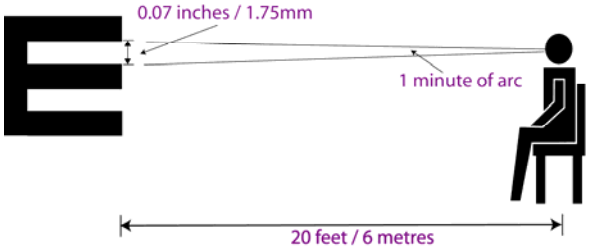
Is 20/20 vision still relevant in 2020?

20/20 is usually associated with good vision. This newsletter explains what is 20/20 vision, and the relevance of 20/20 vision for some everyday tasks.

In 1862 Herman Snellen created a letter chart (Snellen Letter Chart) so that eye doctors could test what a person could see AND quickly calculate the best spectacle lens prescription.[1] The letter chart had high contrast (black) letters on a white background (see image to left-side).

A 20/20 letter is one that has detail with an angular size of 1 minute of an arc (1') when viewed from a distance of 20 feet (see diagram to right-side). The metric equivalent is 6/6, or viewing a letter with detail of 1' at 6m distance.



We can be more precise. The letters on a Snellen letter chart are not equally difficult to read across the whole chart.

A more precise letter chart (the logMAR letter chart) was invented by Australians Jan Lovie-Kitchen and Ian Bailey in 1976.[2] Unlike the Snellen letter chart, the logMAR chart has the same number of letters on each line and the letters are evenly spaced on each line (see example to left-side).

LogMAR charts are increasingly used in clinical and research settings instead of Snellen letter charts. The logMAR equivalent of 6/6 (20/20) vision is 0.0, 6/12 (20/40) vision is 0.3 and 6/60 (20/200) vision is 1.0.

Vision is more than visual acuity (being able to see detail).

Visual acuity is important, but so are other visual functions. For example,

- High contrast visual acuity does not change very much as we age. However, our ability to detect low contrast (for example, grey against white), especially in the presence of glare, is more likely to decrease with age and is associated with greater functional loss.[3]
- There are arguments that visual acuity is not the best measure of vision for driving a vehicle; it may be better to measure visual fields (peripheral vision) and contrast sensitivity for drivers licenses.[4]

Although 6/6 (20/20) is often referred to as "normal", there are about 27% of people who do not have this level of vision. [5]

Objects that include text, such as signs, should be designed so that people with 6/12 vision (or less) can read the text easily.

References: 1. Emsley "Visual Optics" Vol 1 5th ed (1953) **2.** Bailey and Lovie (1976) Am J Optom Physiol Opt 53(11): 740-745 **3.** Haegerstrom-Portnoy (2005) OVS 82(2): 87-93 **4.** Wood (2019) OVS 96(9): 626-636. **5.** Jacobs et al (1975) Aust Road Res 5(7): 68-86

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