Factors affecting the use of simple magnifiers for low vision reading

Jan E Lovie-Kitchin¹, PhD, MScOptom, Grad Dip Rehab Stud, FAAO, LV Dip
Allen (Ming Yan) Cheong¹, PhD, BSc (Optom)
Alex R Bowers², PhD, MCOptom

¹Centre for Health Research, School of Optometry, Queensland University of Technology, Australia
²Schepens Eye Research Institute, Harvard Medical School, Boston, USA

Simple optical magnifiers are still the most commonly prescribed low vision devices for reading. Many factors affect their prescription and patients’ performances with reading magnifiers, such as: visual acuity and visual field, the power and type of magnifier, the patient’s ability to navigate the page and training with the magnifier. Assessment of visual functions has improved significantly but the clinical prescription of magnification for reading still often involves “trial and error”. Recent research has shown that with systematic assessments of vision, the required magnification can be predicted accurately; this magnification needs to be much higher than has been previously recommended. We have also investigated the effect of reading practice prior to magnifier prescription on reading performance with stand magnifiers for subjects with AMD. After one week’s large print reading practice or repeated in-office measures with the magnifier, reading rate with the magnifier was not significantly different from reading rate on large print. Similarly we have examined the strategies low vision patients use in page navigation when reading with simple magnifiers. This paper reviews recent research which has improved significantly our ability to determine the required power of simple magnifiers and gives recommendations for reading training with magnifiers.