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"Normal Age-Related Sensitivity for a Variety of Visual Functions Throughout the Visual Field".

ABSTRACT

Purpose: The purpose of this study was to compare the rate of age-related decline, the magnitude of practice effects, and test-retest variability among normal subjects using six different tests of perimetric visual function.

Methods: One humdred normal subjects aged between 20 and 85 were enrolled in the study. Six visual field test procedures were used: (1) standard automated perimetry (SAP), (2) short wavelength automated perimetry (SWAP), (3) temporal modulation perimetry (TMP), (4) frequency doubling technology perimetry (FDT), (5) detection acuity perimetry (DAP) and (6) resolution acuity perimetry (RAP). To facilitate comparisons, the results for each test were divided by that test's dynamic range. All tests employed a 24-2 stimulus presentation pattern.

Results: Of the three tests used most commonly in the clinic, SWAP exhibited the greatest aging influences, practice effects and test-retest variability, followed by FDT, with SAP exhibiting the least. For the other tests, RAP was the most variable test, followed by TMP.

Conclusions: These results should be taken into account when evaluating glaucomatous loss using different functional tests and when comparing the performance, predictive power and speed of detection of the different tests. Unless these factors are considered, comparisons among test procedures become very difficult.