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◆ **Temporal characteristics of the human visual field**

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Visual performance is distributed unevenly across the visual field, the fovea often showing best performance. Whereas the topographies of spatial and intensity characteristics are well studied, fewer data exist on temporal characteristics of information processing across the visual field. We present data sets from several studies measuring Treutwein's double-pulse resolution (DPR), high-resolution reaction time (RT), static perimetry, and movement contrast sensitivity (movCS, for moving plaids). These topographical, normative data were acquired across the lifespan up to the age of 90 years for assessing performance in patients with cerebral visual field loss or age-related maculopathy (ARM). Key findings are: (i) DPR thresholds with constant-size stimuli increase with eccentricity by  $\sim 1$  ms per degree. (ii) RT increases by  $\sim 2.8$  ms per degree eccentricity. (iii) movCS declines by  $0.01 - 0.03 \log_{10}$  units per degree with eccentricity and  $0.01 \log_{10}$  units per year. (iv) DPR correlates substantially with perimetry ( $\rho = 0.52$ ) but little with RT ( $\rho = 0.28$ ). (v) All performance parameters correlate substantially with age (DPR:  $\rho = 0.65$ ; RT:  $\rho = 0.28$ ; PER:  $\rho = 0.71$ ). However, up to the age of 60–70 years, loss of performance is shallow and age-related changes are smaller than inter-individual variation. (6) In patients with cerebral field loss, both DPR and RTs are impaired in seemingly intact visual fields. (7) ARM patients show pronounced loss of dynamic performance far outside the macula.

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