

## **Abstract**

**Purpose:** To assess the efficacy and safety of oral saffron, a natural antioxidant, in treating mild/moderate age-related macular degeneration (AMD).

**Methods:** Randomized, double-blinded, placebo-controlled crossover trial of 100 adults (>50 years) with mild/moderate AMD and vision >20/70 Snellen equivalent in at least 1 eye. Exclusion criteria included confounding visual lesions, or significant gastrointestinal disease impairing absorption. Participants were given oral saffron supplementation (20 mg/day) for 3 months or placebo for 3 months, followed by crossover for 3 months. Participants already consuming Age-Related Eye Diseases Study (AREDS) supplements or equivalent maintained these. Primary outcomes included changes in best-corrected visual acuity (BCVA) and changes in multifocal electroretinogram (mfERG) response density and latency. Secondary outcomes included safety outcomes and changes in mfERG and BCVA amongst participants on AREDS supplements.

**Results:** Mean BCVA improved 0.69 letters( $p=0.001$ ) and mean-pooled mfERG latency reduced 0.17 msec( $p=0.04$ ) on saffron compared to placebo. Amongst participants on AREDS supplements, mean BCVA improved 0.73 letters ( $p=0.006$ ) and mean-pooled mfERG response density improved 2.8%( $p=0.038$ ). There was no significant difference in adverse event occurrence ( $p>0.10$ ).

**Conclusion:** Saffron supplementation modestly improved visual function in participants with AMD, including those using AREDS supplements. Given the chronic nature of AMD, longer-term supplementation may produce greater benefits.