



Rooted in Science

AMD

Case Report of Dietary Supplements Improving Macular Pigment and Visual Function

(Herman, Kleiner-Goudey, Davis – *Advances in Ophthalmology and Visual System*)

- 521 subjects supplemented with EyePromise Restore
- 24-month study with follow-ups at 6, 12, 18, and 24 months
- **Objective:** To investigate the visual, retinal and macular pigment optical density (MPOD) changes of a diverse group of subjects in a clinical setting with a supplement formulated to increase MPOD.

Results & Conclusion:

- 82.6% mean MPOD increase across the group at 24 months.
- 88.3% of participants achieved an MPOD increase of at least 30%.
- 67.9% reported improved glare recovery.
- 62% reported contrast improvement.
- Improvements were recorded in macular pigment density and visual functions, with improvement in macular appearance and changes in metamorphopsia.
- 24-month EyePromise Restore supplementation, along with sun protection, dietary changes, and smoking cessation, improved visual function and exhibited positive retinal changes documented by SD-OCT and fundus photography.

DRY EYE

Ocular Nutrition Impact on Tear Film Study (ONIT)

(Mulqueeny, Townsend, Davis, Koffler, et. al. – *Advances in Ophthalmology and Visual System*, 2015)

- Multi-center, clinic-based dry eye study
- 67 subjects
- Eight-week study duration
- **Objective:** To determine if subjects presenting with dry eye, confirmed by diagnostic markers and symptoms (Ocular Surface Disease Index or OSDI), responded to a multi-component, omega-3 based anti-inflammatory nutritional oral supplement (EyePromise EZ Tears).
- Protocol required patients to meet minimum of 4 dry eye diagnostic inclusion criteria.

Results & Conclusion:

- OSDI improved 38%
- TBUT improved 45%
- Conjunctival staining improved 50%
- Corneal staining improved 33%
- Tear meniscus height improved 50%
- Lid inflammation improved 40%
- Phenol red thread improved
- Osmolarity scores variable and inconclusive
- Rapid onset of relief: Patients began demonstrating symptom improvement (OSDI) after one week of EyePromise EZ Tears supplementation.
- Improvements continued over the course of the study. (Rationale to keep supplementing beyond 8 weeks.)



DIABETES

Diabetes Visual Function Supplement Study (DiVFuSS)

(Chous, Richer, Kowluru, Gerson, et. al. – *British Journal of Ophthalmology*, 2015)

- Six-month clinical research study
- Randomized, placebo controlled
- Subjects with type 1 or type 2 diabetes > 5 years duration
- 67 subjects
 - No significant inter-group differences at baseline
 - Some with no retinopathy or mild to moderate non-proliferative retinopathy
- **Objective:** Determine if patients benefit from a novel, multi-component oral supplement. (DiVFuSS Formula = EyePromise DVS)

Results & Conclusion:

- MPOD increase of 31%
- Color vision improvement of 21%*
- Contrast sensitivity increase of 19%*
- Macular visual field (5-2) improvement of 12%*
- All P values were highly statistically significant
- The supplement achieved the aforementioned results without significantly affecting blood sugar control (A1c)

*Averaged between both eyes

SCREEN TIME & VISUAL PERFORMANCE

A Double-Blind, Placebo-Controlled Study on the Effects of Lutein and Zeaxanthin on Neural Processing Speed and Efficiency

(Bovier, Renzi, Hammond, et al. – *Public Library of Science (PLOS)*, 2014)

- 64 subjects (young healthy adults)
- 18-32 years of age
- 4-month study
- 3 study arms
 - EyePromise Zeaxanthin (20 mgs of dietary zeaxanthin)
 - EyePromise Vizual Edge Pro™ supplement (26 mgs dietary zeaxanthin, 8 mgs lutein)
 - Placebo

Results & Conclusion:

- Subjects in the EyePromise Zeaxanthin and EyePromise Vizual Edge Pro arms experienced significant improvements
 - A 14% improvement in temporal contrast sensitivity function
 - A 12% improvement in critical flicker fusion threshold
 - A 10% improvement in visual motor reaction time
 - A 20% increase in macular pigment optimal density (MPOD)
- High dose zeaxanthin and lutein supplementation improved visual processing speed, even among young healthy adults.
- Supplemented subjects achieved improved ability to process information and react faster.

Macular Pigment and Visual Performance in Glare: Benefits for Photostress Recovery, Disability Glare, and Visual Discomfort

(Stringham, Garcia, Smith, et. al. – *IOVS*, 2011)

- 26 healthy subjects
- Average age of 31 years

Results & Conclusion:

- Higher macular pigment levels correlated with all outcome measures
 - Improved photostress recovery time
 - Reduced glare
 - Diminished visual discomfort
- Higher macular pigment levels resulted in faster photostress recovery, lower disability glare contrast thresholds, and lower visual discomfort.

