

## **Associations Between Intermediate Age-Related Macular Degeneration and Lutein and Zeaxanthin in the Carotenoids in Age-Related Eye Disease Study (CAREDS)**

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**Objective:** To evaluate the relationship between dietary lutein plus zeaxanthin and intermediate age related macular degeneration (AMD).

**Design:** Women aged 50 to 79 years in Iowa, Wisconsin, and Oregon with intake of lutein plus zeaxanthin above the 78th (high) and below the 28th (low) percentiles at baseline in the Women's Health Initiative Observational Study were recruited 4 to 7 years later into the Carotenoids in Age-Related Eye Disease Study (CAREDS), when the presence of AMD was determined by fundus photographs. Logistic regression analyses examined the prevalence of AMD in 1787 CAREDS participants, after accounting for potential covariates.

**Results:** The prevalence of intermediate AMD was not statistically different between the high and low lutein plus zeaxanthin intake recruitment groups after adjusting for age (odds ratio, 0.96; 95% confidence interval, 0.75-1.23). Limiting analyses to women younger than 75 years with stable intake of lutein plus zeaxanthin, without a history of chronic diseases that are often associated with diet changes, substantially lowered odds ratios (0.57; 95% confidence interval, 0.34-0.95). Exploratory analyses of advanced AMD in 34 participants resulted in protective, but statistically nonsignificant, associations in the overall sample and in women younger than 75 years.

**Conclusion:** Diets rich in lutein plus zeaxanthin may protect against intermediate AMD in healthy women younger than 75 years.