

MIND diet lowers risk of open-angle glaucoma: the Rotterdam Study

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PURPOSE: To assess the association between the Mediterranean-DASH Intervention for Neurodegenerative Delay (MIND) diet and the incidence of open-angle glaucoma (iOAG) , as well as the association between iOAG and two other well-established diets in the Netherlands, i.e., the Mediterranean diet and Dutch dietary guidelines.

METHODS: In the Rotterdam Study, participants were followed for iOAG since 1991, with intervals of approximately 5 years. A total of 170 participants developed iOAG during follow-up. Participants with iOAG were matched with healthy controls on age and sex in a case:control ratio of 1:5. The associations between food frequency questionnaire-derived diet adherences (baseline) and iOAG were analyzed using multivariable conditional logistic regression analyses. The associations between the diet adherences and intraocular pressure (IOP; a risk factor for OAG) were assessed using multivariable linear regression analyses.

RESULTS: Greater adherence to the MIND diet was associated with a decreased iOAG risk (odds ratio [95% confidence interval]: 0.80 [0.66 to 0.96], for each 10-percent increase in adherence) . Food component analyses showed that, in particular a higher intake of green leafy vegetables, berries and fish tended to be protective for iOAG. No significant associations were observed between adherence to the Mediterranean diet or Dutch dietary guidelines and iOAG. Moreover, none of the three examined diets were associated with IOP.

CONCLUSION: Adherence to the MIND diet was significantly associated with a lower incidence of OAG in contrast to adherence to the Mediterranean diet or the Dutch dietary guidelines. As this association was IOP-independent, the MIND diet may be particularly relevant for the prevention of neurodegeneration in the eye.

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