

Diet High in Red Meat Tied to Early Age-Related Macular Degeneration CME

March 27, 2009 — Red meat consumption is positively associated with early age-related macular degeneration (AMD); high intake of chicken, on the other hand, is inversely associated with late AMD, according to findings from a prospective Australian study.

"High meat intake has been associated with higher levels of N-nitroso compounds, heme iron, and advanced glycation end products, which could result in oxidative damage and could be toxic to the retina," Dr. Elaine W.-T. Chong at the University of Melbourne and fellow researchers note in the *American Journal of Epidemiology* for April 1.

To clarify the role of meat intake in AMD, Dr. Chong's group studied 5604 subjects in the Melbourne Collaborative Cohort Study. They were aged 58-69 years at baseline in 1990-1994, when they completed food frequency questionnaires covering the previous year.

The presence of AMD was determined by non-mydratiac retinal photography between 2003 and 2006, when subjects were 66-85 years old.

There were 1680 cases of early AMD, defined as the presence of drusen, 63 μm or larger, with or without the presence of hyper/hypopigmentation. Seventy-seven subjects had late AMD, indicated by the presence of choroidal neovascularization or geographic atrophy.

Compared with red meat consumption < 4.5 times/week, consumption at least 10 times weekly was associated with an odds ratio of 1.47 for early AMD (p for trend < 0.001, after adjustment for age, sex, smoking, BMI, and other dietary factors). Red meat intake was not associated with late AMD.

By contrast, chicken intake was not associated with early AMD. However, those who ate chicken at least 3.5 times weekly were at reduced risk of late AMD compared with eating it less than once a week (adjusted odds ratio 0.43, p for trend = 0.007).

Fish consumption was not associated with AMD, the report indicates.

"A high level of red meat consumption may be a novel risk factor for early AMD or may act as a marker for a group of persons with an increased risk from other lifestyle factors," Dr. Chong and her team conclude. "Confirmatory data from other cohort studies are needed."

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