



## Physical Activity and AMD

In February of this year, Korean scientists published results of a 10-year study on the association between physical activity and AMD in the journal *JAMA Ophthalmology*.<sup>(1)</sup>

Their unexpected finding was that participants who exercised vigorously had a higher rate of wet AMD. The data was from 105,000 seniors who self-reported a history of vigorous physical activity compared to 105,000 who reported a more sedentary lifestyle. These surveys were compared to that nation's equivalent of insurance claims for Lucentis, which the researchers used as indication of development of wet AMD.

The authors, as well as some critics, were cautious to interpret the results as a call for limiting exercise. One reviewer opined that morbidity in this study was likely higher in the sedentary group, and perhaps that partially explained the increased incidence of wet AMD in the active group.



What do we know about the effect of physical activity and AMD?

In a study of 5,000 Americans ages 43-86, followed for twenty years from 1988-2008, people leading an active lifestyle had 70% lower odds of

developing wet AMD compared with people not leading a physically active lifestyle.(2)

In 2014, 3,000 Australians followed for 15 years, showed that the more active individuals over the age of 75 were 79% less likely to have advanced AMD than those who were the least physically active.(3) However, when these results were adjusted for weight, smoking, diet, and overall health, the significance attributed to exercise was no longer there.

In a 2015 U.S. study, AMD patients were outfitted with accelerometers in order to get an accurate account of activity levels – most studies rely on self-reported surveys.(4) In this study, those with late AMD spent significantly less time engaging in moderate physical activity than those



who had early AMD or no AMD. After reviewing the data, the authors suggested it was not the lack of physical activity that resulted in advanced AMD, but rather poor visual acuity led to a more sedentary lifestyle.

Last year, scientists completed a meta-analysis of several studies that looked at AMD and exercise, including some of the clinical trials we have mentioned.(5) In their study of studies, they concluded that a more active lifestyle is associated with lower odds of both early and late AMD, and the effects are more pronounced in advanced AMD. They noted that, in general, people who exercise also tend to eat well, do not smoke, drink in

moderation, seek health services for prevention and early detection of disease, and are more health aware.

So, what is the answer?

The health benefits of physical activity have been established in other areas as having a protective influence against obesity, diabetes, high blood pressure, and heart disease. But it has been more difficult to document a direct connection between physical activity and AMD because of many confounding factors. Does a lack of exercise bring on or accelerate AMD? Or does vision loss resulting from AMD cause individuals to be more cautious about engaging in activities where they might fall or suffer injury?

As a public health measure, physical activity is an important component of a healthy lifestyle. It may or may not have a direct contribution to eye health but activity at reasonable levels should be encouraged.

#### References:

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4. Loprinzi PD, Swenor BK, et al, **Age-Related Macular Degeneration Is Associated with Less Physical Activity among US Adults: Cross-Sectional Study**, *PLoS* doi:10.371/ journal.one.0125394
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