

## **Trends in Visual Impairment Due to Age-Related Macular Degeneration, Glaucoma, and Diabetic Retinopathy Over 40 Years in Finland**

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The trends of visual impairment (VI) due to age-related macular degeneration (AMD), glaucoma, and diabetic retinopathy (DR) has been analyzed over the past 40 years in Finland based on the data from the Finnish Register of Visual Impairment and additional health registers.

For AMD, the incidence of reported VI doubled from the 1980s to the 2010s but stabilized thereafter. Since 2012, the prevalence of reported VI has decreased, coinciding with a 40-fold increase in patients treated with intravitreal injections from 2005 to 2019. The severity of VI has lessened, and the mean onset age has increased, with higher rates in females across all decades. These improvements likely result from advanced diagnostic tools and novel therapies for exudative AMD.

Regarding glaucoma, the incidence of reported VI increased from 2.3 to 3.4 per 100,000 persons between the 1980s and 2010s. Despite this rise, the incidence of VI among treated patients decreased from 32 to 21 per 10,000 treated patients. Primary open-angle glaucoma was the predominant subtype. There has been an increase in mild VI cases and the age of onset, reflecting earlier diagnosis and enhanced treatment strategies.

For DR, the incidence of reported VI peaked in the 1990s but has since dramatically declined. Specifically, the incidence of non-proliferative DR dropped from 102.3 to 5.5 per 100,000 treated patients, and proliferative DR from 39.9 to 7.4. The severity of VI has decreased, and onset age has increased, underscoring the effectiveness of improved screening and therapies despite the rising prevalence of diabetes.

Overall, these positive trends in VI due to AMD, glaucoma, and DR highlight the critical role of early diagnosis, effective treatments, and continuous advancements in medical care.

### **References:**

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