

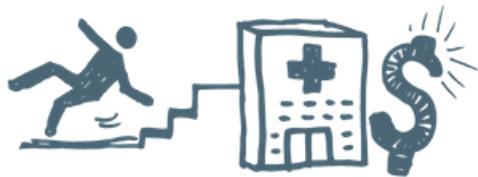
# Vision and Falls Prevention

A WESTERN AUSTRALIAN...

**DIED FROM A FALL EVERY 26 HOURS IN 2016**

**WAS HOSPITALISED EVERY 20 MINUTES DUE TO A FALL-RELATED INJURY IN 2017**

**ATTENDS AN EMERGENCY DEPARTMENT EVERY 12 MINUTES DUE TO A FALL**



**IN 2017 FALLS-RELATED HOSPITALISATIONS RESULTED IN 157,738 BED DAYS AT AN ESTIMATED COST OF \$223,524,324.**

## Vision Interventions

- Vision assessment and referral
- Home safety modifications
- Assistive technology

**For further information on age related vision impairments and falls prevention contact :**

Injury Matters  
[injurymatters.org.au](http://injurymatters.org.au)

Vision Australia.  
<https://www.visionaustralia.org/>

Lions Eye Institute  
<https://www.lei.org.au/>

## Vision and falls risk

Older adults with vision impairments are twice as likely to fall than older adults without vision loss (2).

A decreased visual function, particularly impaired visual acuity, contrast sensitivity, glare sensitivity, depth perception and visual field size can increase an individual's falls risk (2). This can be attributed to an impaired ability to focus on near and far objects (visual acuity), distinguish edges in low contrast conditions (contrast sensitivity) and navigation of the environment to avoid hazards (depth perception, glare sensitivity and visual field size).

In older adults, a decline in visual function can impair their gait, postural stability, balance control, step accuracy and fear of falling, which in turn increases their risk of having a fall (2-4).

Vision is vital to stabilising balance due to its role in continuously providing the nervous system with information regarding body segment movements in relation to the environment (4).

## Age related vision impairments and falls risk

- **Age-related macular degeneration (AMD)** is the leading cause of irreversible vision impairment in people aged over 40 years in Australia (5). AMD affects the macular region of the retina, which is used for straight ahead sight. AMD may affect an individual's falls risk, however the research around this is varied (6).
- **Cataracts**, which are a clouding of the clear lens in the eye, have been associated with falls risk due to cataracts leading to impaired contrast sensitivity (6).
- **Glaucoma** affects the optic nerve and contributes to a reduction in the individual's visual field, which could increase an individual's falls risk (6).

## Research papers and publications

- [Guidelines for optometrists to help prevent falls in older patients](#)
- [Blaylock, S. E. & Vogtle, L. K. Falls prevention interventions for older adults with low vision: A scoping review: Étude de portée sur les interventions visant à prévenir les chutes chez les aînés ayant une basse vision. Can J Occup Ther 84, 139-147 \(2017\).](#)

Partner:



Department of Health



### References:

1. Sweeney R, Meade R, Wold C. Western Australian Falls Report 2019 [Internet]. Perth, Western Australia: Injury Matters; 2019 Sep p. 28. Available from: <https://injurymatters.org.au/wp-content/uploads/2019/09/Injury-Matters-2019-Falls-Report-Digital-Edition.pdf>
2. Saftari LN, Kwon O-S. Ageing vision and falls: a review. J Physiol Anthropol. 2018 Apr 23;37(1):11.
3. Blaylock SE, Vogtle LK. Falls prevention interventions for older adults with low vision: A scoping review: Étude de portée sur les interventions visant à prévenir les chutes chez les aînés ayant une basse vision. Can J Occup Ther. 2017 Jun 1;84(3):139-47.
4. Lord SR. Visual risk factors for falls in older people. Age Ageing. 2006 Sep 1;35(suppl\_2):ii42-5.
5. Vision Australia. Age Related Macular Degeneration [Internet]. Vision Australia. 2012. Available from: <https://www.visionaustralia.org/information/eye-conditions/Aged-Related-Macular-Degeneration>
6. Vance E, Lord S. Vision impairment and fall risk in older people [Internet]. NSW Falls Prevention Network and Neuroscience Research Australia; Available from: <http://fallsnetwork.neura.edu.au/wp-content/uploads/2016/03/Vision-and-falls-Summary-1-1.pdf>