

## **The 3Ds of 3D Viewing from the American Optometric Association**

As 3D viewing becomes more commonplace in movie theatres, on television and even in handheld gaming systems, American Optometric Association doctors of optometry are raising public awareness about “***The 3Ds of Stereoscopic 3D Viewing.***”

- **D**iscomfort
- **D**izziness
- Lack of **D**epth

### **Discomfort**

Cinematographers and programmers create 3D by having the eyes converge in front of the screen or diverge beyond the screen, but focus has to remain where the screen is to keep the picture clear. A person’s eyes normally work by keeping the region of focus and binocular vision in the same plane, so keeping up this mismatch for an hour or two can potentially create eyestrain and headaches. Consumers can reduce the conflict by sitting relatively far from the screen, where accommodation is least active.

### **Dizziness**

3D technology can exaggerate visual motion hypersensitivity (VMH), which can cause motion sickness, and vergence-accommodation conflict, causing consumers to feel dizzy or nauseas during or after viewing 3D content. It’s like having a “visual hangover,” it helps to take in a little bit at a time.

### **Lack of Depth**

A viewer lacking binocular vision, simply won’t see 3D. While this doesn’t pose any problem viewing the screen, it serves as a “vision screening” that something is abnormal with the viewer’s binocular vision. The AOA recommends seeing a doctor of optometry for further evaluation if consumers answer yes to any of the following questions:

- Is the 3-D viewing experience not as vivid as it is for others watching the same picture?
- Do you experience eyestrain or headaches during or after viewing?
- Do you feel nauseous or dizzy during or after viewing?
- Are you more comfortable viewing 2-D TV or movies instead of 3-D TV/movies?
- Is it difficult for your eyes to adjust back to normal after watching 3-D TV/movies?

The AOA also recommends visiting a doctor of optometry on an annual basis for comprehensive eye exams to help ensure healthy vision overall.

***For more information visit [AOA.org](http://AOA.org) or contact Susan Thomas at 314-983-4663 or [SLThomas@aoa.org](mailto:SLThomas@aoa.org).***