

## VR's balancing act

Some 1 million people in the US live with multiple sclerosis (MS). Among other symptoms, the disease makes them far more susceptible to falling than the general population, and because people living with MS have decreased bone density, they're more likely to break bones. Even those who show minimal or no other symptoms still fall, so researchers have been working toward understanding who with MS might be most at risk. Now Jason Franz from the University of North Carolina at Chapel Hill and his colleagues have applied virtual-reality (VR) technology to better investigate the balance issues of people with MS.

In the experiments, 14 participants with MS and a same-sized group without the disease walked on a treadmill while viewing a virtual hallway, shown in the picture. The researchers randomly accelerated the hallway so the participants would feel like they were losing their balance. The two groups walked similarly under normal conditions, but the optical perturbations uncovered differences: Participants with MS significantly varied their stride length and wobbled, whereas those without MS were more steady. The VR tool may help doctors diagnose previously undetected balance problems. (B. P. Selgrade et al., *PLoS ONE* **15**, e0230202, 2020; photo by Franz Lab/UNC.) —AL

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