

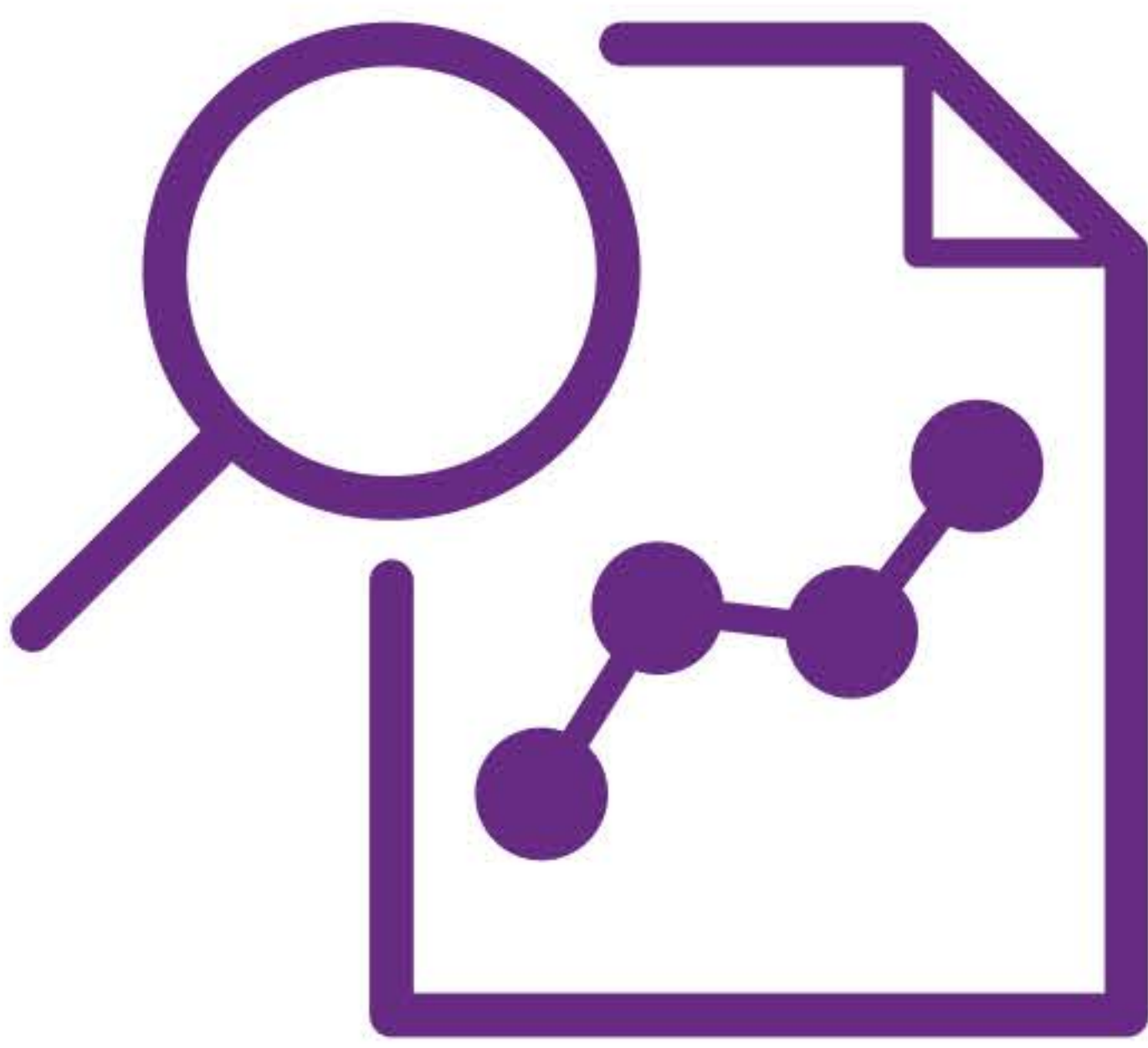
Single leg stance

Why is it important?

-  **When walking, you spend about 40% of your time with one foot on the ground as one leg is swinging through the air.**
-  **Every time we take a flight of stairs, we are in single-leg stance.**
-  **When stepping into a car, a tub or getting on a bike, we need to be on one foot.**



WHAT DOES THE RESEARCH SAY?



- Increased fall risk is associated with elevated co-contraction about the ankle during static balance challenges in older adults (Nelson-Wong et al 2011)**
- Older adults have not only diminished initial sway, but also less ability to control sway during the initial phase of single leg stance. (Roemer et al 2015)**
- Initial foot position affects the ability to stand in single leg stance. (Schneiders et al 2016)**
- Individuals increase their chances of an injury due to a fall by 2x if they are unable to stand on one leg for 5 seconds. (Vellas 1997)**

TRAINING

- Train both the transfer and maintenance phases of standing on one foot.
- Progress exercises with the appropriate challenge (adding visual exercises, head movements, transferring weight from difference stances and planes.)

Single Leg Stance Norms (Mean of 3 trials)					
	Eyes Open		Eyes Closed		
18-39	43.3	sec	9.4	sec	
40-49	40.3	sec	7.3	sec	
50-59	37.0	sec	4.8	sec	
60-69	26.9	sec	2.8	sec	
70-79	15.0	sec	2.0	sec	
80-89	6.2	sec	1.3	sec	

Springer, B.A., Martin R., et al (2007). "Normative values for the unipedal stance test with eyes open and closed." Journal of geriatric physical therapy 30(1):8-15