Exercises for the Brain and Body to Improve Your Balance

One of the best strategies for improving balance is performing exercises that impact the brain, core and the lower body. Exercises that impact balance include: foot and toe strengthening, vision therapy, core and gluteal muscles. The best therapy for the brain is targeting the cerebellum (the balance center). Although this area is smaller than the cortex it has more neurons than any other area of the brain. The cerebellum is best activated with complex movements. When we walk we swing our arms in a linear movement this reflex does not create activation to the balance center. Movements that are big and complex activate the balance center. If you exercise to a beat with a metronome you can also enhance communication to the balance center. For example: doing toe movements with the beat of a metronome enhances activation to the cerebellum.

Exercises provided will include ideas to engage the brain to body connections. It is important to know that the brain likes novel things and requires changes to continue to make new connections. Varying your exercises will keep the brain engaged.

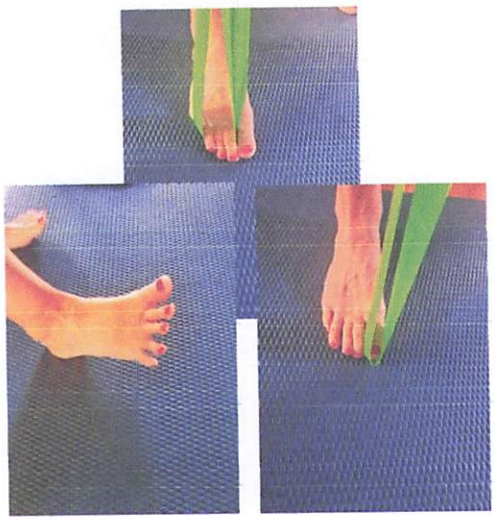
Cerebellum Exercises

Place a tennis ball in a long sock and extend your arm holding the end of the sock. Keep the ball swinging around for 30 seconds keeping your shoulder in one spot. This sustained movement activates the balance center. Do this 1-2 times per day.

Extend your arm and move it in a number eight pattern as large as you can vertical or horizontal. This exercise can be done sitting or standing. Frequently people can fall to the weaker side and doing cerebellum therapy on that side can help. You can do reps of 4-6 of them on the side you are more unstable or try and do both if there is not a side that you fall toward.

Human locomotion website: peanut vibration device

Toe Exercises



Toe splaying can help give info to the brain (parietal lobe) providing better mapping while walking. Lift and splay toes and repeat. Your toe awareness can help improve balance. Carry out10 times 2 sets.

Place the band over the big toe pull with resistance upward and your big toe resists downward at the same time repeat 10 times 2 sets.

Place the band over all toes except the big toe and add resistance upward on the band. Pull toes toward the floor and repeat 10 times two sets.

ToePro Exercises

Rise up on your toes and hold.
Repeat with a metronome (50 beats) 30-60 seconds carry out a couple of sets until fatigue is felt. This will strengthen your toes and calf muscles.

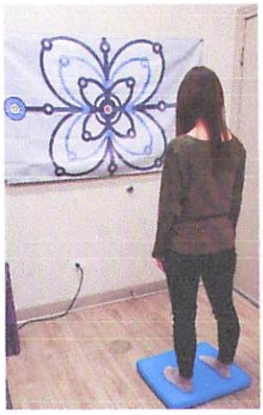
Push down on the edge of the toepro with the big toe and hold 10-20 seconds. Relax and repeat until you feel some fatigue in the big toe.

Lower Body Exercises

Clams: laying on your side put the band around your thighs above your knees. Open up at the knees hold for 20-60 seconds. Repeat on the other side 5-10 minutes recommended daily. Exercise strengthens gluteal muscles for balance.

Hip extension: standing keeping leg and thigh parallel move straight back and hold 5-20 seconds. Repeat 10-20 times 2 times.
Hip abduction: Standing lifting one leg straight out to the side holding 10 seconds repeat. 10-20 times 2 sets. Strengthens gluteal muscles for balance.

Laser guided balance therapy



Motion guidance chart with laser glasses and foam mat. Stand on the mat and use the laser glasses to target the center dot hold 5 seconds. Then move laser target upward, downward and left and right repeating hold time while maintaining balance . Balance can be challenged more while following the butterfly pattern and smaller circles. Try and spend 5-10 minutes on therapy daily.

Chart from: motion guidance
Mat: amazon balance mat
Laser glasses: neurdsolutions.com

Sensory

Placing the vibrational device under your foot a couple of times per day gives info to the brain and receptors in the feet

Try and carry out a couple of minutes or longer if tolerated. By giving sensory information with vibration your brain communicates better with the areas of the brain that map where your feet are.

Human locomotion website for vibration peanut

For any further questions please email **drsteinfeldt@gmail.com**

Dr LeeAnn Manoni DC, DACNB

For further information on ways to search practitioners in the area where you live search ACNB.org
American Chiropractic Neurology Board