B.4. **Side to sides:** video # 3 & 4( slide 24- 27)

**A. Purpose**:

1. Improve balance for sideways balance loss/challenges
2. Improve range of motion in hips and low back
3. Strengthen outside and inside hip and trunk muscles areas

**B. Importance of side to side movements:**

Side to side movements are important if a person is bumped from the side, or loses balance to the side since these movements may prevent the person from falling to the side. These activities may help a person catch themselves to prevent a fall.

**C. Why is there limitation in side to side movements**?

As we age we become less flexible in back and hips. Any challenge to movement (weakness, injury) and/ or pain, esp. involving legs and trunk, causes a person to tighten up and protect many areas of the body.

Tightening up with balance loss is a protective response and a person usually reverts to old patterns of movement when this happens. It is important for people to be able to recover without going into an “old patterns” that might cause them to fall in their braces. This can often be improved over time with gentle, slow practice.

**d. Side to Sides Progression**:

1. Assume OSP - Optimal Standing Position facing parallel bars or counter - HOLD ON!
2. Lean into counter (facing counter) feet slightly back from counter. Barely move hips from side to side –
3. Do NOT MOVE shoulders/head
4. You may feel a stretch or some pulling on the side you are moving toward
5. SYMMETRY: Move hips an equal amount from side to side.
6. Widen sway at counter with NO shoulder/head sway
7. Take a small step back from the counter but HOLD ON!
8. Next step: Stand between 2 chairs if they are heavy and watch yourself in a Mirror
9. Sway hips side to side minimally and later broaden sway
10. Be very careful to NOT FATIGUE!!
11. Keep movements symmetrical!! Without moving shoulders and head –
12. Remain in (OSP) optimal standing position. If you see your buttocks drop back, then you have lost OSP.
13. Do these slowly, fast, and medium speed without letting shoulders/head sway or buttocks dropping back
14. Gradually hold on less and less as long as you can maintain symmetry
15. Progress to not holding on. Notice that the amplitude (width of sway) decreases when you do this. Goal is to have the amplitude be the same holding on and not holding on, with no shoulder sway
16. SWAY to one side, unweight the opposite foot a bit and HOLD for a few seconds without letting your hip drop. If your hip drops on the non-weight bearing leg side, it means the opposite hip is weaker. Sway slightly less to side and hold, or decrease time of hold to make the movements symmetrical
    1. **Stepping Side to Side**: (Video #, Slide # )
17. Optimal standing position (OSP) at counter – HOLD ON!
18. Step to the side with the stronger leg and don’t let your buttocks drop back; your hip on non-weight bearing side should NOT drop down!
19. Step to the side. Make sure that your knee does not feel like it will give out. It shouldn't if you maintain OSP
20. Go both to left and right
21. Bring legs fully together with each step
22. You want your legs to take equal width steps
23. Take narrow steps, wide steps, fast, slow, medium steps without buttocks falling back or hip dropping.
24. Gradually do this without holding on
25. You have succeeded when you can do the grapevine/weave (define?) without holding on
    1. **Challenges to Success:**
26. Dislocated/dislocating hip
27. Significant weakness throughout the hip
28. Significant muscle imbalance throughout hip
29. Weakness of hip adductors – muscles that bring your legs together
30. Hip flexion contractures (tightness)
31. Hip pain, esp. from arthritis/bursitis
32. Limitation in hip and low back movements
33. Scoliosis impacting hip movements
34. Difficulty maintaining OSP
35. Your brain telling you: “it can’t be done!; I will fall!; My knee won’t hold!; And my body doesn’t do that!; And, and, and…”
36. These obstacles do not mean you cannot succeed. They mean your way of doing them may need to be adapted.
37. Fear