

BALANCE: **WHAT** is it, **WHY** Should you Care, & **HOW** to Improve

What is balance?

Balance is the ability to maintain and control a position while performing a task. This can either be while remaining still (sitting at a table, standing in place) or while moving (walking or running). Throughout the day we encounter many different environments and tasks.

Why is balance important?

Some of the most basic tasks we take for granted require balance including getting dressed, walking around the yard, kicking or throwing a ball, even walking up and down stairs! We begin to work on balance as infants trying to sit on our own. Our balance should improve as we grow, but if there is a problem with our balance then performing more advanced tasks as we get older becomes much more difficult.

Having good balance also reduces the risk of injury while participating in the activities you love. Poor balance leads to a higher fall risk. Injuries related to poor balance include:

- Sprained ankles
- Knee injuries
- Sprained or broken wrists from trying to catch yourself
- ACL injuries in female athletes (especially in teenage years)
- Head injuries (concussions from not being able to catch yourself)

What are the building blocks necessary to develop balance?

- **Vision:** our eyes are often the strongest component of balance, allowing us to see obstacles in our path and determine how to navigate our environment.
- **Vestibular System:** the inner ear is the home to a small structure that helps provide the brain with information about your head position and how the body is moving through space. This part of the body tells us when we are spinning, if our head is tilted or turned or upside-down, and even if you are walking.
- **Body Awareness (Proprioception):** your brain receives information from the joints and muscles/ligaments surrounding them about how your body is positioned and helps us become aware of how our body needs to move.
- **Core Strength:** strength and balance works from the inside-out. Without a strong base (your core) the arms and legs used to maintain your balance do not have something stable to rely on. Lack of core strength results in more movement of the arms and legs, meaning we have less control of our bodies.
- **Leg Strength:** if you're standing, you're using leg muscles! Any weakness throughout the legs puts stress on the rest of the body and causes you to fatigue at a faster rate.
- **Foot Strength:** your first point of contact with the ground needs to be strong to hold you up throughout the day. Without the tiny muscles in the feet making small adjustments to the position and shape of your foot, your legs would lose control.



How can I tell if my child has problems with balance?

Balance skills improve with age and these skills include:

- **18-24mo:** picking up toys from the floor, walking backward while pulling toy, attempting to kick ball
- **2-3 yrs:** running, walking up/down stairs, jumping with feet together, kicking a ball
- **3-4 yrs:** stand on one foot 3-8 seconds, walk on tiptoes, riding tricycle, climbing jungle gyms and ladders
- **4-5 yrs:** stand on one foot 5-10 seconds, one foot hopping 5x, walk on line
- **5-7 yrs:** walks stairs while holding object & alternating feet, galloping/skipping, riding bike, single leg balance 10-15 seconds
- **8-9 yrs:** hopping sideways and backward
- **10 yrs & Older:** single leg balance 20-45 seconds, advanced ball control

Signs of difficulties with balance include:

- Falling easily or cannot recover quickly
- Stiffer movements or poor control of the arms or legs
- Avoiding physical activity or only participating in very specific activities
- Fearful of new games or scared of heights that do not face peers
- Difficulty getting dressed standing up
- Moving faster through activities than peers and with more upper body movement (flailing arms, wobbling trunk)

What activities can help improve balance?

Tall or Half-Kneeling: have your child stay still in these positions while playing a game like catch, popping bubbles, or passing a balloon with a partner. Make it more challenging by kneeling on a pillow or couch cushion and without letting the hands touch the floor.

Balance Beam: walk on the curb or a line drawn with sidewalk chalk and try not to step off. Make it a game with putting puzzle pieces at one end and the board at the other. Or pretend the floor is lava or a icy cold lake, make it across safely!

Single Leg Standing: try to stay standing on only one leg for as long as possible.

- Pretending to be objects that only have one leg like a flamingo, stork, ballerina, tree, or lamp.
- Pick up socks or small toys with your toes and bring them up to your hands.
- Trapping a soccer ball with one foot.
- Popping bubbles with your feet or kicking a balloon before they hit the ground.
- Practice in the pool; see who can stand on one foot the longest while trying to splash others.

Bike or Scooter: riding a bike will work the core and leg muscles needed for balance. If your child has training wheels, make one slightly higher than the other so they can learn to balance while rocking side to side. A scooter has moments of single leg balance with the added challenge of steering and movement.

Statues Game: everyone in the room has to freeze in a fun position and stay still for as long as possible like statues in a museum. The last person to move wins the game!



***** DISCLAIMER:** The information provided is not specific to any child. Not all activities would be appropriate for everyone therefore, if you have specific questions or concerns regarding your child please reach out to your physical therapist or primary care physician. Never force your child to do an activity that is too challenging and always ensure safety and supervision during activities.