WEEK 3

Balances

WEEK 3

Being Balanced

“Life is like riding a bicycle. To keep your balance, you must keep moving.”

— Albert Einstein

“Balance is the perfect state of still water. Let that be our model. It remains quiet within and is not disturbed on the surface.”

— Confucius

Life is a balance between rest and movement.

— Rajneesh

“Next to love, balance is the most important thing.”

— John Wooden

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Static Balance

Static balance refers to the ability to maintain a stable position or posture while remaining motionless. It involves keeping the body aligned and centered against the force of gravity, which is essential for various activities.

Static Balance Relies On:

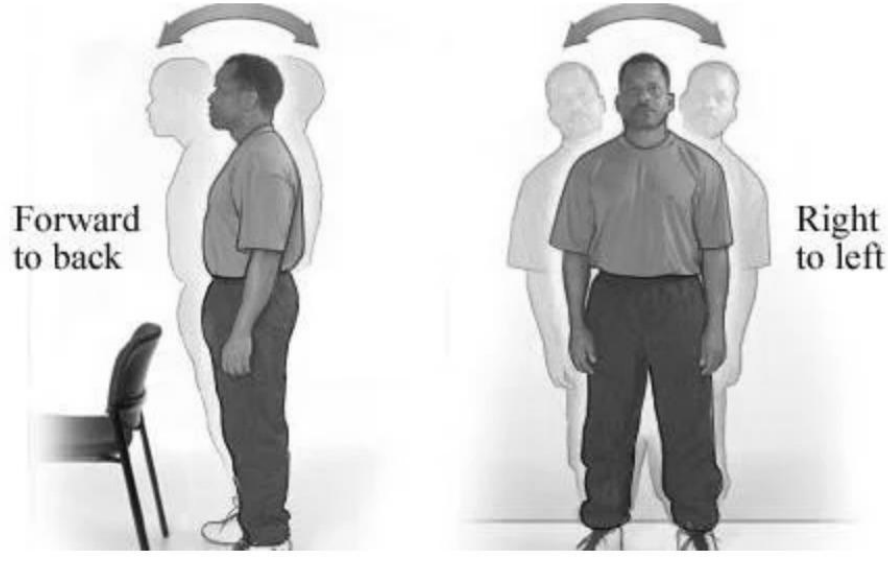
- **Postural Control:** Static balance focuses on maintaining an upright posture without movement.
- **Core Engagement:** A strong core is vital for achieving and sustaining static balance, as it helps stabilize the body.
- **Endurance:** Exercises aimed at improving static balance often emphasize holding a position for extended periods, enhancing the ability to maintain stability during daily activities.

Static balance is crucial for performing tasks such as:

- Standing on one leg
- Sitting unsupported
- Holding specific poses in activities like yoga, martial arts, or Super Nova

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Sway



We all sway, even when we are trying to stand still.

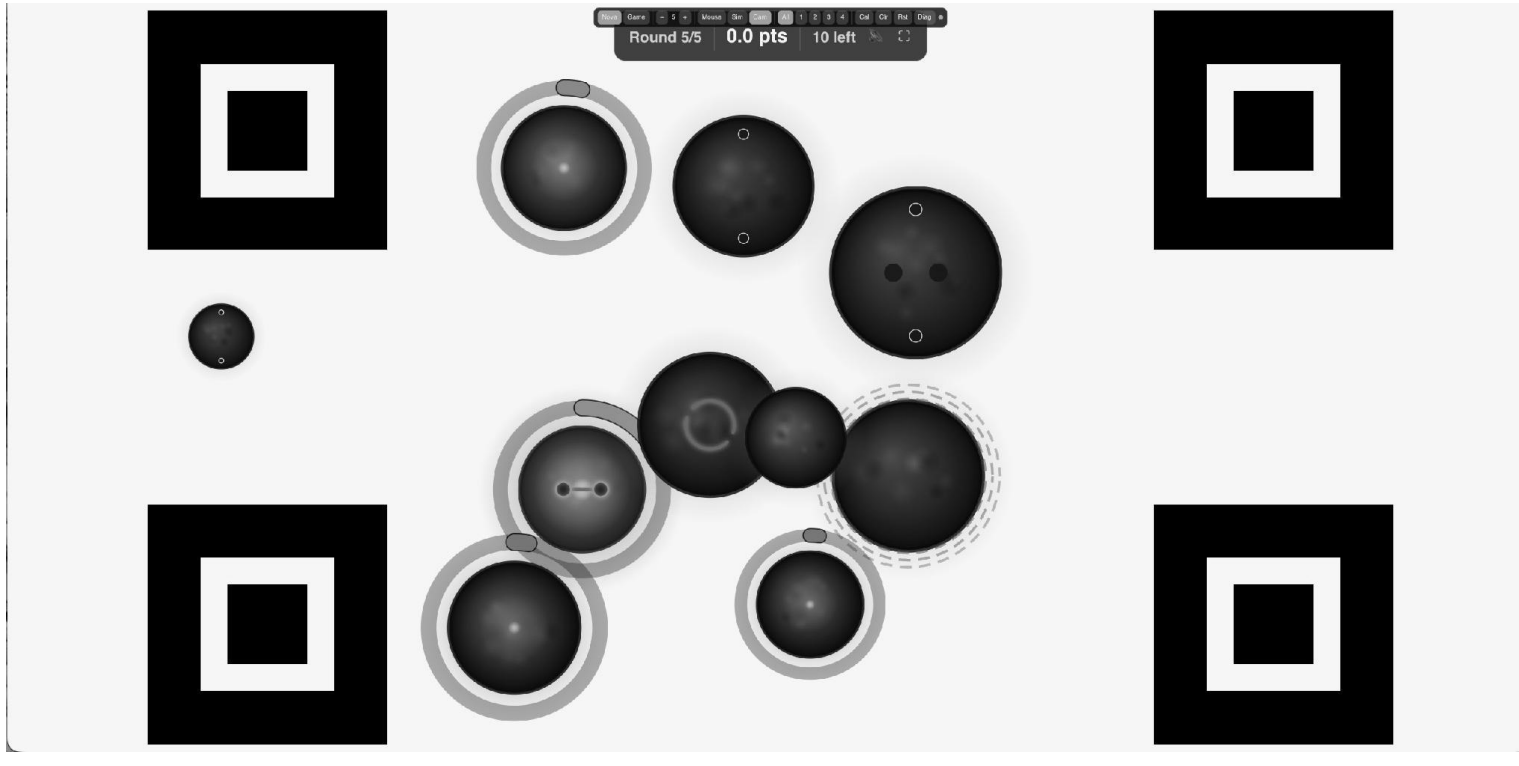
This is natural.

It is also true that an increase in the amount of sway makes it more difficult to move with grace and poise.

Improving static balance reduces sway and improves poise.

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Improving Static Balance



Super Nova is designed to test static balance.

- Stillness is required to hold the position of the Spark on the screen
- Poise is required to maneuver that Spark skillfully.

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Super Nova Training Secrets

Exercise	Description
Feet Together	Stand with your feet touching or as close together as comfortable.
One Foot in Front of the Other	Position one foot in front of the other, maintaining an upright posture.
One-Leg Stand	Stand on one leg while keeping your body tall and aligned.
Heel-to-Toe Stand	Stand with the toes of one foot touching the heel of the other foot.
Side Leg Raises	Stand on one leg and lift the other leg to the side, keeping your posture tall.

These positions can be held for 10–60 seconds as often as you would like.

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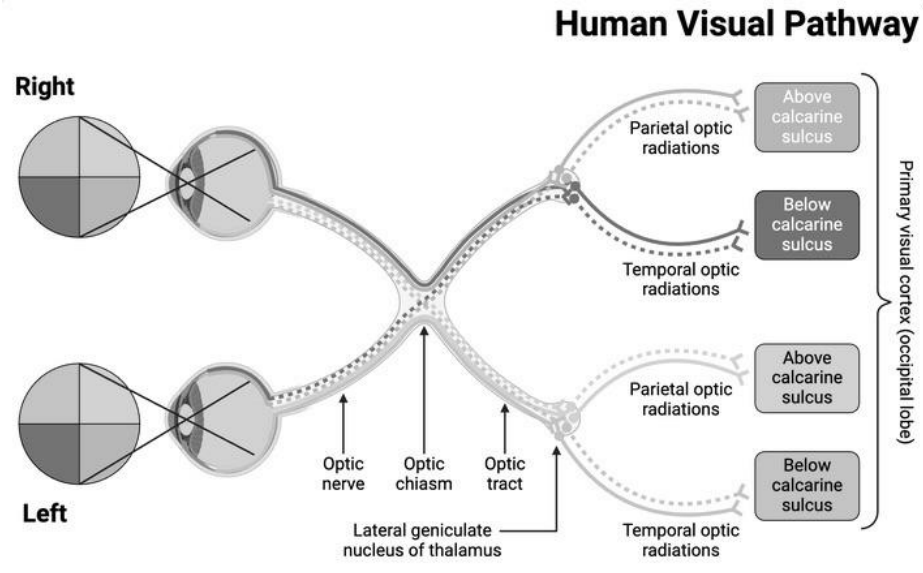
Dynamic Balance

Dynamic Balance unites stability with movement. It integrates the:

- **Visual System:** Provides information about the environment and helps in spatial orientation.
- **Vestibular System:** Located in the inner ear, it helps maintain balance by detecting changes in head position and movement.
- **Proprioceptive System:** Comprises sensors in muscles and joints that inform the brain about body position, allowing for adjustments to maintain balance.
- **Cognitive System:** We use our brains to blend and then interpret sensory input.

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The Vision System



We are accustomed to thinking about our vision solely in terms of the “pictures” we see in our minds.

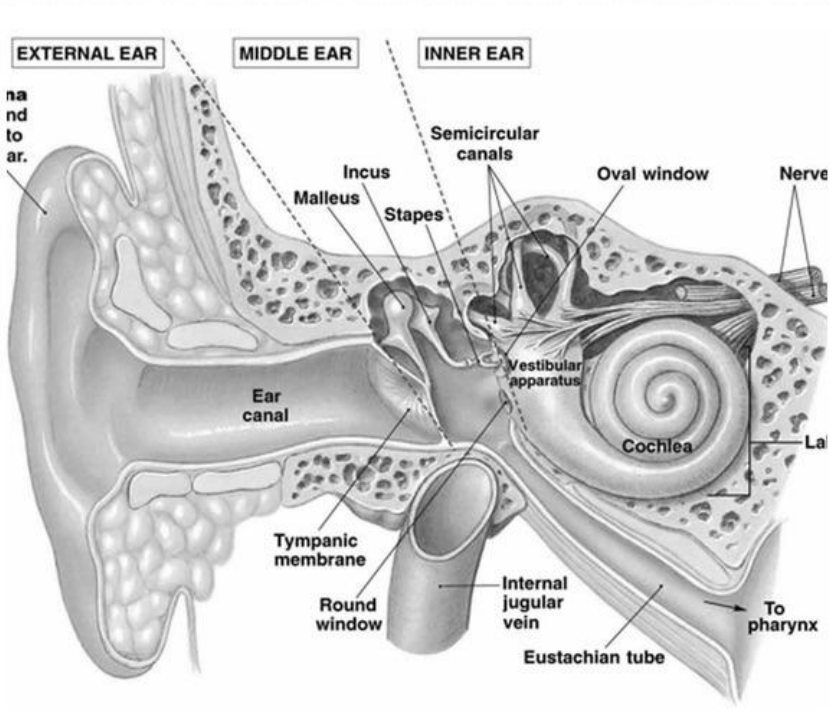
In fact, the human vision system is tightly integrated with other systems. That integration is what creates BALANCE.

Most people find it more difficult to maintain their balance when their eyes are closed.

Yoga practitioners are taught to look at a single point on a wall when they are attempting a standing balance pose.

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Vestibular System



The Vestibular System Integrates:

- **Spatial Orientation:** Provides awareness of body position in space.
- **Coordination of Eye Movements:**

The vestibular system sends signals to the brain about head position and movement. This information is integrated with inputs from the eyes and proprioceptive feedback from muscles and joints to maintain balance.

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Important Dynamic Balance Reflexes

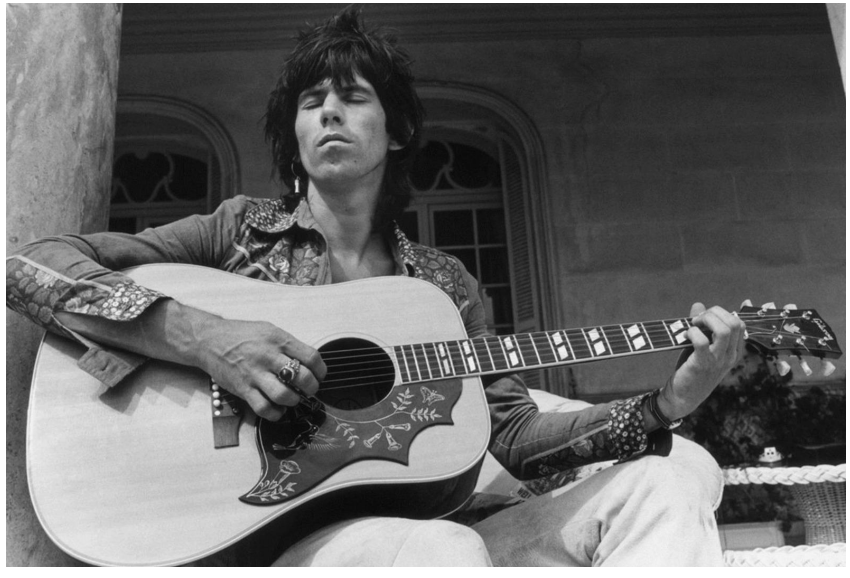
Vestibulo-Ocular Reflex (VOR): The reflex acts to stabilize images on the retinas of the eye during head movement. Gaze is held steadily on a location by producing eye movements in the direction opposite that of head movement. For example, when the head moves to the right, the eyes move to the left, meaning the image a person sees stays the same even though the head has turned.

Vestibulospinal Reflex: The VSR helps maintain balance, posture, and stability in the body. It coordinates signals from the vestibular system in the inner ear with muscle responses in the body, particularly below the neck.

- **Balance Maintenance:** The VSR triggers muscle responses to keep the body upright and stable when the head moves.
- **Postural Adjustments:** It adjusts muscle tone in the neck, trunk, and limbs to prevent falls and maintain posture during movement.

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Proprioceptive System



Proprioception is the body's ability to sense its own position and movements in space.

Proprioception:

- Operates subconsciously, meaning individuals can perform tasks without actively thinking about their body position.
- Involves specialized sensory receptors located in muscles, tendons, and joints.
- Rapidly adjusts movements based on the body's position in relation to the environment.
- Helps the brain integrate information from various sensory systems to coordinate body movements effectively.

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Kinesthesia



Kinesthesia: is the perception of body movements and changes in body position. This sense is engaged during physical activities like walking, running, driving, dancing, and swimming — any action that involves movement. When you compress or tense your muscles, they detect and communicate sensory information about movement and posture.

This sense is also sometimes referred to as muscle memory.

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Cognitive System

Several cognitive functions contribute to balance:

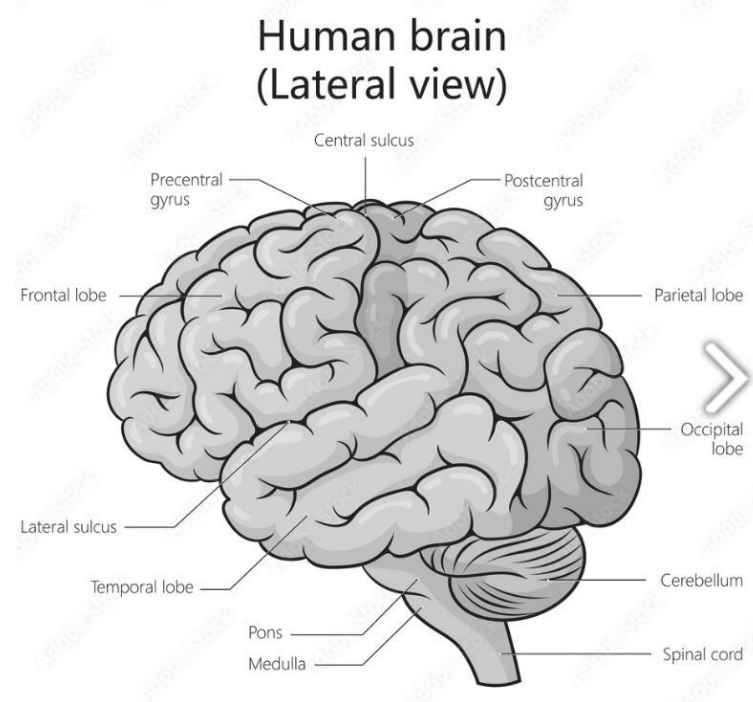
- **Attention:** Allowing for quick reactions to changes in the environment.
- **Memory:** Helps recall past experiences and learned movements
- **Decision-Making:** Determining the best course of action to maintain poise.

Cognition influences balance in the following ways:

1. Sensory Integration

2. Movement Coordination

3. Adaptation to Environment



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Philippe Petit



After seeing circus high-wire acts, he strung a rope between two trees on his parents' property and taught himself tightrope walking.

By the time he was 16 years old he had mastered the backward somersault, the front somersault, the unicycle, the bicycle, the chair on the wire and jumping through hoops on the wire.

As a young adult he supported himself as a juggler on the streets of Paris. There he met the Czech aerialist Rudy Omankowsky, from whom he learned how to rig a wire for long walks at great heights.

WEEK 3

Life on the Line

"Death frames the high wire. But I don't see myself as taking risks. I do all of the preparations that a non-death seeker would do."

— Philippe Petit

Philippe Petit spent six years planning and training for the Twin Towers high-wire walk. During those years he learned everything he could about high-wire techniques and the construction of the buildings he intended to traverse. He practiced at a variety of locations and sharpened his skills as a performer before attempting his most famous walk. He was 1,350 feet above the ground. He performed for 45 minutes, making eight passes along the wire, during which he walked, danced, lay down on the wire, and knelt to salute watchers.



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One Year Later…

Petit fell 45 feet while rehearsing a high wire act with the Ringling Bros. and Barnum and Bailey Circus – he required surgery but lived and resumed walking on the high wire.

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One Step Toward Better Balance

Single Leg Stand

1. Start standing tall with your feet hip-width apart, holding onto a stable surface if needed.

2. Slowly lift one foot a few inches off the floor.

3. Hold it for anywhere from 10 to 60 seconds.

4. Repeat on the opposite side, performing three sets on each side.

WEEK 3

Another Step Toward Greater Poise

Tandem Walking (also known as heel-toe walking) improves dynamic balance and coordination, both of which are important for walking with confidence. This movement challenges your stability as your center of gravity shifts, mimicking the sensation of walking on an uneven surface.

1. Start standing tall with your arms relaxed at your sides.

2. Place one foot directly in front of the other, so your heel touches your opposite foot's toes.

3. Continue walking forward in a straight line using this stride for 10–20 steps.

4. Turn around and repeat three times in each direction.

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Yet Another Step Toward Greater Poise

Sit-to-Stand: Standing up from a chair is a movement that you most likely perform multiple times each day. Practicing it can help strengthen your glutes, quadriceps, and core muscles, supporting your balance and mobility.

1. Sit near the front edge of a sturdy chair with your feet flat on the floor, holding onto a stable surface in front of you if needed.

2. Lean your upper body slightly forward and press through your heels to stand up.

3. Slowly lower yourself back down with control.

4. Perform three sets of 10 repetitions.

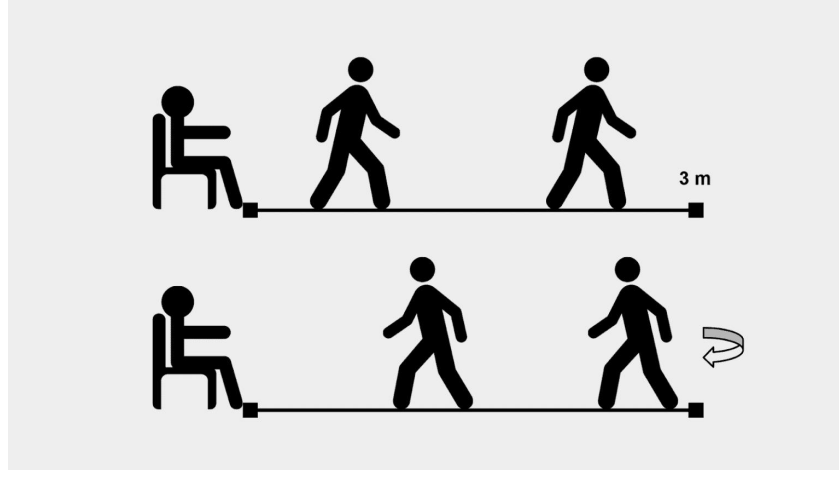
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TUG! = Timed Up and Go

TUG uses the time that a person takes to rise from a chair, walk three meters, turn around 180 degrees, walk back to the chair, and sit down while turning 180 degrees.

During the test, the person is expected to wear their regular footwear and use any gear that they would normally require.

The TUG is used frequently as it is easy to administer and can generally be completed by most seniors.



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Composure is Dynamic Mental Balance

Poise allows us to create and maintain a dynamic balance between:

Optimism and Pessimism



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Positive Traits of the Optimist

Trait	Description
Positive Outlook	Optimists maintain a hopeful perspective, believing that good things are possible.
Resilience	They bounce back from setbacks and view challenges as opportunities for growth.
Confidence	Optimistic individuals trust in their abilities and believe in their potential for success.
Focus on Opportunities	They tend to see possibilities rather than obstacles, which helps them navigate difficulties.
Hopefulness	A strong belief in a positive future drives their actions and decisions.

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Positive Traits of the Pessimist

1. Pessimists are risk-aware and look for potential problems ahead of them.

2. Pessimists use critical thinking to assess situations they are confronted with.

3. Pessimists have the motivation to improve and often inclined to take actions that can improve themselves or their situation.

4. Pessimists can be less emotionally reactive and have an easier time dealing with negative emotions and situations because they were expecting them.

5. Pessimists may have stronger attention to detail. A pessimist's focus on what could go wrong can result in meticulous attention to detail.

WEEK 3

Realism

“The pessimist complains about the wind; the optimist expects it to change; the realist adjusts the sails.”

— William Arthur Ward

Mental Balance Matters

- Pursuing greater poise allows us to create a more effective and dynamic balance between optimism and pessimism and that opens the door to greater realism…
- Realism strikes a continuous balance by:
  - Focusing on practical assessments of situations without extreme optimism or pessimism
  - Allowing for a more grounded perspective and better decision-making.

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Poise Blends Posture and Balance



Posture and balance are usually considered separately. In fact they are twins. They work together to create the foundation for all poise.

- In 18th century London, young women could study under a “posture master” who could help them achieve greater poise.
- In the 21st century, seniors should be able to study under a “poise master” who can help them age magnificently.