

# Your Neural GPS

To best understand this training, it is easiest to think about your balance system as your “neural GPS.” The GPS unit in your car or on your smart phone does several different things:

It tells you where you currently are and what’s around you.

It tells you how to get to where you want to go most efficiently.

It tells you how fast you are moving and when you will reach your destination.

Your balance system does the same things:

It tells you where you are in space and orients you to your surroundings.

It helps you plan and control your movements to get where you want to go smoothly and efficiently.

It tells you how fast you are moving and when you will reach your destination.

PLUS – It keeps you upright against gravity, the SAFETY ELEMENT!

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Signal Quality – Real world balance skill requires a very precise body-wide “symphony” of coordinated neural signals to occur. Signals from your eyes, your inner ear and your body’s movement nerve endings all play vital roles in how you balance and move. So, to IMPROVE balance, you have to challenge each component of the system and make sure that the SIGNAL QUALITY is optimized.

Signal Integration – In addition to having excellent signal quality, we also need exceptional signal integration. This is all about how your BRAIN processes the balance information it’s receiving from the eyes, the inner ear and the body. Ultimately, BALANCE LIVES IN THE BRAIN, which means that to train your balance optimally requires us to challenge your brain to integrate at the highest level. The WAY WE PERFORM the exercises in The Balance Gym is specifically designed to teach your brain this vital skill.

In your body we have a central processing unit and 3 satellite systems:

**Central Processing Unit – Your Brain**

**Satellites**

**Your Visual System**

**Your Inner Ear (aka Vestibular System)**

**Your Movement/Sensory System (aka Proprioceptive System)**

To move efficiently, powerfully and gracefully through the world, you need great Signal Quality from your satellites and great Signal Integration in your brain.

Any time you have deficits in any part of your Neural GPS, you will suffer on a physical level - all the same things we talked about above in regards to your car. When your balance system is compromised, you will be slower, weaker, more tense, anxious, and frustrated. You may experience weird, transient pains that come and go. You may experience high levels of fatigue most days for no apparent reason, and the list goes on. Simply put, when you have poor Signal Quality or Signal Integration it feels like you are driving through life with one foot on the gas and the other on the brake.

## Small Deficits = Huge Problems

One of the most fascinating things about the human balance system is that small deficits can create huge problems. We've already talked about the fact that your balance system is a symphony of different parts – all needing to play in sync. Just like one off-key instrument can ruin the work of an entire orchestra, a small deficit in Signal Quality or Signal Integration can profoundly disturb how you move, feel and perform.

Anyone who has ever slipped and lost their balance knows that the instinctive response is to tighten up your muscles in case you fall. This is not something that you have to think about – it happens through a very complicated set of reflexes. In other words, it's a non-conscious response to disruptions in your balance. These same reflexes are often triggered in a less dramatic fashion from subtle disruption our neural GPS. If your brain is getting poor signals or integrating those signals incorrectly, it may create reflexive muscle tension that you carry with you 24/7. This can result in a host of movement problems and pain over time as this unnecessary muscle tension alters how you move – literally with every step you take each day.

## Total Balance Training Based on Neuroscience

Because of the complexity of your balance system, it is essential that any complete balance-training program assesses and trains you to improve Signal Quality and Signal Integration. What this means is:

Balance training **MUST** challenge your **visual system** – this means:

Moving your eyes when your head is still.

Moving your head when your eyes are still.

Moving your head and eyes in opposing directions.

Balance training MUST challenge your **inner ear (vestibular system)**:  
Moving your head in rotation.

Moving your head in a nodding motion.

Moving your head in diagonal directions.

Balance training MUST challenge your **movement/sensory system (proprioceptive system)**

Challenging your balance progressively from lying or sitting, to standing on two feet, to standing on one foot, to walking and moving.

Challenging your balance by progressing your training from eyes open to eyes closed.

Balance training MUST challenge your **brain integration skills** – this means:

Performing exercises combining all of the elements above into walking drills.

## What Will I Notice? What Are The Benefits?

Improving your balance is going to have a profound affect on your life.

Vastly Improved Muscle Tone, Movement Skill and Posture.

Decreased Daily Muscle Tension and Improved Resistance to Stress.

Major Improvements in Strength, Speed, & Mobility/Flexibility.

Breakthroughs in Sports Performance.

Significant Decreases or Total Elimination of Chronic Joint and Muscle Pain.

Improved Visual Skills and Decreased Eye Strain.

Massive Improvements in Daily Energy with Decreased Fatigue.

Oh, and Better Balance! :)

Some of these improvements will be noticeable from your VERY FIRST TRAINING SESSION. Others will take more time to notice.

Here's the important point, YOU WILL NOT SEE ANY OF THESE IMPROVEMENTS IF YOU AREN'T LOOKING FOR THEM! Make it a point each and every week to take a few minutes and

look for the improvements – you'll see them and noticing them will be like rocket fuel for your motivation to continue to train.

## Safety First!

Your safety is our first concern. Here are the components:

### CONSULT YOUR HEALTH CARE PROFESSIONAL

Because we are not there to work with you in person, we do not know anything about your health. Caution dictates that you should speak to your health care professional before beginning the training program to confirm that it is safe for you to perform the exercises.

### CHOOSE A SAFE TRAINING POSITION

If you have balance deficits, or you know that when you have a tendency to get dizzy please begin all of these drills either seated or lying down. As you improve, you can progress from seated, to a supported lean (think of leaning against a wall here), to standing while holding on to something for balance, to full standing and beyond. You will see examples of this progression in the video.

### BE AWARE OF YOUR SURROUNDINGS

We suggest you begin your training with The Balance Gym material in a relatively open environment with nothing to run into or fall on should you somehow lose your balance.

### USE PROPS FOR BALANCE

As a caveat to #2 & #3, we strongly recommend that when you begin doing Balance Gym exercises standing that you do them near a wall, counter, or tall chair that you can use to stabilize yourself. This is not only OK, it's actually a great idea!

### STOP IF ANY STRANGE RESPONSE OCCURS

When dealing with your balance system, it can be a lot of work for your brain to sort out what you are doing. As a result, if you experience dizziness, blurred or double vision, or anything else that makes you uncomfortable, stop immediately and speak to your health care provider.

## Train Barefoot

You'll notice in the video that we are training in our socks. There's an important reason for that. When you do balance training of any kind, as well as your baseline assessments, it's very important that you take your shoes off. Shoes often provide additional "artificial" information to your feet and ankles that make performing the drills easier. While this is ok in the short term (or if you have to wear them because of your location), you will gain far larger benefits from the training program over time by working barefoot.

## How Much?” & “How Often?”

Training your balance system is like training the rest of your body: time and consistency both matter. Here's what we recommend:

10-15 MINUTES/DAY.

3-4 TIMES/WEEK.

### HERE'S THE REALLY IMPORTANT PART!

How you do those 10 – 15 minutes is up to you! We really do mean this. You can do them in sets of one minute, sets of two minutes, or all in one block. In fact, we are going to suggest that over time that you vary your schedule and see what works best for you with regards to your goals and lifestyle.