ZHEALTH
Performance

21st Century Strength:
Brain-Based Training for Power Athletes

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Brain-Based Training for Power Athletes

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"Learn avidly. Question repeatedly what you have learned. Analyze it carefully. Then put what you have learned into practice intelligently."

— Confucius

Foreword

Welcome to the world of Z-Health!

Let's start off with the basics:

Our System

The Z-Health Performance System, or "Z", is the name given to our **neurologically-based** performance enhancement program that incorporates a huge range of tools, skills and concepts. It is what many people call, ***"The Human Potential Project"*** as its main goal is to offer a path for improving every aspect of your health, life and athleticism.

Our Creed

Our operating creed is, ***"Everyone is an athlete."*** As a result, we have spent many years **reverse engineering elite athleticism** – finding and creating drills and skills, that with practice, can have you moving, feeling and performing at your best throughout your life.

Our Business

Z-Health Performance Solutions, LLC is the name of our company. We are a **life-long education company** with this directive: ***"We help create professionals in the top 1% of their respective fields."*** Whether that field is medicine, fitness, coaching, athletics, or business, understanding how the human body and mind work is essential to lifelong progress.

In short, Z-Health Performance is a system and a company that will help you better understand how **to rewire your own nervous system** to help you achieve all of your goals and more – as quickly and efficiently as possible.

On the pages to come you'll get a taste of the much larger Z-Health system. You'll read about just some of the science the system was built upon, our deliberate practice training model, how and why the nervous system rules everything, and (the whole reason you probably downloaded this report) five drills you can use to instantly improve your strength and performance.

And, as promised, we have included two bonuses at the back:

1) **Reflexive Lifting – How To Use Your Eye Reflexes For Instant Strength Gains.**
2) **Instant Self-Assessment: The Key To Lifelong Progress!**

Now for the important part…

Once you have read the report, the most important part is **to DO SOMETHING WITH IT.** Get up and try the drills, try the self-assessments, and utilize the eye positions the next time you get under something heavy. Progress comes from taking decisive action – so plan now to **ACT** on what you've read…

If you get stuck or have any questions email us or give us a call **IMMEDIATELY**. Everyone who works for Z-Health is an advanced level Z-Health trainer or Master Practitioner and we answer questions every day from people just like you that are getting started but aren't quite sure where to go next, can't quite figure out the drill, or have a question specific about their training.

You can reach us at 888-394-4198 or info@zhealth.net. We look forward to hearing from you and helping you down the road to achieving **YOUR** human potential.

Keep Moving,

Dr. Eric Cobb

P.S. As you read the rest of this report, remember that the most important thing I said was, **"DO SOMETHING WITH IT."** Very few people take daily decisive actions to change their movement and athleticism for the better. You've already set yourself apart from the crowd simply by asking for this report. Now take the next step. Everything that follows has been tested with top athletes, fitness enthusiasts, and people in pain around the world with dramatic success. Make sure to try it and find out for yourself…

SURVIVAL VERSUS PERFORMANCE

The human body – your body - is a wonder. Whether you love how you look in the mirror or not, your body is infinitely more complex and better run than the most advanced technological equipment you can imagine. In your body, if you are in even reasonable health, there are millions of isolated tasks being carried out simultaneously every moment of every day – usually in near-perfect harmony.

When this harmony is interrupted, however, while top performance may be your goal, **survival is priority #1!** The fact is, that your body is constantly attuned to staying **alive and uninjured** and it is your **nervous system** that handles this **most critical** of all tasks.

Sadly, your nervous system couldn't really care less if you can dunk a basketball, hit a smoking cross-court backhand, or hit a new bench PR. Instead, it cares about keeping you alive and uninjured so that you can obtain the basics of survival. **For most of us as athletes, this is the problem** – we want to push ourselves to the limit, while our nervous system wants us to curl up in a ball and stay "safe."

It can be incredibly frustrating!

However, when you finally wrap your head around your whole **"survival programming,"** everything suddenly begins to make a lot more sense.

You see, if you want to maximize your capabilities, you have to make sure that your nervous system feels "safe." The world's greatest athletes make everything look easy. **Another way to say that is that they look "unafraid."** They have mastered their bodies' responses to fear and learned to cooperate with their nervous system, instead of fight against it. The whole Z-Health system is designed to help you learn to do on purpose, what these elite athletes learned intuitively or accidentally.

Now that you understand that to be better – faster, stronger, smoother, and more athletic – you have to make sure your nervous system feels safe, **how do you do it?**

The answer lies in first understanding how your nervous system determines "safe" or "unsafe." It does this through utilizing a vastly complex array of neural signals and hard-wired reflexes…

Your nervous system, acting like a guard that is on duty 24 hours/day, is constantly at work – observing both your internal and external environments. It monitors your **surrounding environment** utilizing every system at its disposal – sight, sound, touch, etc. At the same time, it monitors your **internal environment** – movement, balance, heart rate, blood pressure, etc.

What is it doing with this monitoring? It is running all of the information it receives, moment-by-moment through a **"threat/no threat"** filter. If there is "no threat" in what you are currently doing, it's simply business as usual. If, on the other hand, it perceives "threat" **things MUST change.**

Let's look at a couple of real-world examples…

If you are in the stands at a baseball game, hear the crack of the bat and then suddenly pick up something moving toward you quickly in your peripheral vision (external stimuli) - you'll flinch and move to protect yourself. That flinch is fast, powerful and reflexive and designed to protect you from injury.

Conversely, if you are pushing a bench press that is too heavy (internal stimuli) and your nervous system believes you're about to rupture a pec, **it will hit the brakes – literally.** Your nervous system will shut down pushing power in an attempt to **protect you from yourself.** Just like the baseball flinch, this "shutdown effect" is fast, powerful and reflexive. Far from being uncommon, these types of "safety decisions" are being made reflexively all day, every day in your body..

So, it's pretty cool to realize that you have an onboard guardian angel, called your nervous system, specifically designed to keep you safe, right?

To a point, it should! But, here's the problem for athletes. In many cases, your nervous system hits the brakes **far earlier than necessary.** Why is that? Meet the arthrokinetic reflex...

ARTHROKINETIC REFLEX

If you run a Google search on this term, do not be surprised when you get a minimal number of hits! This **vital neural concept** is only now coming into vogue in the training and therapy communities.

Very simply, arthrokinetic reflex is a term that describes the **hard-wired neural loops governed by joint motion.** These reflexes are a two-edged sword. On the positive side, they help keep you safe when your body is in danger of damaging a joint. Conversely, these same protective reflexes can also hold back your training when they are misfiring.

Here's how the arthrokinetic reflex works. Your nervous system is continually monitoring where you are, what you are doing and how fast you are doing it via small nerve endings distributed throughout the body. The intricate work of this system is termed proprioception. The vast majority of this neural input comes from a class of nerve endings termed mechanoreceptors. You'll find tons of these when you start looking at the muscles, tendons, and ligaments of the body, but an even greater number are found around your joints.

When you move in such a way that your nervous system detects **a threat to structural integrity**, a barrage of signals shoots from your spinal cord into the involved area to shut down the activity. **This shutdown effect is based upon the relative amount and quality of the proprioceptive input coming INTO the spinal cord.** What that means is that you can inhibit this reflexive response by altering the **quality and quantity** of information being sent to the spinal cord and CNS!

Are you excited yet? **Probably not.** Let's get a bit more practical.

What this means in simple terms is that by altering improper or less-than-optimal nerve signals from the periphery to the spine, you can dramatically enhance performance by inhibiting your body's protective reflexes. **Thankfully, you can do this safely because the body's margin for error is very high!**

Where do these less-than-optimal nerve signals come from? Good question…

Most often they come from **compensatory movement patterns** that developed from old injuries, sensory-motor amnesia or other nasty little motion inhibitors. These compensatory movement patterns impact dramatically on the **QUALITY of proprioceptive information being sent to the spinal cord, which can then fire off our protective reflexes inappropriately.**

You can think of this reflex like the governor they sometimes put on cars – no matter how hard you push the accelerator the governor sets your top speed. The fact is, in most athletes the arthrokinetic reflex kicks in **VERY** early. Some research indicates that on average, most people can only contract between 20-30% of all their available muscle fibers at any one time, and even highly trained athletes stall out around 50% (Depending on who you read, some authors will say that we can go up to 70% or so). **Either way, what this means is that we are all far stronger than we look!**

Pavel Tsatsouline, Russian kettlebell and strength expert, has a great saying to describe this fact:

"Your muscles are already capable of lifting a car. They just do not know it yet!"

As we delve into two specific, practical strategies for maximizing your neural efficiency and strength, keep in mind that the **primary goal is to decrease INAPPROPRIATE reflex activity in the body.** Doing so will radically increase both your strength and performance...

STRATEGY #1 - DYNAMIC JOINT MOBILITY (DJM) TRAINING

While many people are throwing around terms like dynamic joint mobility these days, most often they are referring to dynamic stretching rather than specific joint mobility work. These are not the same thing! Dynamic flexibility training is an isolated tool that focuses on lengthening body tissues to meet the demands of a specific activity. On the other hand, correctly performed DJM drills provide a proprioceptive training effect that makes the body neurologically "smarter" about movement.

The Z-Health approach to using DJM training to improve your neural signal quality is to work each joint through specific drills that **encompass all potential ranges of motion and speeds.** Done correctly, these "simple" drills require high levels of specificity and concentration and promote tremendous performance gains.

Correct DJM training is one of the fastest methods available for decreasing the negative effects of the arthrokinetic reflex on your performance. By using specific, focused dynamic joint mobility training drills you can undo many of your body's compensations, improve the quality of your neural signals and unlock your performance potential at remarkable speeds!

To get the most out of any DJM training system here are some basic rules to keep in mind. A good DJM program that will help re-wire YOUR nervous system for maximum performance must:

1. **Address every joint area in the body including the hands, feet, and spine.**
2. **Be specific enough to ensure that every joint is being moved through all potential ranges of motion.**
3. **Contain a range of training speeds that allow you to work on maximum body control and coordination no matter the speed of the event.**
4. **Emphasize efficient exercise performance over high numbers of reps. (Quality vs. Quantity)**

Adding **SUPERIOR DJM** work to your current training regimen is a must if you want to really reach your genetic potential.

Now, let's look at strategy #2…

STRATEGY #2 – DELIBERATE PRACTICE: STRENGTH IS A SKILL

Every year, tens of thousands of articles are written in magazines, websites and blogs around the world and most of them sound exactly the same. In fact, one of my favorite sayings is from the Demotivators line of office art. It says,

> "Blogging — Never before have so many people with so little to say said so much to so few."

While that may sound a bit harsh, if you've been involved in this field for any length of time you may agree!

Virtually every piece that you see revolves around different set/rep schemes, novel exercises, nutrient timing programs, and other areas of arcane research. While there is nothing wrong with any of these ideas, the current training culture overlooks one simple, but hugely important, fact: **the QUALITY of what you do determines your end results!**

At a base level, we all know this. When it comes to our cars, our computers or other technology we want products that are reliable, dependable and do their jobs with complete efficiency. Why should we expect something different from our exercise programs?

In Z-Health we work very hard to get trainees focused on the fact that the **quality of EVERY REP** makes a huge difference at the end of the day. We refer to this as our **Perfect Rep Principle.**

Every Perfect Rep has 4 different components in the beginning stages of training. We call these four components the **4 Elements of Efficiency.** Here they are:

Perfect Form – The human body is a beautifully designed adaptation machine. In fact, our physiology is hard-wired to always make us better at exactly what we do! This means that your current body is the direct result of your habitual activities. **The lesson here is that if you train with poor form or even slightly poor form – your body will get better at moving incorrectly!**

The end result of this is typically injury, pain, lack of progress and poor performance. While the exercise world preaches good form, most people think "close enough is good enough." Nothing could be further from the truth if you want to maximize your results. Remember this – NEVER SACRIFICE PERFECT FORM FOR AN EXTRA REP OR TWO.

Dynamic Postural Alignment – When you mention the word posture to most people, they usually flashback to their grandmother primly telling them to "stand up straight." Excellent posture is far more complex than just standing up straight, however. In your pursuit of efficient movement and maximum strength, you must constantly be aware of your posture – especially while in motion.

This is a vital element in injury prevention and better performance that most people overlook. Poor posture, especially while in motion, will fire off the body's arthrokinetic reflexes like lightning. Avoid bad posture while training like the plague!

Synchronized Breathing – If you had the chance to take a quick look at the human lung you would see that it resembles a large sponge and works like one as well. The movement of your body either squeezes air out, or reduces the pressure on the lungs, letting air flow back in.

As simple as this sounds, and as instinctive as breathing should be, many people breathe 'out of sync' during movement. The basic Z-Health training rule is to **RELAX** and allow air to be squeezed out of the lungs when they are compressed, and let air flow back in when movement causes the chest to expand. You'll be amazed at what this can do to your strength and performance. In fact, embracing this simple rule will dramatically improve your joint mobility, coordination, and body control.

Balanced Tension and Relaxation – Experience teaches us that carrying excessive tension in the body is tiring and counter-productive for maintaining high levels of energy and efficiency.

Despite this common knowledge, few people develop the skill of maintaining relaxation while in motion. **Movement precision, the cornerstone of efficiency, depends upon your ability to maintain the perfect balance of tension and relaxation.** As you train, **tension is necessary** to create muscular activity and growth. However, **excessive, inappropriate tension breeds injury and a hyper-responsive arthrokinetic reflex.**

To reset your strength governor learn to use just the necessary tension in your training and no more! The more you practice this skill, the more precise your movement will become, your energy levels will soar, and you will move more and more like the athlete you've always wanted to be.

So, there you have it – two strategies for the LONG-TERM:

1. **Incorporate a precise, complete DJM training program into your daily routine.**
2. **Practice the Perfect Rep every session – with deliberate intent.**

Add just these two strategies into your strength training and you will see progress that leaves your buddies shaking their heads – wondering what new supplement you're taking but not telling them about…

Now, that we've covered these BASIC STRATEGIES, we're going to give you even more information to skyrocket your results. We're going to teach you how to know FOR CERTAIN that you are doing the right thing at the right time for your body.

To do that, we need to revisit…

YOUR THREAT RESPONSE

Earlier we talked about how the nervous system often hits the brakes far sooner than it needs to because of an overzealous threat response. As an athlete, this may make you wonder, "So, EXACTLY what does my body consider a threat?"

Unfortunately, this topic gets very complex very quickly…

Because your nervous system is so concerned about your safety, almost anything can be classified as a threat. It can be an old scar causing a movement restriction, visual issues causing your brain not to trust the information coming in, something disagreeable in your lunch, poor respiratory patterns, a fight with your boss, bad lighting, extreme temperatures, uneven footing, and the list goes on...

The fact is, the list of potential threats to your body is varied and nearly infinite. The important thing to note about the list above is that many of the threats listed aren't obvious, they are really subtle. And, it's rarely one threat that makes the difference — instead it's the build-up of them all to the body, **as the effect is cumulative.**

And, because it is cumulative, what your body considers a threat one day may not be a threat the next. Which makes this whole threat management thing sound really complicated. **But, it's not once you understand it and know what to look for.**

So, how do you recognize it?

Whether you know it or not, you've seen this phenomena in action. You head out for your standard run, pick up your favorite kettlebell, or load up the bar with your usual weight, and your body is like "nope, this isn't happening today."

That is threat overload. It is your body's way of saying that what you are trying to do is simply too much. And if you insist on continuing, your body WILL find another way to get your attention and move you to safety.

And the body's favorite way of doing that? Pain…

So, what do you do about it?

1. **Build Your Internal Awareness –** Learn what your body's danger signals are and learn to pay attention to them. If you get them while training, back off on whatever you are doing at the time. Reduce the mileage, slow the pace, reduce the weight. Change one or more variables until you start feeling better.
2. **Self-Assess –** When many people hear the term assessment, they assume that it's only for the professionals. Nothing could be further from the truth! You, most likely, are your own coach and trainer. As a result, you owe it to yourself to learn and use the two powerful, self-assessments we've included in the back of this report. As you learn and practice them, you will have a sniper-sharp, moment-to-moment "guide" to your best training sessions ever. You will likely find these two self-assessments INVALUABLE and if you want to learn more of them, we teach many more in our Essentials of Elite Performance weekend workshops.

SUMMARY

Let's quickly review what we have covered to this point in bullet form:

1. Your nervous system, particularly the arthrokinetic reflex, **governs** your strength and performance.
2. It does so based primarily on a **"threat/no threat" filter.** It wants to keep you alive – it doesn't care about your sports performance.
3. Any altered or poor movement patterns, old injuries, etc in your body can all create "threat" resulting in **sub-par performance.**
4. To maximize your strength and athleticism, your training must focus on **decreasing the negative effects** of these reflexes.
5. The fastest, most efficient method for accomplishing this is by making your body smarter about movement through **precise DJM training** that hits every joint in the body at every speed. This lowers the "threat" of movement tremendously and resets your neural brakes.
6. In every form of training, every rep counts. So in your practice, **quality and not quantity, is the goal.**
7. **Deliberate Practice is KEY.** To maximize the quality of every rep you perform of any activity, there are four elements of efficiency to follow:
    - **a. Perfect Form**
    - **b. Dynamic Postural Alignment**
    - **c. Synchronized Respiration**
    - **d. Balanced Tension and Relaxation**
8. Your body can perceive anything as a threat to survival. Anything! And, you may not consciously realize it.
9. So, ongoing self-assessment and re-assessment is the key to lifelong progress!

Got enough theory for now? Let's get to work…

DYNAMIC JOINT MOBILITY DRILLS FOR STRENGTH

Now it's time to turn the science into practical application – which is what Z-Health is all about. Below are five (of the 160) Level 1 drills that we find most effective for anyone focused on strength training.

Would you like to know EXACTLY which of these drills is beneficial for you? Then jump ahead to Bonus #2, where we give you the self-assessments you need to determine the effectiveness of the drills on your nervous system!

Ankle Mobility
Lateral Tilts

Key Points

- Begin in neutral stance
- Place one foot directly in front of you, toes facing directly forward with your full foot in contact with the floor
- Slowly roll to the outer edge of the foot
- Concentrate on creating a gentle stretch in the target area (see pictures)
- Return to neutral and repeat
- Make sure to perform this movement on a soft surface
- If you are unable to feel the stretch in the target area, try using one of the two illustrated alternate positions

Common Errors

- Feeling the stretch up by the toes or on the inside of the foot
- Flexed body position
- Tightening abs and/or holding breath
- Balance problems create extra tension in the body, so perform the drill holding on to a chair or wall

Do not overstress the knee when performing this movement.

Lateral Tilt Target

Stretch the area directly between the bottom of the outside ankle bone and the heel (pictured above). To find the target move approximately an inch down and ½ inch back from the bottom of your outside ankle bone.

Foot in Neutral Position

Standard Neutral Position

Alternate Position #1

Alternate Position #2

Ankle Mobility
Medial Tilts

Key Points

- Begin in neutral stance
- Step out to one side in a lateral lunge keeping 70% of your weight on the lunging leg
- Make sure toes are facing straight ahead on both feet
- Begin with the foot of your non-lunging leg in contact with the floor
- Slowly roll to the inner edge of the foot
- Concentrate on creating a gentle stretch in the target area (see pictures)
- Return to neutral and repeat
- Make sure to perform this movement on a soft surface
- Return to neutral and repeat

Common Errors

- Feeling the stretch by the toes or in the knee
- Flexed body position
- Tightening abs and/or holding breath
- Balance problems create extra tension in the body, so perform the drill holding on to a chair or wall

Do not overstress the knee when performing this movement. You can perform it with knee bent or locked for comfort.

Medial Tilt Target

Stretch the area directly between the bottom of the inside ankle bone and the heel (pictured above). To find the target move approximately an inch down and ½ inch back from the bottom of your inside ankle bone.

Begin in Neutral Stance

Step Out to a Lateral Lunge & Tilt

Closer View of the Foot Position

Mid-Foot Mobility
Middle Toe Pulls

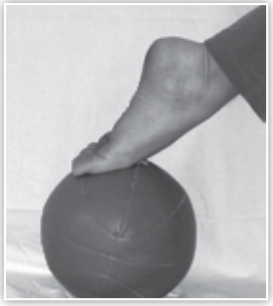
Key Points

- Perform this movement on a soft surface or on an elevated bolster
- Begin in neutral stance
- Move one leg behind you curling the toes under (see photos)
- Position your foot to create a mild stretch at the target site
- While maintaining that stretched position, do 3-5 small knee bends with the front leg to gently increase the stretch

Common Errors

- Feeling the stretch in the toes and not the target area
- Practicing on too hard a surface can create pain or excessive tension
- Flexed body position
- Balance problems create extra tension in the body, so perform the drill holding on to a chair or wall

Do not overstress the foot & ankle joints when practicing this movement



Use a Bolster to take Pressure Off the Toes

Middle Toe Pull Target

Stretch the area just above the middle cuneiform bone (pictured above). To find it move approximately an inch down toward the toes from an imaginary line joining your ankle bones directly in the middle of your foot.

Side View

Rear View

Mid-Foot Mobility
Outside Toe Pulls

Outside Toe Pull Target

Gently stretch the area just above the cuboid bone (pictured above). To find it move just below and in front of your outside ankle bone into the soft spot you find there.

Side View

Rear View

Use a Bolster to take Pressure Off The Toes

Rear View Close-Up

Key Points

- Perform this movement on a soft surface or on an elevated bolster
- Begin in neutral stance in the middle toe pull position
- Drop the ankle to the outside of the body
- Position your foot to create a mild stretch at the target site
- While maintaining that stretched position, do 3-5 small knee bends with the front leg to gently increase the stretch

Common Errors

- Flexed body position
- Tightening abs and/or holding breath
- Practicing on too hard a surface can create pain or excessive tension
- Balance problems create extra tension in the body, so perform the drill holding on to a chair or wall

! Do not overstress the foot & ankle joints when practicing this movement

Mid-Foot Mobility
Inside Toe Pulls

Inside Toe Pull Target

Stretch the area just above the navicular bone (pictured above). To find it move just below and in front of your inside ankle bone into the soft spot you find there.

Side View

Rear View

Key Points

- Perform this movement on a soft surface or on an elevated bolster
- Begin in neutral stance
- Move one leg behind you and out to the side, curling the toes under (see photos)
- Position foot to create a mild stretch at the target site
- While maintaining that stretched position, do 3-5 small knee bends with the front leg to gently increase the stretch

Common Errors

- Feeling the stretch in the big toe and not the target area
- Practicing on too hard a surface
- Flexed body position
- Balance problems create extra tension in the body, so perform the drill holding on to a chair or wall

! Do not overstress the foot & ankle joints when practicing this movement

Use a Bolster to take Pressure Off the Toes

Thoracic Mobility

Anterior/Posterior Glides — First Position

Key Points

- Begin sitting in a neutral spine position with one leg elevated
- Take a deep breath in and then exhale while rounding the mid-back
- Compress around the midpoint of the sternum as you round the mid-back
- Inhale as you reverse the motion lifting the sternum forward and up
- Be certain to keep the low back as still as possible
- Keep your face and abdominals relaxed
- Switch legs and repeat

Common Errors

- Using the shoulder blades/scapula to create the motion
- Tightening abs and/or holding breath
- Tightening the muscles between shoulder blades
- Jutting head and/or neck forward or back

Begin in Neutral

Round the Mid-back Into Flexion

Arch the Mid-back Into Extension

Thoracic Mobility

Anterior/Posterior Glides — Third Position

Key Points

- Begin standing in neutral stance
- Take a deep breath in and then exhale while rounding the mid-back
- Compress around the midpoint of the sternum as you round
- Inhale as you reverse the motion lifting the sternum forward and up
- Be certain to keep the low back as still as possible
- Keep your face and abdominals relaxed

Common Errors

- Using shoulders to create motion
- Tightening abs and/or holding breath
- Tightening muscles between shoulder blades
- Jutting head and/or neck forward or back

Round the Mid-back Into Flexion

Arch the Mid-back Into Extension

Wrist Mobility
Wrist Flexions/Extensions

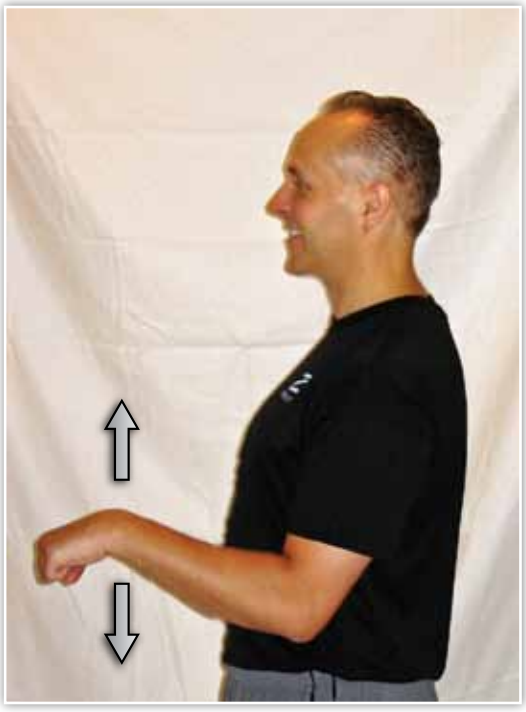
Key Points

- Begin in neutral stance
- Hold elbows close to the side of the body and bend the elbows to 90 degrees
- Make a loose fist and be certain that the knuckles are parallel to the floor
- Move the wrist up and down while allowing the hand to follow

Common Errors

- Moving hand first instead of wrist
- Lack of forearm motion
- Tightening abs and/or holding breath
- Raising shoulders

Focus on Moving the Wrist — Not the Hand



Neutral Position

Bottom Position

Top Position

Hand Mobility

Hand Figure 8's (Pinky Leads)

Key Points

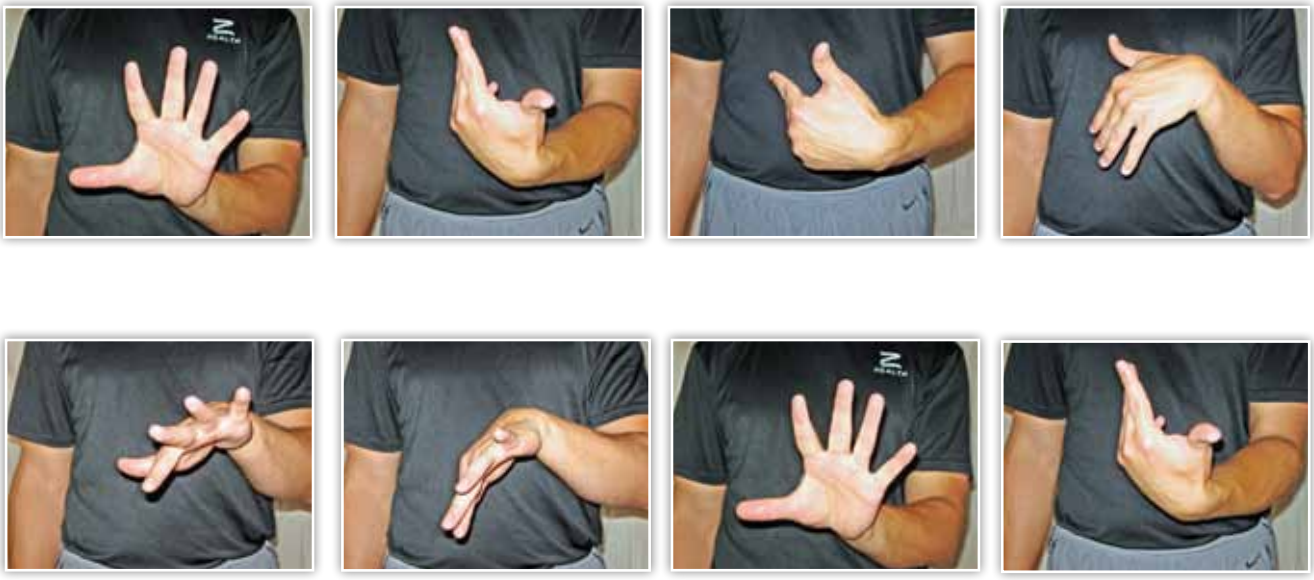
- Begin in neutral stance with arms at 90 degrees, elbows close to the body and palms facing away from the body
- Rotate the palms toward the body and create a circle leading the motion with the pinky finger

Common Errors

- Forgetting to lead movement with the pinky finger throughout the motion
- Bending head to watch motion
- Tightening abs and/or holding breath
- Raising/shrugging shoulders

Pinky Leads Hand Figure 8 Target

When performing this mobility drill correctly, you will feel a gentle stretch in the hand directly down from the pinky finger near the wrist.



Hand Mobility

Hand Figure 8's (Index Leads)

Key Points

- Begin in neutral stance with elbows bent at 90 degrees, close to the body and palms facing the body
- Rotate the palms away from the body and create a circle leading the motion with the index finger

Common Errors

- Forgetting to lead movement with the index finger throughout the motion
- Bending head to watch motion
- Tightening abs and/or holding breath
- Raising/shrugging shoulders

Index Leads Hand Figure 8 Target

When performing this mobility drill correctly, you will feel a gentle stretch in the hand directly down from the index finger near the wrist.








Bonus #1

Reflexive Lifting: How To Make Your Neural Reflexes Work With You And Not Against You!

One of my favorite quotes is by Combatives expert Tony Blauer who states,

"An expert is someone who has memorized someone else's material."

Sadly, the health and fitness world is a prime example of this. Walk into any college weight room or gym across the country that still allows people to pick up heavy things, and you will see lots of athletes doing the "right" thing, the wrong way.

This is one of the most important lessons that I always try to get across to my athletes and certification attendees; any exercise can be a great exercise, and any exercise can be a terrible exercise — it depends both on **what** you are doing, and **how** you are doing it!

For a number of years, we have been teaching concepts and ideas that run counter to the popular culture, and one of these small, but important, concepts involves head and neck position during weight training: especially during the squat and deadlift.

Our typical approach to all athletic activities is to deconstruct them from a neurologic perspective because your nervous system runs the show. Doing so has led us to some very powerful conclusions about proper neck position from both a safety and performance perspective.

To begin, when you look at the multiple pieces of the neurologic puzzle involved in squatting and deadlifting, one thing that cannot be denied is the fact that reflexes play a huge part. Let's take a quick look at two different important reflexes, as well as how these apply to enhancing your lifts.

The Eyes Have It

In almost all sports, including lifting heavy weights, the eyes play a vital role. While a heavy deadlift doesn't require much in the way of great vision, it does require great eye position! Let me explain.

The muscles that surround the eyes, called the extraocular muscles, are all innervated by small nerve endings. These small nerve endings provide propioceptive (body awareness) input to various

neuromotor sensors in the spinal cord and the brain. The primary reason for this is that the eyes and the inner ear work together to create balance and stability in virtually all of our movements.

How does this apply to your lifts? It's quite simple, really. The small nerve endings in the extraocular muscles actually create full body muscular responses to help guide movement. Practically speaking, what this means is that if your eyes are moved up, the small nerve endings in the extraocular muscles facilitate the extensor muscles of the body, creating a simultaneous inhibition of the flexor muscles. Conversely, the eyes down position will create flexor facilitation and extensor inhibition. Put simply, the eyes lead the body.

Please take note at this point that we are talking about eye movements SEPARATE from head movements. You can create these facilitation and inhibition reflexes by moving **only** your eyes while maintaining a completely neutral spine. Unfortunately, this is not what most lifters do.

When you look at this reflexive pattern closely, you will see that the classic neck hyperextension taught and practiced by many people over the years is a legitimate attempt to take advantage of this reflex. Unfortunately, following the "more must be better" philosophy common to the fitness world, few lifters actually make the differentiation between the eyes and the neck. While looking up to the ceiling does creates the desired "eyes up" position and subsequent extensor facilitation, the accompanying neck hyperextension can bring another reflex into play: **the arthrokinetic reflex.**

The arthrokinetic (arthro = joint, kinetic = motion) reflex is a simple reflex that can have both positive and negative impacts on the body. The arthrokinetic reflex was initially described by a group of physical therapists who found that mobilizing joints in the spine while strength testing subjects actually created an increase in muscular strength. We explain this simply to our athletes by saying **"mobile joints create stronger muscles."**

Conversely, the arthrokinetic reflex also has a protective aspect to it that can negatively impact strength training if you fail to understand it. From a survival standpoint, this reflex is designed to inhibit muscular activity when joints are at risk due to compression. If you take a joint or series of joints (like the neck), compress and then load them, if enough nerve endings are disturbed, a reflexive shutdown effect will occur throughout the body, limiting the available horsepower. **This is your body's attempt to keep you safe from yourself.** Just as above, there is a simple way that we describe this aspect to our athletes; **"jammed joints create weak muscles."**

Keeping this in mind, look at the typical neck postures that most people use when performing a traditional back squat or dead lift. In about 85% of lifters that I have ever observed, you see significant cervical hyperextension in combination with the eyes up position held throughout the lift. If the neck hyperextension is strong enough to invoke the arthrokinetic reflex, the lifter is playing tug of war with himself!

Logically speaking, we want our athletes to use their hard-wired reflexes correctly to enhance their lifts, and prevent negative reflexes from inhibiting their lifts. Based on the above information, there are three distinct things that we teach:

Eye Position

Make eye position your first priority. Understand that eyes up = extensor facilitation and that eyes down = flexor facilitation. Depending upon your personal challenges in your lifts, use the correct eye position to facilitate the movement you most need to make. It is important to play with these concepts in a variety of lifts to feel the effects.

Neutral Neck Position

For most athletes, we advocate learning their lifts in a neutral neck position. This is the simplest and safest way, as long as it is combined with eye position, for most athletes to learn. However, there is a third option that some elite lifters can use as long as they understand what they are trying to do.

Neck Extension (not hyperextension) Combined with Axial Extension

Axial extension is a term that, in the spine, means to take the crown of the head and the coccyx or tailbone and move them apart along the long axis of the spine. Think of this as trying to stand as tall as you can without thrusting your chest out or hyperextending your neck. A number of research studies looking at models of the ligamentous and muscular actions of the spine indicate that axial extension stabilizes the spine more than virtually any other activity by increasing activity in the transversospinales muscles. As a result, axial extension is considered by some to be the most stable and safe position for the spine. Obviously, whenever you're going under heavy load during a deadlift or a squat that is exactly what you want.

With practice, it is possible to take advantage of a slight cervical extension, while maintaining axial extension and a correct eye position. This is the best of all possible worlds but it requires work and often hands-on coaching to get it just right.

To begin this process, let's look at a couple of experimental drills that you can perform to see the power of your reflexes!

Eye Position Deadlift Experiment

Try this drill to see how eye position can increase your pulling power.

1. Begin in your normal deadlift stance, and grip the bar.
2. While maintaining a neutral neck position, move your eyes only up to focus midway on the wall in front of you.
3. As you initiate the pull and move up past your knee toward lockout, your head will track up toward neutral. While this is occurring smoothly shift your eyes up to the ceiling.
4. Remember that this may feel very weird at first, so practice with very light loads in the beginning to smooth out the eye movements before you up the weight.

Eye Position Kettlebell Swing Experiment

In comparison to the above, here is an experiment that demonstrates the use of the eyes in a ballistic drill. You can use eye position both to facilitate the explosive part of the list, and to facilitate the braking action necessary.

1. Begin in your normal swing position.
2. While maintaining a neutral neck position, move your eyes only up to focus midway on the wall in front of you and initiate the swing.
3. As the bell comes up and you hip snap, allow the eyes to maintain their focus on the midpoint of the wall in a neutral head position.
4. As the bell starts down, maintain your neutral neck position, while keeping the eyes fixed on the same spot. As the bell drops further, this will naturally move you into an eyes "up" position at the bottom of the swing. This helps facilitate the extensor braking action.
5. You can also experiment with allowing the eyes to follow the bell at the bottom of the swing if you want to increase the velocity or depth of this portion of the movement. However, from a safety perspective I don't prefer this for most athletes, unless they already possess exceptional swing technique.

The take away lesson of this article and the drills is that **your nervous system is the primary driver of your strength.** Learning to take advantage of the beneficial reflexes hard-wired into your body, while minimizing unnecessary protective reflexes, will take the brakes off your strength and performance and help move you closer to your true genetic potential. **Most importantly, you can do it safely and healthfully.** Give it a try — your body will thank you for it!

Bonus #2

Instant Self-Assessments = Instant Results!

Have you ever heard the phrase "If you're not assessing, you're guessing?" It's absolutely true and we don't believe in guessing about our or your health, fitness and athleticism. As we like to say,

"Guessing is not corporate policy…"

Assessments then are a critical part of the Z-Health system. And, not just any assessments, but day-to-day, moment-to-moment, instant assessments…

By this time you should know that Z-Health is a neurally-driven performance enhancement system. And, the one thing we all know about the nervous system is that it is **LIGHTNING FAST!**

In most cases, the nerves that control your "threat/no threat" responses travel at about 300 miles per hour. What this means practically is that you can KNOW – from moment-to-moment – how your nervous system is responding to your training.

So, the reason we can talk about instant results is that we have an instant assessment process. No waiting a few weeks "just to see what happens." Instead, in a matter of seconds you will know if your body liked the drill or not.

Let's take a quick look at our basic self-assessments and then we'll give you the CRITICAL DETAILS to using them appropriately…

In our Essentials of Elite Performance workshop we teach six different self-assessments (and hundreds more in our certification courses), but here are a couple to get you started…

ASSESSMENT #1: ACTIVE RANGE OF MOTION (AROM)

1) Stand up nice and tall, in a good neutral stance.
2) Bend forward in to a forward bend – like you are going to touch your toes.
3) Notice how far you are able to bend over. Get an idea of the approximate number of inches from the floor. If you are close to the floor, it's often easier to extend the wrists as if you are going to flatten your palms on the floor and measure that way.
4) Your baseline is how far forward you can go after 4-5 warm-up reps.
5) Each time you re-assess during your training session, you will assess against your most recent result.

As you continually re-assess, if you bend forward to the same point or even closer to the floor (an increase in range of motion), then that is a **good** result.

If you bend less far and lose range of motion, then that is a **bad** result.

Pretty simple, right? More active range of motion means your body likes what you are doing. Less means it doesn't. It's not rocket science, but it is easy to forget that your AROM changes instantly and constantly based on what you are doing! So, re-assess constantly!

(By the way, if you don't like forward bends, you can test ANY range of motion for your personal assessment.)

ASSESSMENT #2: PERIPHERAL VISUAL FIELD

1) Stand with arms outstretched, the index finger of each hand in front of you pointing upwards.
2) Slowly move your hands horizontally out to the periphery (each side) while keeping the eyes focused forward. As it gets hard to see, wiggle your index fingers – the motion helps provide a target.
3) Stop moving your hands when you lose sight of your fingers with your vision directed forward.
4) Now, turn your head in each direction and get a mental picture of where you lost sight of each finger.
5) Where your hands are is your baseline peripheral vision point. Each time you re-assess during your training session, you will assess against your most recent result.

As you continually re-assess, if your hands remain out about where they started or go back even further, this is a **good** result.

If you can't move your hands back as far before you lose sight of your index fingers, that is a **bad** result.

Now that you have an idea of the basic assessments, let's talk about how to use them in your training sessions…

HOW DO YOU USE THE ASSESSMENTS?

The most efficient way to use the assessments is to follow a very simple, logical process:

1. Start with an initial assessment to **set your baseline**. Make sure to do a few warm-up reps of your AROM or Peripheral Field test before deciding on your baseline.
2. Next, do a few reps, laps, etc of your first exercise.
3. Now, re-assess – Here's the "magic". When you re-assess, if you performed the right exercise or movement in the right way, your body will only sense APPROPRIATE THREAT LEVELS. As a result, upon re-assessment you will get a **good result**. However, if you did the wrong thing in the wrong way at the wrong speed at the wrong time, upon re-assessment you will get a **bad result**.

What Does It Mean?

Good Result

A good result means that the exercise is either beneficial or neutral to your performance. This means you are free to continue with that activity and know that your body is currently OK with it.

Notice that we used the word **currently**…

Just because a drill may test OK now, doesn't mean that it will be in 10 minutes, so be sure to stop regularly to re-assess. Between sets is often a good time to do that. If you are running or doing some other time-based activity, either set a timer or, frankly, just listen to your body. If it's trying to tell you it's done, stop and re-assess.

Bad Result

A bad result means that what you are doing is degrading your performance.

When something tests badly, you have a bunch of decisions to make. The first is whether you continue the exercise or not. There are many situations, such as competition, where stopping is simply not an option (or at least not that most people would take). But, in a training scenario, our recommendation is that you stop what you are doing and switch to something else.

Switching may be as simple as downshifting to a lighter weight, slower speed, or a lesser range of motion. But, it may be abandoning that exercise altogether for the day. Which you choose is up to you.

What does that mean for your training program?

That means that your program will probably be more fluid than you are used to – something that is both really liberating and really annoying. No more just following the program you read in a book or on a web site somewhere…
Instead, you get the opportunity to do exactly what you are supposed to be doing on that day. Which is really cool. You are choosing the drill or exercise that is maximizing your performance – every single time you train.

IMPORTANT – PLEASE READ!

Two key hallmarks of science are the words: **Repeatable and Reliable**. You need to keep this in mind as you practice your self-assessments!

In other words, to make sure that you can trust your self assessments, be as **CONSISTENT** as possible between your assessment and re-assessment. Make sure that your weight distribution is the same, your posture is the same, etc. Only if your testing is consistent, repeatable, and reliable will the results be valid.

Finally, REMEMBER you need to reset your baseline with every training session!

The amazing part of this system, is that once you understand it, you can test virtually every exercise you do. Z-Health drills, running, kettlebell swings, weightlifting, etc. **It's only limited by your creativity…**

And, the superior results you get from respecting your neural threat response will, if you are like most people, amaze you in the coming weeks – if you do it!

If you have any problems with these instant self-assessments, call the office and ask for help. We are here to help YOU succeed, and love talking to clients about how to use the program. You can contact us at 888-394-4198 or info@zhealth.net.

Move for Life!

Your Next Step:
Essentials of Elite Performance — Your 3-Day Elite Performance World Tour

To become elite athletes, we need to learn to speak the language of the nervous system.

Yet, most of us are attempting the equivalent of running for President of France — without ever having learned French.

We'll take the principles from this report and show you the framework to an entire system that let's you overrule your body's limits without causing injury — all through movement.

Find out firsthand why Martin Brown discovered that, **"It was as though someone suddenly switched the lights on as to why I have certain training weaknesses and injuries and how I can correct almost all of them instantly."**

And why Rob from London told us, **"This workshop gives me hundreds of ideas and I want to implement them all! I've absolutely NEVER had more value for money and I've done a lot of workshops."**

Whether you use the course for continuing education credits, as a way to test the waters before signing up for R-Phase (the first course in the Z-Health certification process), or as a vital step in your own athletic development, the Essentials of Elite Performance will profoundly change your body and your approach to training in three short days.

To learn more: **http://www.zhealth.net/essentials-of-elite-performance**