

Welcome to the Z-Health® Mobility for Strength Series, Part III!

In our first article we talked at length about the basic neuroscience of performance, with a particular focus on the arthrokinetic reflex. To refresh your memory, the arthrokinetic reflex is a hard-wired protective mechanism that shuts down muscle activity when your nervous system senses “danger” to a joint. This is a great thing as we need the arthrokinetic reflex active in the body to prevent injury. However, an overly “ambitious” reflex can also be a detriment to performance!

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, that in most people including athletes, the arthrokinetic reflex kicks in VERY early. 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%. 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, keep in mind that the primary goal is to decrease INAPPROPRIATE reflex activity in the body – which will increase both strength and performance!

Let’s get started.

Max Strength Strategy #1 - Develop active mobility and coordination around all the body’s joints.

To really supercharge your training and your results you are going to have to go back to the basics. Going back to the basics does NOT mean squatting and benching more, but something far more fundamental – developing the basics of good movement. In Z, we describe this process using a language analogy by pointing out the simple truth that most people do not speak the language of movement fluently. As a result of bad training, injury, habitual movement patterns, poor posture and host of other factors, the fact is that most people do not have good body control. Even many elite athletes, while exceptionally skilled in one arena, are actually lost when they try to perform physically outside their event. Great, “natural” athletes, on the other hand, seem to have the innate ability to move from one sport to the next without missing a beat. They can do this, not because they are naturally gifted at every sport but because they have a high level of precise body control.

Without speaking the language of movement well, your body’s protective reflexes are always going to set your governor very low. The more uncoordinated you are, the more poor movement patterns built into your body, or the more injuries you are “working around” the more on edge your nervous system has to be to protect you. Basically your governor is set to make sure that you survive – not that you thrive during training! So what do you do about it? Your first priority must be to develop active mobility and coordination in **every part of your body**. Here’s why.

The fact is that your nervous system works from an “**all the body all the time**” perspective. In other words, when you are doing shoulder work, your nervous system is monitoring, not only your shoulder, but your back, legs, abs, neck, jaw, toes, and everything else. An imbalance at any place in the body can have a detrimental effect on your performance as it can cause the arthrokinetic reflex to kick in early. From this simple fact, you can see that to decrease arthrokinetic reflex

activity in the body you need to address the **whole body** and insure that your movement vocabulary is up to par!

If you are following this train of thought, your next question should be, “Ok, enough with the theory stuff! How do I go about doing that?” I’m glad you asked. The fastest, most effective method that we have found to bring your vocabulary up to speed is specific, dynamic joint mobility (DJM) training. Specific DJM work done correctly, in every joint of the body, bombards the nervous system with information that helps reset your governor. DJM work decreases the amount of “negative” information coming into the nervous system that keeps the arthrokinetic reflex/governor set so high.

At this point, hopefully you are convinced about the necessity for adding DJM training into your programs! While Z-Health® specializes in specific DJM work we don’t want you to feel like you have to use our program. However, to get the most out of any time you invest in DJM training here are some basic rules to keep in mind. A good DJM program that will help “re-wire” the 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 insure 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 good DJM work to your current training regimen is a must if you want to really reach for your genetic potential. Now that we’ve looked at how DJM training can help you and given you some guidelines for choosing a program, let’s take a look at the next element necessary to skyrocket your strength and efficiency.

Max Strength Strategy #2 – You must train while emphasizing the elements of efficiency.

Every year, tens of thousands of articles are written in magazines and websites around the world and most of them sound exactly the same. They typically revolve 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.

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, which is 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, and your energy levels will soar.

What’s Next?

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

1. The nervous system, particularly the arthrokinetic reflex, governs our strength.
2. Poor movement patterns, old injuries and an over-active startle reflex can cause the arthrokinetic reflex to fire early and inappropriately.
3. To maximize strength and athleticism training must focus on decreasing the negative effects of these reflexes by making the body “smarter” about movement.
4. A primary goal of training, then, must be to develop maximum movement fluency.
5. The fastest, most efficient method for building movement fluency is through precise DJM training that hits every joint in the body.
6. In every form of training, every rep counts. Quality, not quantity, is the goal.
7. To maximize the quality of every rep, there are four elements of efficiency to follow:
 - a. Perfect Form
 - b. Dynamic Postural Alignment
 - c. Synchronized Respiration
 - d. Balanced Tension and Relaxation.

With all of this in mind, you are now faced with a decision: what do you do with this information? You can read this article, think “cool, good stuff” put it down, and then never think of it again. Alternatively, which we recommend, you can take steps to incorporate this information into your training and your life! What we recommend is that you call us or drop us an email. Tell us about your background, your training, and your goals. If there is a Z-Health® product that will help you we’ll recommend one. If not, we’ll tell you that too. If you need hands-on training in these concepts to really learn them, we’ll help you find a trainer in your area. And, if you’re a fitness professional (either for yourself or for clients) and you want training in these concepts, we’ll tell you about our certification programs.

What we can assure you is that neural re-training through dynamic joint mobility work is a vital piece of the puzzle for maximizing performance. It has the capacity to completely change your training, your body and your life for the better. We hope you take advantage of it.

Good luck and good training.

Dr. C

To Learn More

Z-Health® is a professional educational company whose primary goal is bringing cutting-edge neural training techniques to professional trainers and therapists. The company offers numerous learning opportunities in select venues around the country each year as well as a four-level certification program. To learn more about Z-Health® programs visit us online at: www.zhealth.net or call Toll-Free at 1-888-394-4198.