# Movement Fuels The Athletic Genome

You've seen the videos during the Olympics. Or watched them on YouTube.

Gymnasts defying the very laws of gravity around us.

We've gasped at her inhuman level of flexibility on the balance beam.

...and control on the rings.

And it reminds me of a conversation I had with a parent a few years back.

Confessing her amazement to these videos, she asked, "Do you see these gymnasts overseas? They move like silk.

How do they do it?

They must be genetic freaks!"

But you'd be surprised to know it has much more to do with than just genetics...

Their athletic upbringing allows them to optimize the genetic potential for neuromuscular development.

[One study showed that certain stretching techniques increase gene expression associated with increased muscle growth and lowered muscle wasting. This means that muscle growth, power, and athleticism extend farther than strength training]

That's why retired gymnasts can pick up almost any sport and excel at "superhuman" speed. Gymnasts simply can recruit more muscle fibers and control their body better than any other athlete.

Just know one thing…

# Destiny is not bound to our genetic code.

We all hold the capability in ourselves to express our genes and develop this level of mastery for our craft - if we choose to.

It starts with the foundations.

...And the foundations of neuromuscular development should come before any sport specific training because it acts as a springboard for all other skills learned.

It's the base for athletic development and the missing link in most athletic programs.

I know of a sports scientist in the Ukraine who trains his Olympians from when, as a child, they can first walk onto the mats.

You know how they begin?

With a tissue.

Doesn't sound very technical, right? Yet, all children begin by placing a tissue underfoot and learning to roll it into a ball with their toes.

Imagine that.

"Er...Why?"

Well, the coaches understand behind any fluid movement you need a strong neuromuscular foot and ankle for power and control.

By encouraging this early dexterity, they begin early neuromuscular development which will set them on the right path towards those handsprings, aerial cartwheels, etc., that they will learn later in their lives.

[This study revealed that different types and intensities of exercise are found to change direct muscles involved AND total body circulation. This shows there were specific epigenetic changes that occurred within the body beyond acute muscle growth]

And this isn't some Ukrainian secret - a mentor of mine revealed the same protocol was true of Jamaica, where he lived as a child.

When the right movement patterns are learned in adolescent and teenage years the athlete gains an overwhelming advantage over their competition throughout their career. The right movement patterns will act as a springboard for all other athletic skills learned in the future. And the only way to develop the right movement patterns early on…

## The athlete must focus on neuromuscular development first.

It's not about building size, specific energy system development, or even about sports specific exercises. The focus is on foundational movements which enhance nervous and muscular system interaction.

The mother watching those videos was seeing the years of exercise protocols that have been achieved. And it's not just among gymnasts. Different types of exercise and physical activities can hone different epigenetics.

Your child does not lack any specific DNA code - but they do hold within them massive potential. It's just your duty to transform that into workable energy.

Now neuromuscular development has a host of other benefits beyond enhancement of their epigenetic potential...

# BULLETPROOF FROM INJURY

Most athletes walk around like ticking time bombs. Muscular and skeletal imbalances along with unstable movement patterns skyrocket risk for injury…

Yet no parent comes up to me and asks…

"What are my child's biggest weaknesses?"

It's always… "How can they run faster… jump higher…. hit harder?"

Unfortunately, kids are more sedentary than ever before. Posture never seems to be ingrained within any of my athletes, although I don't blame the parents or the kids.

It's the lack of pro-level knowledge online today.

And typical trainers typically won't even begin with a basic postural assessment. Before your athlete begins to train, or learn any more "athletic moves" they must go through a posture audit.

Are they leaning to one side when standing?

Do they slouch when they sit?

How long do they sit each day?

Do they sleep on one side?

These are just a few "no-brainer" questions an athletic trainer should go through even before they begin training your athlete.

Because we know typical activities like sitting to do homework, play video games or watch TV promotes mobility and postural issues.

With that knowledge...

It shouldn't be surprising how many injuries are being developed at such a young age. Injuries have been on the rise from youth athletes specializing in one sport. Repeating the same motion over and over again without proper neuromuscular training, mobility stability, rest and recovery will ultimately lead to injuries.

So, here's the keys on how to build the optimal athletic physique from the ground up...

**STEP 1: BUILDING THE FOUNDATION**

Everything needs balance. Developmental movements should make up the majority of your child's training program. Those include:

1. Running/locomotion (sprints)
2. Jumping (box jumps, Jump Rope)
3. Crawling (bear crawls)
4. Climbing (Indoor rock climbing for grip strength)
5. Isometric holds (Variation of planks)

Don't overlook isometric holds. Our core strength is the basis of all other movement and energy generated throughout the body.

**Moving the body through space should be the foundation of any athletic program.** Once bodyweight movements are mastered and the neuromuscular system is stimulated then they can begin to add other weighted movements.

[Remember: Gymnasts don't need weights to build their muscular development, strength and speed to an Olympic level.]

### STEP 2: BALANCE BASIC MOVEMENT PATTERNS

Once your child has built a foundation of strength and stability their training protocol can add the fundamentals of movement with body weight and even some weight training. It's important to note that we don't move to weight training before we master body weight movements.

**Knee Dominant** - Lunge, Split Squat, Squat

**Horizontal Pull**- TRX ROW
**Vertical Pull** – Pull Up

**Horizontal Push**- Push Up

**Hip Dominant** - Single Leg Hip Thrusts, Deadlift
**Vertical Push**- Shoulder Press

## STEP 3: AVOID BURNOUT AND REDUCE INJURIES

**Avoid Burnout and Reduce Injuries**

Expand their time over multiple sports. Movement patterns from soccer will improve baseball performance, lacrosse will improve football… and so on.

There's a correlation between injury and repetitive motion.

Baseball (Elbow, shoulder)

Basketball (Knees, ankles)

Football (...just about anything)

Etc….. Etc….

The body needs a new stimulus, and to round out its weaknesses with more movement patterns.

Make sure you child is involved in multiple sports or trains their movements through gymnastics, yoga, or at least gym based training.

There should be a variety of movements balanced around those shared in STEP 1. Playing multiple sports will do more than just lower risk of injury. Multi-sport athletes learn how to communicate better, skyrocket in-game IQ, and even problem solving,

## STEP 4: INTRODUCE A FEEDBACK LOOP

Feedback is one of the key, yet missing elements of any training protocol. Without feedback the athlete won't be able to engage their muscles optimally.

It's called [neuro]muscular for a reason. The mind-body connection is crucial to build any foundation for athletic performance. Here's how to engage their mind in critical thinking to shorten the learning curve of any movement or skill:

a. As them what they learned?
B. If they enjoyed the exercise
c. How they felt
d. If they can show you the movements
e. Ask why they were doing it the movement.

Asking questions will engage critical thinking by shift their focus and purpose from "going through the motions" to a high level of understanding. So…

## What Does It Really Take to Engineer a D1 Athlete?

Most parents don't understand the effort needed to earn a D1 scholarship. But you're not like most parents. You now have been armed with what is truly possible in our modern world and the actions you need to take to ensure your athlete's success.

# Are You Willing to Overlook This Information?

Remember: Your child must develop their skills, potential, and craft outside of their sport. It begins in the mind, then it expands through their nutrition, recovery (sleep, meditation, etc) and movement. The competition for a D1 scholarship is rising with new advances in sports and athletic training. It's your choice if you want to be one step ahead or stuck in the past.

So, let me ask...

Do you have the nutritional know how to fuel their performance with the right meals, vitamins, minerals, nutrients and supplements to replicate a professional or Olympic level?

Have you designed their bedroom and bedtime habits around recovery specialists like those who train Michael Phelps or the most successful athletes around the world?

Does your athlete understand how they fuel their body will affect their strength, recovery, focus, happiness and most importantly in-game performance?

Has your child built a sound mind that is capable of overcoming any stressful event in and out of the game?

Can they handle stress like MJ, Kobe, or Jeter?

Do they know how to silence the fear of failure, and channel their confidence into unrivaled performance?

Remember: Improving our nutrition, mindset, and movement are habits some of the most successful individuals on earth have in common. These behaviors will not only transform Hall-of-Famers and elite college athletes, it'll also do the same for your son or daughter.

Altering epigenetics (the way we express our genes) will give your child the advantage you NEVER had.

So now the choice is yours.

Stick to the old ways or learn the new way to engineer athletes of the future.

Until Next Time,

Joe Giangrasso

## RESOURCES


1. **https://www.ncbi.nlm.nih.gov/pubmed/17143883**
2. http://www.sciencedirect.com/science/article/pii/B9780128032398000296