# ATHLETIC SPEED

THE WAY I SEE IT

## WE ARE GOING TO HAVE AN OPEN DISCUSSION ABOUT HOW THE PURITY OF SPEED INSPIRED ME!

- The nonsensical comments by coaches when I was an athlete drove me to discover through observation.

## EVALUATING NEVER ENDS

- You can't evaluate if you don't know what you are looking for- educate yourself first!
  - Understand the principles of multi-directional speed
  - Know how movement should **generally** look.
  - Understand why an athlete isn't moving the correct way
  - Know how to address it if they are not moving correctly.

## EVALUATION…

- Don't evaluate them on what you know to do, evaluate them on what they know to do. In other words "watch and see what they do in their natural state. This is what makes it an evaluation.
  - Don't coach from the dictionary
    - USE LOTS OF DIRECT **CUE WORDS**:
      - "Play in the tunnel"
      - "Don't sway"
      - "Throw hands back"

## BREAKING THROUGH THE MYTHS…

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## MY FOOTBALL AND BASKETBALL COACHES…

Told me not to take a "False Step".

They said it slows you down by wasting time.

They said; why would you take a step backward if you want to go forwards…

THIS IS WHAT THEY "THINK" THEY WANT….

MY BASKETBALL COACHES TOLD ME TO NEVER CROSS MY FEET WHEN MOVING LATERALLY…


THIS CROSSOVER WITH A SHUFFLE DOESN'T SEEM SLOW TO ME…

## PURE LATERAL ACCELERATION

- Understand The **Lateral Gait Cycle**:
  - Each leg has a role in the lateral shuffle:
    - Rear leg is the primary force producer- "Push"
    - Lead leg keeps the acceleration going- "Pull"
    - Rear foot/ankle dorsi-flexes and springs- "Load"
    - Lead foot/heel cycles back and pulls- "Pulls"

*Both legs recover together under the hips and continue the Lateral Gait Cycle.

## I WAS TOLD IN COLLEGE THAT OUR FRONT FOOT SHOULD NEVER TURN OUT DURING A SHUFFLE…

They said it won't allow you to keep up speed

They said it won't allow you to change direction quickly

They also said the strides should be shorter

## SEEMS LIKE THIS ATHLETE CHANGED DIRECTION QUICKLY EVEN THOUGH HIS FOOT TURNED OUTWARD…

THE HEEL IS PREPARING TO PULL

THE "LATERAL GAIT CYCLE"

THE FOOT PATTERN IS NATURAL

## I WAS TOLD THAT THE FRONT FOOT PUSHES FIRST DURING A "CROSSOVER"/LATERAL RUN STEP

They said the power comes from the front foot pushing down and back and the back leg crossover.

They said the front foot must stay straight and not turn out…

## THIS ATHLETE IS SIMPLY REACTING TO A SIGNAL. THE FRONT FOOT DOESN'T PUSH FIRST…

## I READ A RESEARCH ARTICLE FROM A MAJOR COLLEGE SAYING ON ALL CUTS/COD THE KNEE SHOULD ALWAYS BE OVER THE FOOT

## I WAS ALWAYS TOLD I HAD TO TEACH ATHLETES HOW TO CREATE PROPER ANGLES TO CHANGE DIRECTION

- They said you can't have athletes do reactive drills until they learn how to plant properly- they might do it wrong…

## OBSERVE ANGLES BEING CREATED OUT OF NEED-
NOT COACHING!

## WHEN I WAS IN COLLEGE MY PHYS. ED PROFESSORS TOLD US TO ALWAYS BREAK THINGS DOWN FIRST…

They said to slow it down and teach exactly what you want to see.

They said to always show them what you want before they do it.

*I agree in some cases and with some skills- but not many when it comes to quickness…

WORDS CAN DRIVE PATTERNS. ALL I SAID WAS PUSH HARDER ON LATERAL RUN STEP (CROSSOVER)

MY SPRINT COACH TOLD US WE SHOULD ALWAYS HAVE ELBOWS AT 90 DEGREES…

We use to work on coming out of blocks and immediately going to tight 90 deg arm swings.

We were told it made the leg action quicker…

THE BACK ARM EXPLODES BACK AND LONG. IT OPENS TO HELP THE LEGS PUSH AND SEPARATE ~~LONGER~~.

## I WAS TAUGHT TO PLANT AND PIVOT WHEN OPENING UP HIPS TO RETREAT SHUFFLE…

I was told to keep the foot down to be quicker

It was, and in some cases still is, thought the pivot create more stability and power.

## NO PIVOT

## I WANT TO SHARE WHY I FEEL ATTACKING THE GROUND CREATES BETTER MOVEMENT

1. We want to attack the ground with longer leg joint angles
2. We need to "core" as the source of power and stability to allow the hips to open and close
3. To be quick we must push down and away even before we hit the ground- SO WHEN WE DO HIT THE GROUND WE "EXPLODE" AWAY.

## ATTACK THE FLOOR OPPOSITE OF THE DIRECTION YOU WANT TO TRAVEL.


## WHY DO COACHES GENERATE IDEAS ON WHAT'S RIGHT AND WHAT WRONG?

- Their coach or mentor said it. We are taught not to question our superiors.
  - Don't get a drink during practice- it is a sign of weakness
- They see something that looks different than what they perceive to be correct.
  - A false step can't be right because the athlete is moving backwards first

## AFTER WHAT I JUST SHOWED YOU, ANSWER THIS QUESTIONS

Why were humans given the ability to have speed, agility, quickness?

## WHY IS IT WE DON'T HAVE TO TEACH KIDS HOW TO USE FREEDOM OF MOVEMENT-PLAY?

Through development, kids can eventually run, cut, stop and accelerate again….

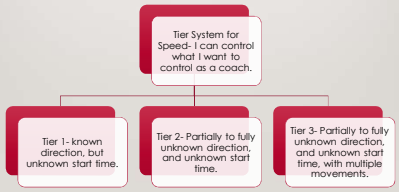
***All without coaching!***

## WHY DO YOU WE USE SCRIPTED DRILL PATTERNS?

- They are more common- just search YouTube and you can get hundreds.
- We are more comfortable with drills we can control
- We like to know the outcome as a coach because we can assess it better
- Easier to compartmentalize and improve a specific aspect of a movement (leg drive, arm action…)
- Much easier to test. And, we value being able to validate our successes through tests.

## SCRIPTED PATTERN- I KNOW WHAT IT SHOULD LOOK LIKE BEFORE IT HAPPENS. I CAN PREPARE!

## PARTIALLY RANDOMIZED AND FULLY RANDOMIZED SKILLS.




## TIER 1

## TIER 2

## TIER 3
## (THE LAST DRILLS ON THIS CLIP)

## TOP END SPEED/MAX VELOCITY

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Build up to it. | Accelerate first | Become proficient at technical drills | Build endurance to maintain postures and finish sprints | Stay disciplined and don't run 100% (you lose form when you press to hard) |

## LET THEM FEEL WHAT IT MEANS TO COLLAPSE AT KNEE AND HIP.

## TOP END SPEED

## LEARN TO SMASH

## FLOAT – SPRINT – FLOAT – SPRINT – FLOAT

1. Allow athlete time to feel the movement during a rep.
2. Float for 20 meters, sprint for 10 meters, etc…
3. Build to 20 – 15 – 20 – 15 – 20
4. Build to 15 - 20 – 15 – 20 - 15
5. Build to 10 – 20 – 10 – 20 – 10

** Allow for the athlete to process how to shift gears without "pressing"

## PROGRAM DESIGN IDEAS

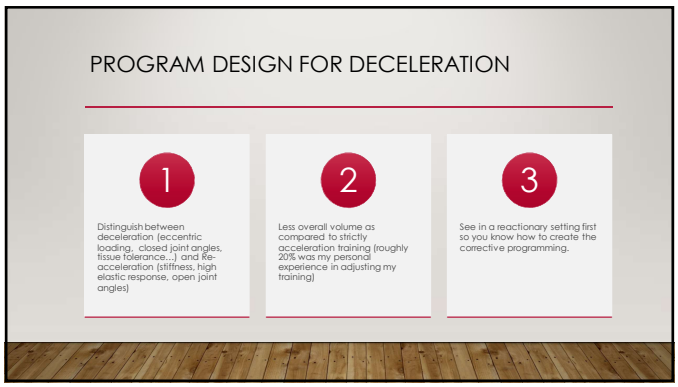
- Don't get Paralysis by Analysis!
  - You can train forms of speed everyday as long as you understand a few things:
    - Avoid multiple deceleration/change of directions days in a row.
    - Understand what the athlete has been doing for practice- don't repeat more hard exercises.
    - Change the direction of training
    - Be more concerned with technique and high effort not high volume.

## PROGRAM DESIGN IDEAS

| 1 | 2 | 3 | 4 |
|---|---|---|---|
| Keep time frame very short- 2-7 sec on average. | If you are planning on training speed everyday- choose one skill and coach the heck out of that skill- can accomplish is 3-10 minutes. | If you only have 2-3 days per week- choose 1-3 skills per day. 8-20 minutes. | Different thought process- Train "reactive drills" first and follow with cleaning up with "corrective drills" |

## PROGRAM DESIGN FOR RESISTED ACCELERATION

| 1 | 2 | 3 | 4 |
|---|---|---|---|
| Teach to push! | Load it with reasonable resistance to teach pushing longer- you get more reps | Lateral shuffle, crossover, and linear acceleration all benefit from it | Load them day #1 if you have to. It is safer than not in many cases because deceleration is taken out of the equation. |


PROGRAM DESIGN FOR DECELERATION
1
Distinguish between deceleration (eccentric loading, closed joint angles, tissue tolerance...) and Re-acceleration (stiffness, high elastic response, open joint angles)
2
Less overall volume as compared to strictly acceleration training (roughly 20% was my personal experience in adjusting my training)
3
See in a reactionary setting first so you know how to create the corrective programming.


THANK YOU!
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