



# Blocks and Acceleration

**Coach Alycia Williams**

**Head Girls' Coach at Flagler Palm  
Coast High School**

# About Coach Williams

- Semi-Pro for Nike
- **NCAA All-American at Florida State University 4x400**
- ACC Indoor and Outdoor Champion (FSU)
- **CAA and ECAC Champion (George Mason)**
- High School 5A State Record Holder in the 400 in 2001 also won the 200m
- **Assistant Coach at FPC in 2009 and Head Girl's Coach at FPC in 2022**
- Head Coach at Hickory Ridge Middle School and High School in Harrisburg, NC from 2017-2022





# ACCOMPLISHMENTS



**Won Greater 4A Metro Conference from 2018-2022 (Hickory Ridge MS and HS)**

**4A Girls State Champions in 4x200 and 4x400 Indoors (2022)**

**4A Girls State Champions 4x100 and 4x200 Outdoors with the #7 time in the country in the 4x200 (2022)**

**Adidas National Champions in the 4x100 and 4x200 in Greensboro, NC (2022)**

**Boy's State Champions at FPC (Assistant Coach, 2009)**

**Signed four athletes to D1 and D2 colleges (2022)**



A photograph of Allyson Felix, a professional sprinter, standing on a red running track. She is wearing a dark purple athletic top with a Sainsbury's logo, dark shorts with the number 6, and bright pink running shoes. She has her hands clasped in front of her chest and is smiling. In the background, there is a red barrier with the Sainsbury's logo repeated across it. To the right, there is a red bag and some equipment on the track.

## QUOTE OF THE DAY

*"I am a big believer in visualization. I run through my races mentally so that I feel even more prepared."*

*Allyson Felix*

# My Coaching Process

Establish the Objective

Understand through Assessment and Adjustment

Providing Feedback

Follow With Support



# OBJECTIVE

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improve speed and explosive power  
to maximize speed



Acceleration focuses on exploding forward and increasing turn over Everything is in front of the hip, where athletes generate power

# ACCELERATION





## **Example of Our Acceleration Day @ FPC**

Frontside Mechanic Drills Warm Up

Learning to Accelerate Program

Wall Acceleration Drills



# A-SKIP, A-SKIP AND MORE A-SKIPS

A-Skips are a basic drill that helps develop lower-leg strength while encouraging knee lift and promoting an efficient footstrike.





# **Frontside Mechanics Warm Up Sample**

**A Skip in Place Hands on Hip R/L Leg Only**

**A Skip Hands on Hips R/L Leg Only**

**Alternating A Skips Hands on Hips**

**A Switches**

**2-min Water Break**

**Backward A Skip R/L Leg Only**

**Backward A Skips Alternating with Arms**

**Backward A Skip Switches**

**Backward Tight High Knee's Hands on Hip (Rotary Action)**



# Learning to Accelerate Drill Using A-Skip and Rotary Running Mechanics

<b>Push Up (down position) Start R/L</b>	<b>2x20m</b>
<b>Push Up (up position) Start R/L</b>	<b>2x20m</b>
<b>Seated Facing Backwards Start R/L</b>	<b>2x20m</b>
<b>Falling Accelerations R/L</b>	<b>2x20m</b>

## Video example- Seated facing backwards r/l



# Video Example-Falling Accelerations



# Wall Acceleration Drills

Works on frontside mechanics

This will help athletes during the acceleration phase

You want them to be at a 45 degree angle

Not too high and not too low (no butts poking out)



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## Other Key Points

- You want to have postural integrity at the hip
- Foot stays DORSIFLEXED and pushes back into the ground
- Stay on the BALL OF THE FOOT (that's where the strength comes from)



# Wall Acceleration Drills Workout

**Wall Posture A Position Holds R/L      2x30-sec**

**Wall Posture March                              2x20**

**Wall Posture Single Leg Switches          2x20**

**Wall Double Switches R/L                      2x10**

**Wall Posture Continuous Switches          30-sec**



## Wall Posture A Position Holds R/L

Work on power position and hold on right leg first, then left leg.

The hold will give athletes a feel for muscle group **HIP FLEXORS** that will be activated

Instruct athletes to stay on the ball of their feet.





# Wall Acceleration Drills Workout

**Wall Posture A Position Holds R/L**    **2x30-sec**

**Wall Posture March**    **2x20**

**Wall Posture Single Leg Switches**    **2x20**

**Wall Double Switches R/L**    **2x10**

**Wall Posture Continuous Switches**    **30-sec**

**March** to get them to feel what it is like to before we go to continuous switches

**The switches** increase the intensity of the drill and teaches the athletes how to fire the leg down and to emphasis how quick the movements must be

Again we do both right and left leg to help athletes on their dominant and non dominant legs

# Wall Posture Continuous Switches

Moment of truth!

We put it all together and do  
continuous

Start at 30 secs and then  
increase during each phase of  
your training (45 secs and up to  
a minute)



# Takeaways

Makes sure athlete's aren't breaking their elbows (kissing the wall)

Stopping before time is a big no no

- Have them start over-teach them the importance of pushing the body to failure

Prevent backside mechanics

- General concept of sprinting is the least amount of ground contact time, creates the least amount of air time

Always about angles

- Teach correct angles

# BLOCKS

HOW TO MAKE YOUR ATHLETE MORE  
EFFECTIVE COMING OUT THE BLOCKS

# BASICS

Fastest way from point A to point B is a straight line

- Any other movements (wide steps, side steps) hinders that

Hands dictate what the legs will do

Keep the hands in a linear motion and the body will move in a straight line



# Eliminate the “Dead Step”

## Dead Step

When the hips drop and they lose their position

This can come from either their initial exit from the blocks OR when they initiate acceleration



## On your Mark

Shoulder straight above the hands

Neutral head position

Arms perpendicular to the ground





## Key Angles In Set

Back foot at 120 degrees

Front leg at 90 degrees

Hips above the front toe

Block set up is to produce force and overcome inertia and be able to explode out the blocks





# Go!!!!

Low heel recovery

Do not have the heel come up and through the hip (that will take a long time for the foot to come back down)

Fast movement of the back leg

**Push** with the front foot and **pull** with the back.

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## Head down or Not?

Are you telling your athlete to keep their head down during the drive phase?

Remember, to think of the CENTER OF MASS

If the chin is to the chest, the center of mass is slightly forward making a tucked hip, if the head is up you will over rotate the hip causing backside mechanics

So keep a straight line though the spine

- look at the track 4-5 meters in front of you.





## The Big Picture

Block starts are all about consistency.

Once you have everything dialed in, you want to be able to replicate the same movements you do during practice in a meet situation.

# Workout Sample

Wickets x 6 **ACCELERATION**

Speed Cord x 2 **ACCELERATION**

*set the blocks up on the lane line to provide a visual cue and assist with lining up your forces down the track.*

2x Accel/Tape Drill with Blocks to:

- o 3 x 20m - rest: 3 MIN,

- o 3 x 30m - rest: 3 MIN,

BLOCK STARTS:

- o 3 x 40m - rest: 3 MIN,

# Video-Blocks





# Proper Postural Positions is a must

Two point starts are followed by rolling starts.

Rolling starts are followed by crouch starts.

Crouch starts are followed by three point.

Three point starts lead to four point and then eventually to the blocks.

# Advantages

starting positions that don't incorporate blocks will help you work on hitting similar angles and sprinting mechanics with a lot less fatigue.

Performing 3 and 4-point starts are very effective because the same rules of sprinting mechanics apply.



# Two point stance

Focus on proper posture



# CROUCH POSITION

Often times this is what younger athletes do, so once two point stances are mastered, you can do to 3 point



# References/Links

[Blocks](#)

[Two point stance](#)

[Crouch position](#)

Other presentations

[Dynamic warmup](#)

[100/200](#)

# QUESTIONS?

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