

# **HORIZONTAL JUMP SKILLS**

***DECEMBER 2019***

***USTFCCCA Convention  
Technical Symposium***

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***Princeton University***



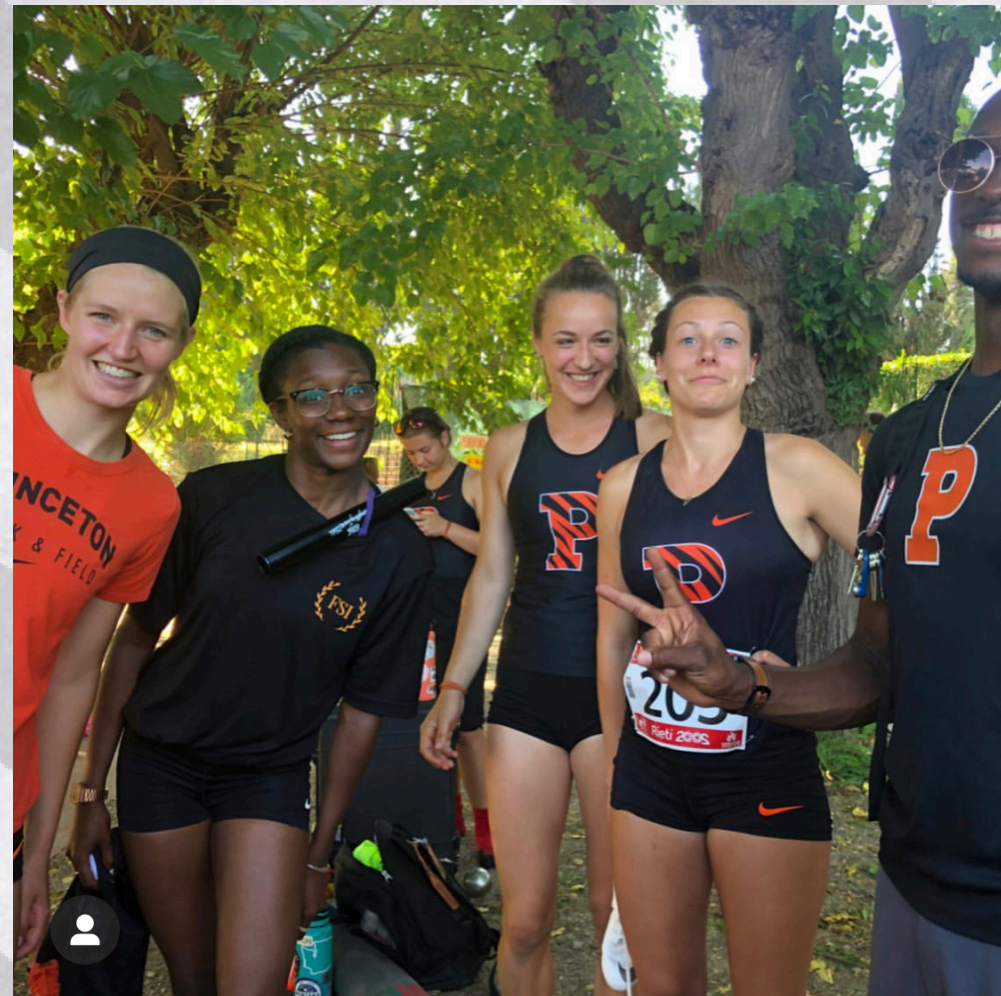
# Discussion Outline

- ❖ Influences
- ❖ Physical Performance Components
- ❖ Horizontal Jump Skills
- ❖ Pre-Season Training Examples



# INFLUENCES

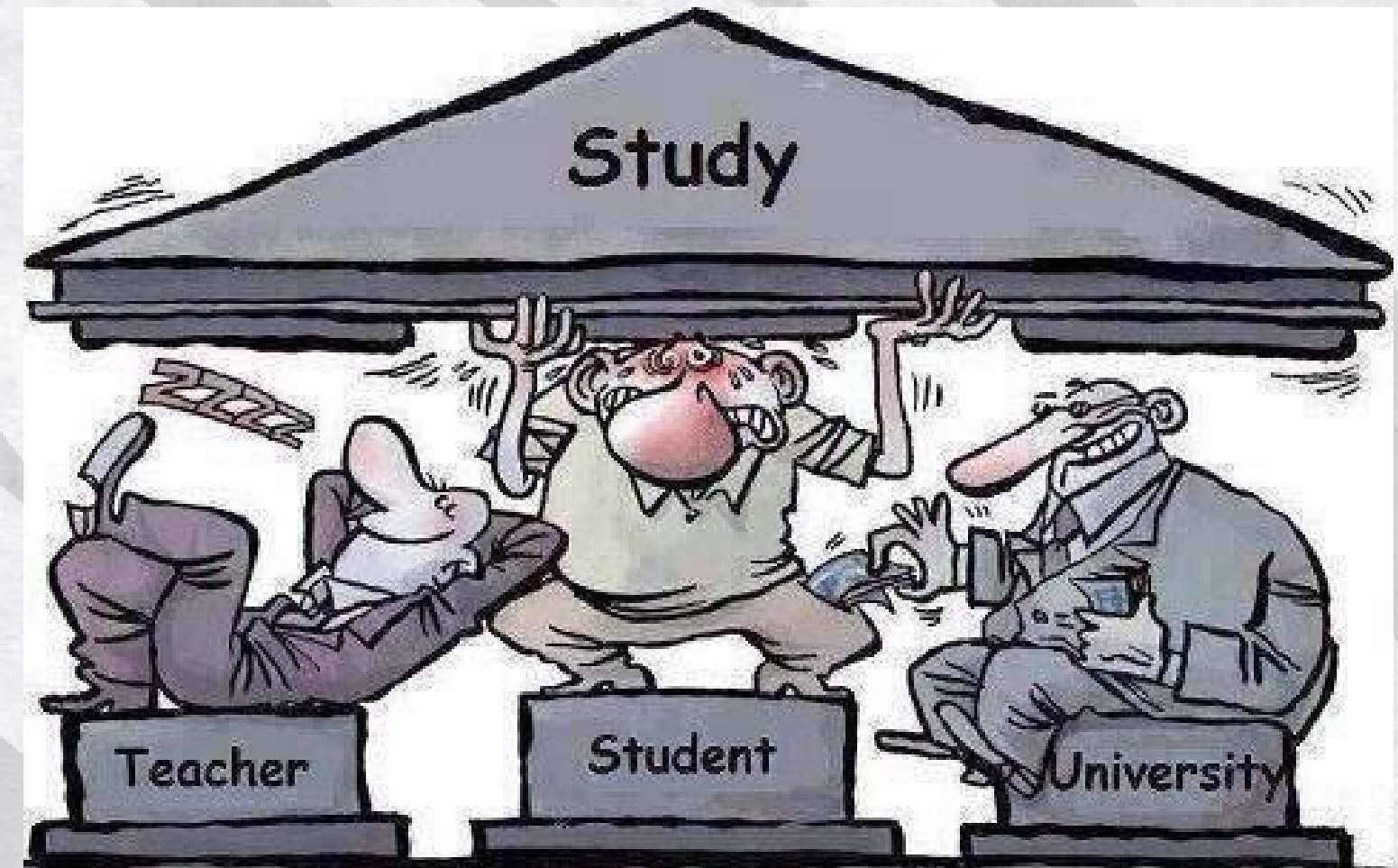






Working in the Ivy League, it's evident that successful coaches teach more than the X's and O's – they also consider ...

- Semester Schedule
- Concentrations
- Time Management Skills
- Mental Health







## Coaching is HARD Because ...

### Calvin & Hobbes



I'M A GREAT BELIEVER IN THE VALUE OF NOVELTY.

I SAY ANYTHING NEW IS GOOD BY DEFINITION! IT CAN SHOCK, INSULT, OR OFFEND ME, SO LONG AS IT DOESN'T BORE ME!

IF YOU CAN'T GIVE ME SOMETHING NEW, THEN REPACKAGE THE OLD SO IT LOOKS NEW! NOVELTY IS ALL THAT MATTERS! I WON'T PAY ATTENTION IF IT'S NOT FRESH AND DIFFERENT!



by Bill Watterson

I SEE WHY TIMELESS TRUTH DOESN'T SELL.

GIVE ME A GOOD FLASH IN THE PAN ANY DAY.







## You've Been Robbed!

- **Moose Akanno (UCONN)**
- **Chris Bostwick (Clemson)**
- **Fletcher Brooks (Iowa State)**
- **Jesse Chapman (Columbia)**
- **Michelle Eisenreich (Princeton)**
- **Mike Eskind (UNC)**
- **Jeremy Fischer (USATF)**
- **Ron Grigg (Jacksonville)**
- **Quincy Howe (Wyoming)**
- **Ken Hunt (Brown)**
- **Kyle Hierholzer**
- **Todd Lane (LSU)**
- **Marc Mangiacotti (Harvard)**
- **Kiamesha Otey (Richmond)**
- **Andrew Owusu**
- **Jeff Petersmeyer (Louisville)**
- **Dan Pfaff**
- **Boo Schexnayder (LSU)**
- **Lee Solomon**
- **Kebba Tolbert (Harvard)**
- **Mario Wilson (UVA)**



**“Beware of the  
myth of building  
a big base ...  
always ask  
yourself ... a base  
of WHAT?”**







**“Revel in the  
set up”**

**Rhythm and  
flow of  
training**





**“Develop an  
array of skills. It  
is not about  
mastery – but the  
struggle to get  
there”**







# **PHYSICAL PERFORMANCE COMPONENTS**





## The Big Rocks

- **Speed**
- **Strength**
- **Skill/Coordination**
- **Work Capacity**
- **Suppleness (Mobility)**





- Balance in development of physical performance components is essential to long-term progress. These abilities are requisite and dependent upon each other.
- The training balance between various physical performance components need not be equal.





## Subcategories

### **SPEED**

- Acceleration
- Absolute Speed
- Speed Endurance

### **COORDINATION/SKILL**

- Agility
- Mobility
- Balance
- Technical Execution

### **STRENGTH**

- Absolute
- General
- Endurance
- Power
- Reactive



- Develop technique alongside the development of physical performance components.
- Identify skills/features the jump events have in common. Teach them and bring both to events in applicable form. Provide opportunities to learn and rehearse commonalities.



# What Are The Features of the Horizontal Jumps?

- **Approach**
- **Preparation**
- **Takeoff**
- **Flight**
- **Landing**



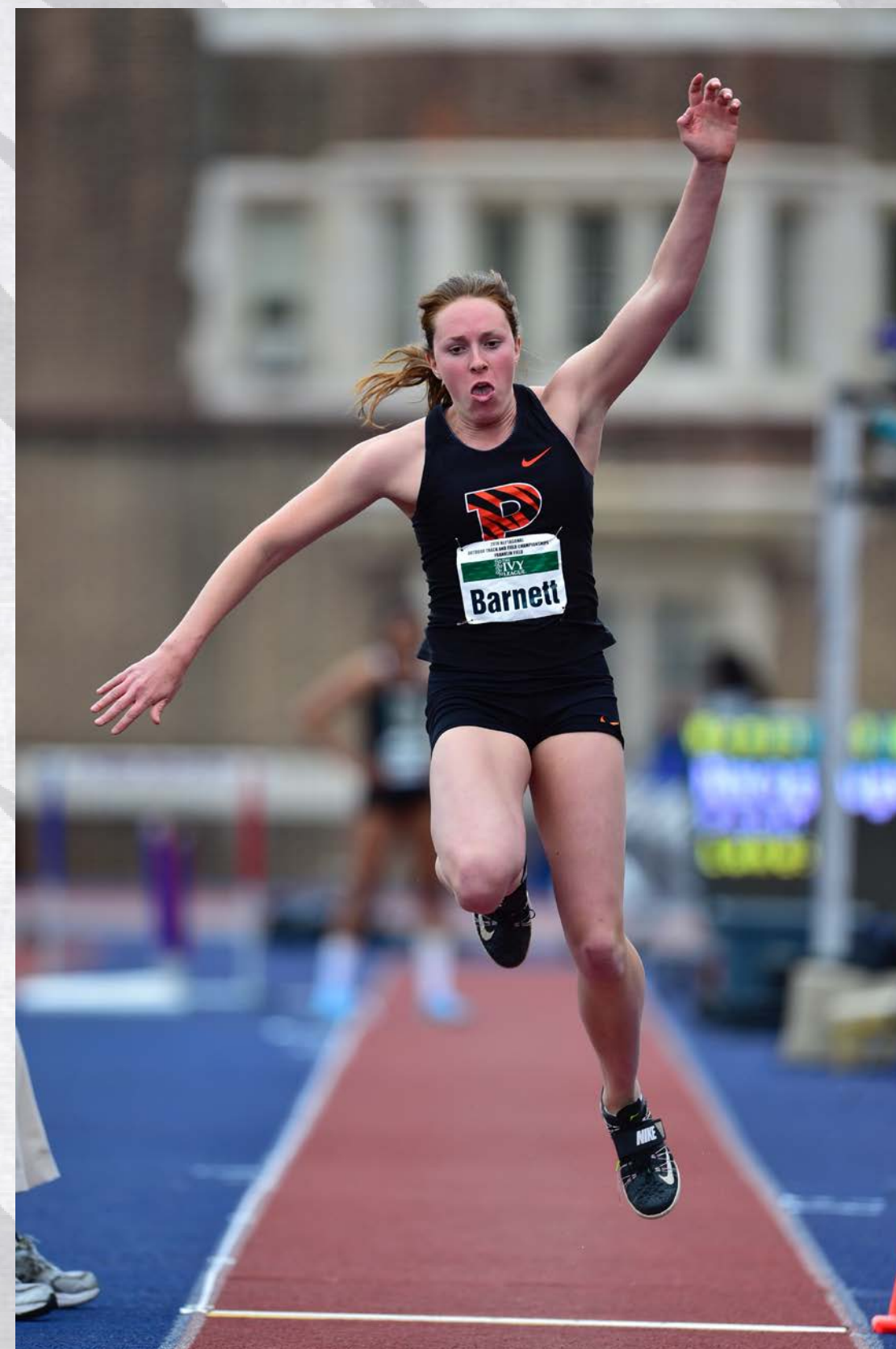
# FLIGHT/LANDING

*In flight, the path of a body's center of mass is predetermined...*



# Jump Skills

- Postural
- Impact/Contact
- Swinging Segments







# HORIZONTAL JUMP FUNDAMENTALS

POSTURE







# What Does Good Posture Look Like...

**Jogging/Skipping?**

**Static Flex?**

**Dynamic Flex?**

**General Strength?**

**Multijump?**

**Multithrow?**

**Sprint Drills?**

**Hurdle Mobility?**

**Medicine Ball**

**Circuits?**

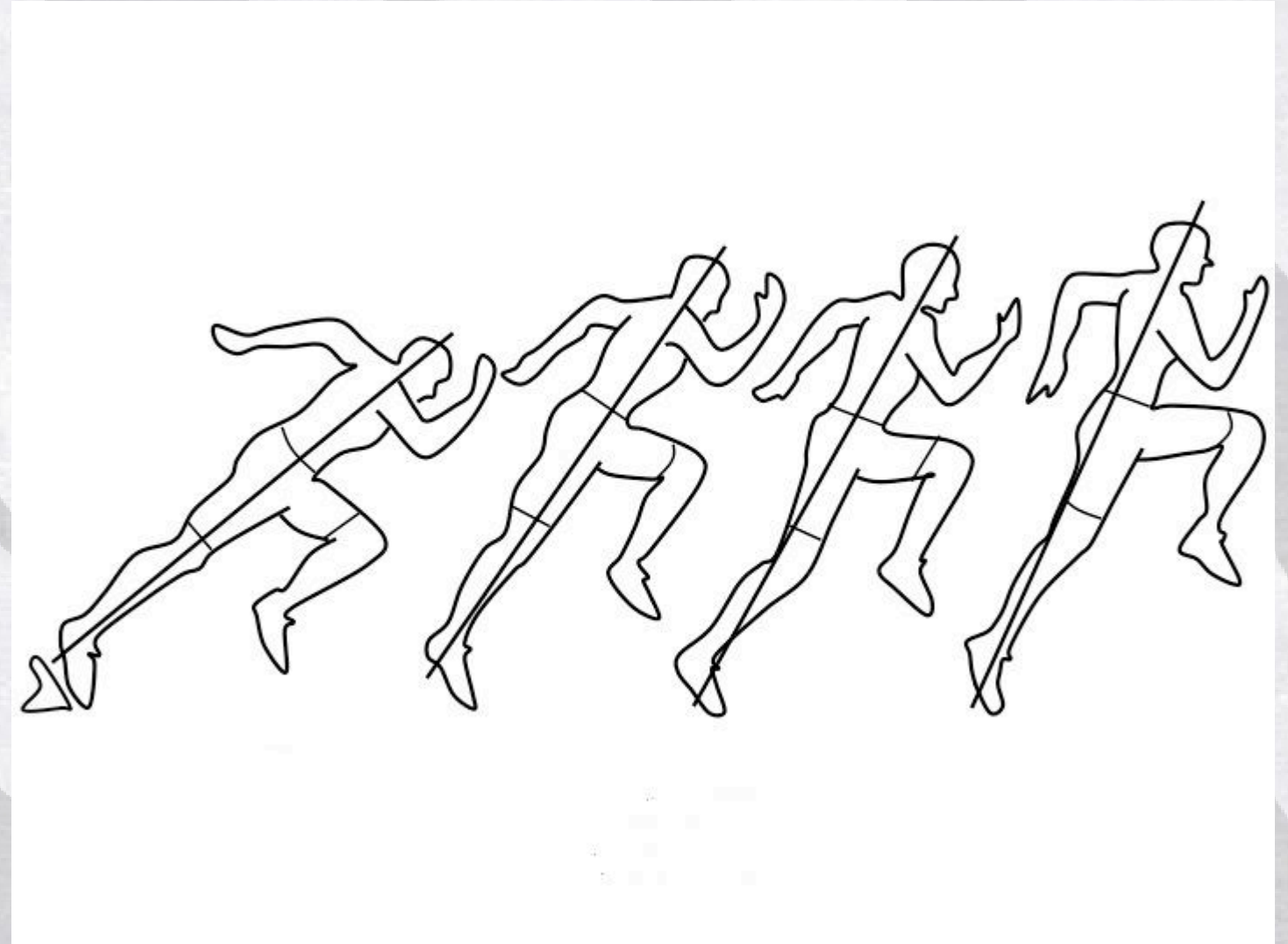




## Proper alignment of...

- Head/Neck
- Shoulders
- Lower Back
- Hip
- Knee
- Ankle

**A.k.a. "Neutral"**







# HORIZONTAL JUMP FUNDAMENTALS



**SWINGING SEGMENT USAGE**



# Oscillation

- ❖ Large, extended ROM
- ❖ Preservation of pelvic alignment (posture)
- ❖ Blocking





## HORIZONTAL JUMP FUNDAMENTALS



**TAKEOFF/CONTACT PATTERNS**



# Preparation

- ❖ Prerecruitment of thigh
- ❖ Ankle Dorsiflexed
- ❖ Heel Lead

# Contact

- ❖ Flat
- ❖ Rotating shin while in support - heel to toe
- ❖ Foot bridges late in support phase





# AMORTIZATION





# A.K.A. YIELDING





# A.K.A. ABSORB





# FUNDAMENTAL JUMP DRILLS



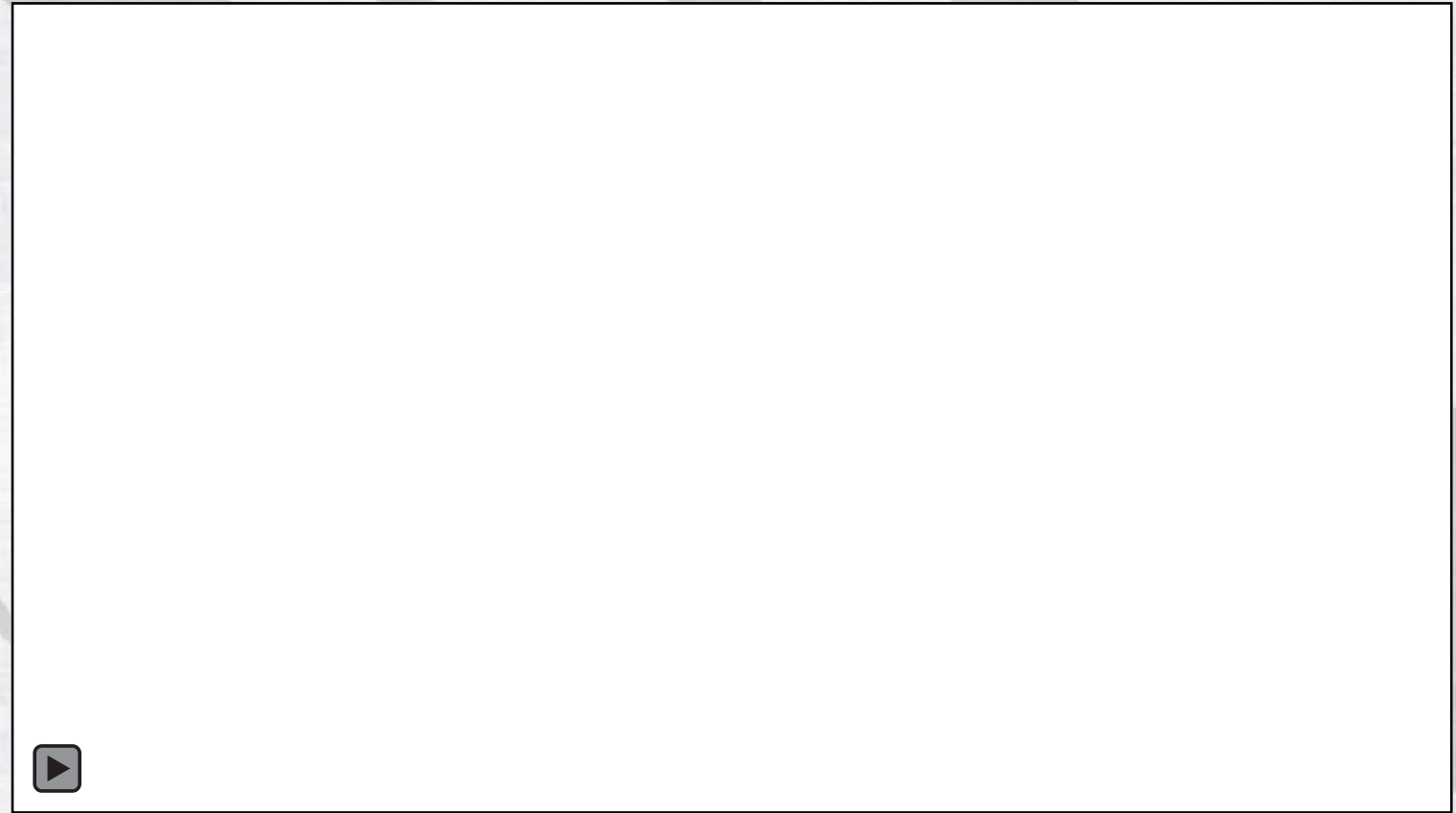
# SKIPS FOR HEIGHT

*Teaching tool for: amortization; posture; swinging segments; long jump takeoff trajectory*

Posture: Hips higher than knees – keeps the pelvis neutral

Takeoff/contact: vertical shin – vertical force; heel to toe

High takeoff trajectory; feel rise and fall of hips





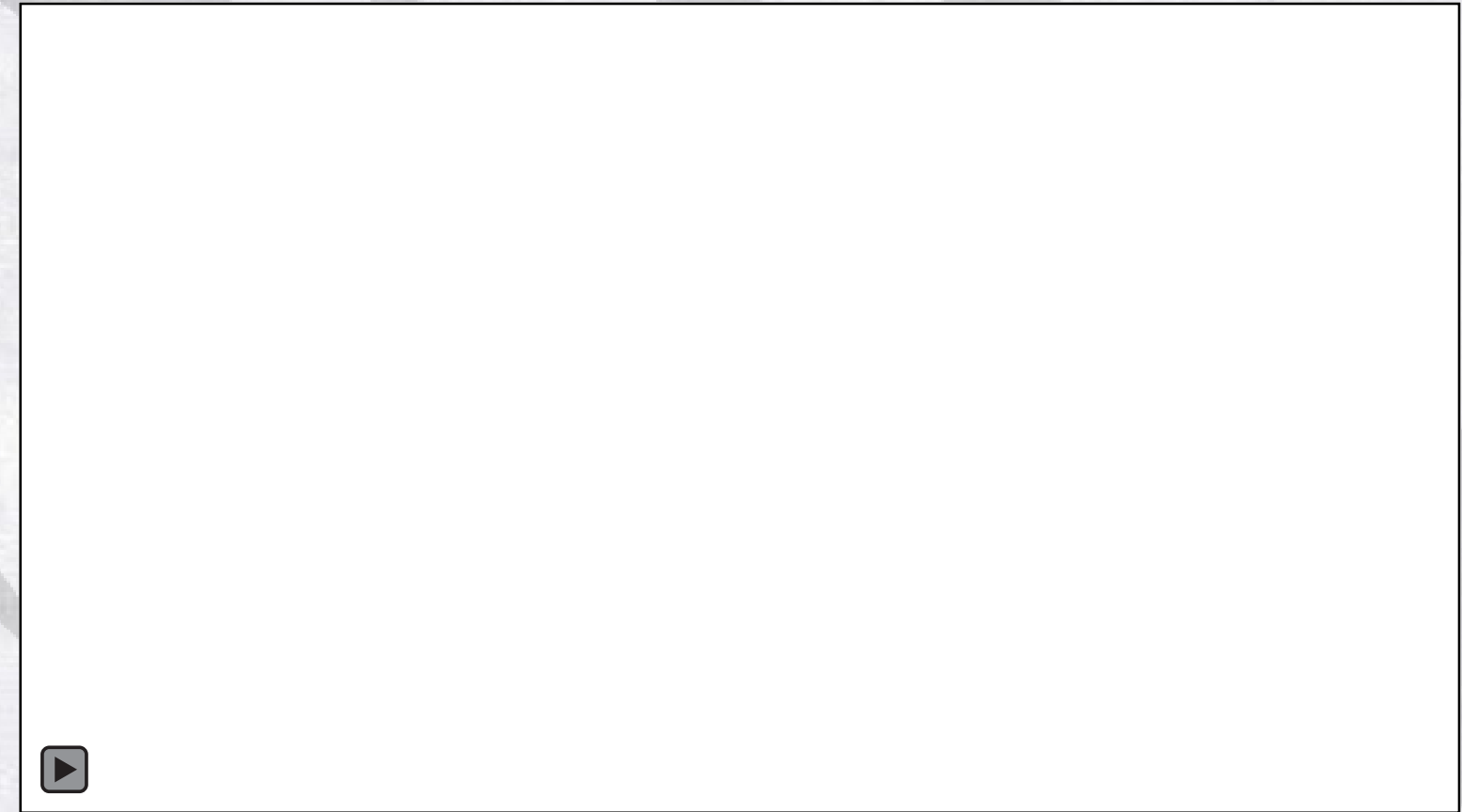
# SKIPS FOR DISTANCE

*Teaching tool for: rhythm; posture, triple jump  
take off trajectory; swinging segments*

Posture: Hips higher than knees –  
keeps the pelvis neutral

Swinging Segments: hands low;  
feet close to the ground

Flat, then slightly upward  
trajectories



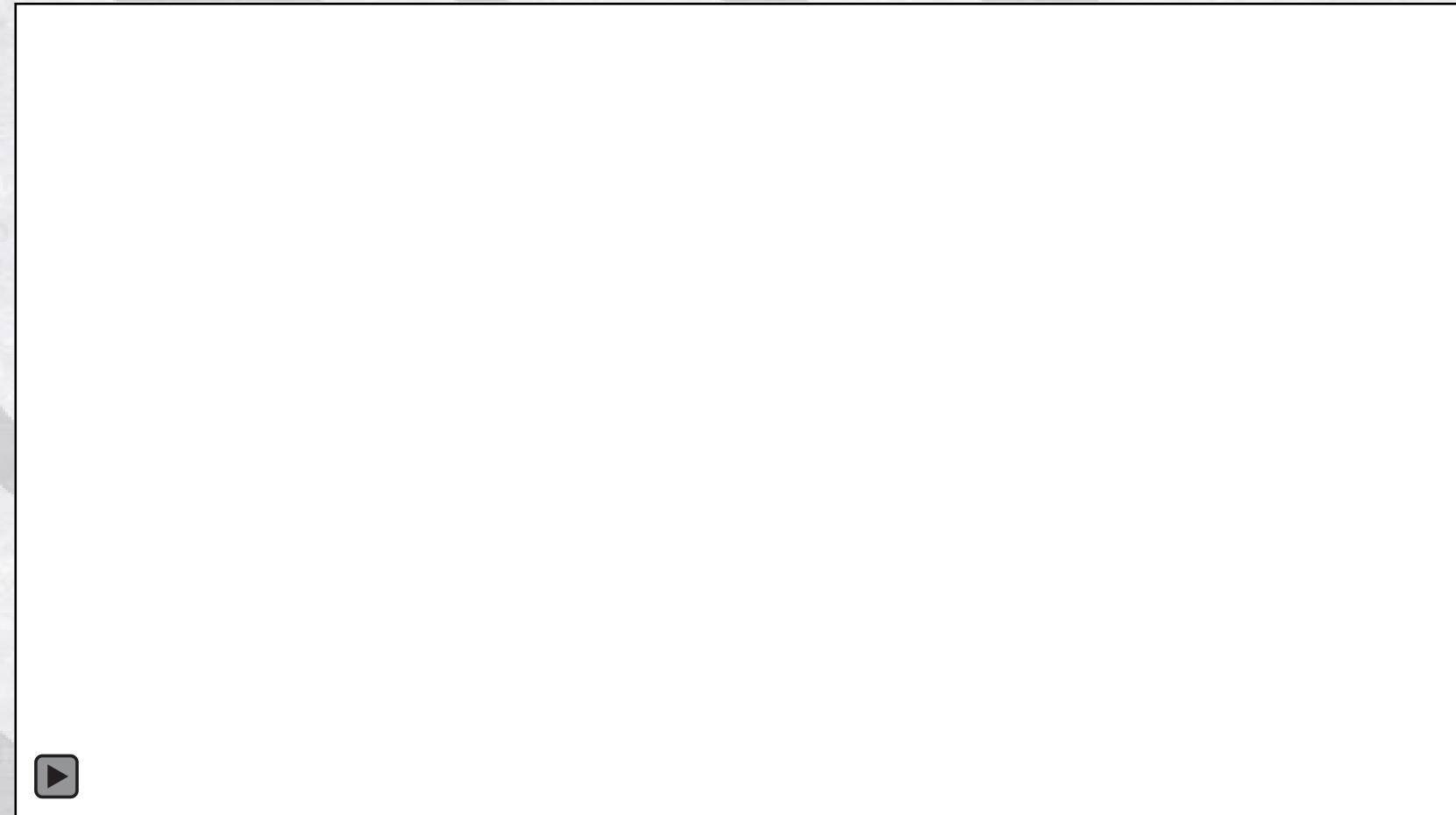
# CONTINUOUS TAKEOFFS

*Teaching tool for: amortization; posture, long jump take off trajectory; swinging segments*

Posture: Hips higher than knees – keeps the pelvis neutral

Preparation – Penultimate step

Vertical force generation





# RUDIMENT HOPS

*“A Jumping Battery” – Dan Pfaff*

**Double Foot Forward**  
**Double Foot Backwards**  
**Double Foot Lateral**  
**Single Foot Forward L**  
**Single Foot Forward R**  
**Single Foot Backward L**

**Single Foot Backward R**  
**Single Foot Lateral R**  
**Single Foot Lateral L**  
**Single Foot Medial R**  
**Single Foot Medial L**  
**Left, Left, Right, Right**

# SINGLE LEG FORWARD L





# SINGLE LEG BACKWARD L



# LEFT, LEFT, RIGHT, RIGHT





# SINGLE LEG LATERAL R



# **PRESEASON TRAINING EXAMPLES**





# SEPTEMBER

## TUESDAY (G)

- General Warm-Up; Descending
- Hurdle Mobility
- Tech - 3x30m Skips For Height; 3x30 Skips For Distance; 2x Continuous Takeoffs L; 2x Continuous Takeoffs R

## THURSDAY (G)

- Repeat



# OCTOBER

## TUESDAY (G)

- Tech – 10-12x Long Jumps from 6-8 steps (SRJ's)
- General Strength & Med Ball Routines

## THURSDAY (G)

- Tech - 2x ea. LLL, RRR, RLRL, LLR, RRLL
- General Strength & Med Ball Routines





# NOVEMBER & DECEMBER

## TUESDAY (G)

- Tech – 6-10x Long Jumps from 10-12 total steps

## FRIDAY (N)

- Tech – 10-12x Triple Jumps from 6-8 total steps



# FEEDBACK LOOP

*“A flaw in an athlete’s technical approach to their event cannot be considered to be corrected until the athlete can clearly tell the difference between correct and faulty execution” – Frank Dick*

- **Summary**
- **Average**
- **Bandwidth**
- **Self-Selected**





# Questions?





**THANK YOU!**

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