

# High Jumping

Considerations in a Digital World 2026

Andrew Mozer

# My Audience - I Don't Know You

- Who has high jumped?
  - What form?
- Who here coaches high jump?
  - If any what level?
- Are you an assistant or the head coach?
- What do you want to know?
  - Basics
  - Advanced

# Roadmap

- Introduction
  - About Me
  - Coaching Philosophy
  - Knowledge Base
  - Adversity
- High Jump
  - Rules
  - Dangers
  - Misconceptions
  - Psychology Considerations
- Goals
  - Common Mistakes
  - Training progression
  - Drills
  - Efficiency
- Digital Information
  - Filming Considerations
  - Athletic.net
  - Online Resources

# Introduction



# About Me

- I am Andrew Mozer.
- Grew up in Helena, MT and competed for Helena High.
- Elementary PE teacher
- Started high jumping in 7<sup>th</sup> grade.
- Started assistant coaching high jump as a sophomore in high school for middle school students.
- In high school, my progression of personal bests was 5' 4", 6', 6' 4", 6' 8". 1' 4" increase overall.
- Competed in college for one year.



# Coaching Philosophy



- I believe that anyone can become a decent high jumper. Decent meaning that anyone can find value in learning the high jump form, pushing their own physical ability, and have a general understanding of what it is to high jump.



# How I Learned, What I know

- An obsessive interest since 2003.
- I learn by an overwhelming amount of repetitions and conditions.
  - I referenced my own experience jumping and the journey.
    - Daily jumping, shin splints, and a broken foot.
  - I coach anyone and everyone, whether I share the information or not.
  - I have done film review on all my athletes.
  - I have had my athlete's experiment with various drills and exercises.
  - Twice certified for Level 1 USATF, keep missing Level 2.
  - Acknowledged by Dave Kerin for my understanding and given advanced tips.
  - Still actively pushing my knowledge and coaching with athletes.
  - Coaching through adversity over the years, by other coaches.

# Adversity

- Athletes
  - High jump is not a required or prioritized.
    - Other commitments (events, other sports)
      - Time/Injuries
    - Trouble in school
    - Other school's athlete during summer.
- Coaches
  - “Don’t go hiding at high jump, you have real work to do.” Two separate coaches.
  - Building kids back up psychological.
  - Teaching kids to recover physically, don’t push through injury.
  - I believe let kids do, what they want to do.



# High Jump Basics

- High jump is one of the seventeen different events in track and field in Montana.
- The goal is to clear a bar at variable and increasing heights typically 2”.
- You must take off one foot.
- Three consecutive misses ends competition for a competitor. Does not need to be at same height.
- If a height is cleared within the three attempts, the jumper is awarded three more jumps.
- Most common form is the Fosbury Flop (rotating and landing on your back).
- Kids can scissor or flip (not recommended) as long as they take off one foot.

# Dangers

- Shin Splints, Stress Reaction, Stress Fractures. - Repetition and landing
- Black eyes and broken noses. - Improper landing, knees to face
- Back Pain - hereditary, improper landing, poor core strength
- Dislocating knee - twisting on takeoff.
- Bruises - landing on bar
- Getting cut - hitting standard, spiking oneself
- Missing the mat - jumping down the bar
- Mental breakdowns - Pressure

# Misconceptions

- Getting off the mat fast matters.
  - If you touch the bar and it falls, counts as a miss. Even after clearance.
- Arching improves height
  - Arching allows for legs to clear the bar easier, nothing with height.
- Increasing speed will improve high jump.
  - Only if athlete can handle the speed and knows how to adjust for takeoff.
- Once you jump, can't change arc.
  - Absolutely can change arc in air.
  - Can't increase distance, but can decrease.
- Fosbury flop is how all jumpers need to compete.
  - Depending on athlete, adjustments can be made to clear the bar in different ways.
- Toe dragging is bad.
  - Subconscious, little impact to jump.
- The high jump is a jump.
  - The high jump is a deflection from the ground. Usually around 5 - 10 degrees of flexion.
- Center of bar is the lowest.
  - Sometimes, but not worthy training for.



# Misconceptions cont...

- Stereotypes
  - Taller athletes are better.
    - Can be, not always.
  - Light athletes jump better.
    - Can be, not always.
  - Fast athletes jump better
    - Can be, not always
    - When does speed hurt an event?
- Should you copy what the top jumpers do?
  - Why are the top jumpers doing something?
  - Not necessarily good traits.

Trey  
4' 11"

# Psychology Considerations

- Is your athlete okay with...
  - Almost all competition ending in failure.
  - Stronger kids beating correct form.
  - Taking time to physically recover from jumps.
  - Technical improvement not resulting in vertical improvement.
- Physically see the challenge.
- Athlete's mental maturity.
- Athletes aren't trying to perform the technique poorly.

# Requirements of a Perfect High Jump

- Proper running technique.
- Good acceleration with speed maintained through the curve.
  - Not speeding up the curve.
- Good gradual lean to initiate curve and maintain body position lean at takeoff.
- Strong arm drive vertical to assist lift.
- Strong knee drive vertical to assist lift.
- Body relaxed (or flexed) in the air with head back.
- Slight leg raise upside down to get heels out of the way.
- Good bar awareness
- Short Last Step
- Confidence



# Common Mistakes In High Jump

- Poor running mechanics.
- Inconsistent steps during approach.
- Inconsistent speed during approach, curve, and jump.
- Turning body and running straight at bar, or down bar.
- Turning away from bar and running a wide curve.
- Twisting body at takeoff for rotation.
- Throwing body at the bar to initiate an arch.
- Kick timing: early, late, slow, aggressive.
- Poor confidence.

# Considerations for Individual Jumpers

- The athlete will not know what a good jump feels like.
  - The approach is an unnatural form and will take time to even feel comfortable.
  - Stress changes perception (competition, PB)
- Some jumpers can handle more speed, some cannot. Do not force speed to fix simple mechanics.
- Different strengths will result in different jumps.
  - Core strength
  - Flexibility
  - Speed control
  - Running consistency
  - Bar awareness
  - Confidence
- Any combination of strengths and weaknesses will make a jump look different.

# Training Progression from the Beginning

- Jog and jump off one foot.
  - Can be curved or diagonal.
  - Not slowing down when jumping.
- Horizontal rotation
  - Working a curve to get feet to face away from the landing.
- Layout
  - Working on landing on high back to shoulders.
- Running a curve
  - Have more forward momentum toward bar than across the bar.
  - Flipping a car.
- Takeoff
  - Lean creates turn, do not twist any part of body to rotate.
  - Focusing on jumping vertical, no throwing body into the bar.



# Drills and Key Goals

- Back Falls - Getting comfortable with landing on shoulders.
- Back Bends - Holding layout as long as possible and landing on shoulders.
- 3 Step Scissors - Simulate a short curve, drive knee and not kick.
- 3 Step Jump - Simulate a short curve, including horizontal rotation and landing.
- 5 step jump - Simulate a longer curve with above benefits.
- Full Approach - Getting comfortable with controllable speed and curve to the bar.

# Efficiency for Coaching

- Approach Width: 8', 9', 10' from standard. Slow, medium, fast.
  - Barshim was 11.5'-13' wide from standard, Sotomeyer was around 13'-14.5' wide. Both were significantly stronger/faster than high schoolers.
- 7 or 8 step approach: 2-4 step drive phase, 3-5 curve.
  - Curve starts subtle so it may seem like an additional forward step.
  - When athlete can consistently control curve, increase steps and width.
- An athlete should not jump down the bar, it is the result of a bad angle.
- Focus on improving technique over clearance. A bar can be knocked down with good form, or cleared with bad form.
- When competing, short term corrections for the moment.
- When practicing, aim for long term corrections for development.

# Corrections

- High jump is all about breaking bad habits. If you can break them, that is when you will see success.
- Why did they knock down the bar?
  - Didn't jump high enough:
    - Was there a speed change
    - Did they arch too early
    - Bad takeoff angle
    - Twisting upper body or lower body on takeoff.
  - Above bar but knocked it off.
    - Bad takeoff angle
    - Kicking early/aggressively, or too slowly.
      - Cannot tell time adjustment, too short
  - Don't need to fix whole jump if there is a simple answer.



# Corrections

- Understand a jump is extremely physically demanding and make adjustments accordingly.
  - The strength requirement to jump is increased significantly as speed and power are increased. Higher bars require increased strength, which means less reps.
  - Novice jumpers need more practice with reps at lower heights and slower speed, less stress.
    - Improves confidence, run, and understanding.
    - High bars as stress test, not necessarily for clearance.
  - Advanced jumpers need more focus with drills to improve weak areas and a few full speed/full approach jumps. (College demands are different)
    - Less repetitions and more time spent recovering.
  - The faster you move, the less time your brain has to think. (Processing Speed)
    - High Five

# Digital Information

# Filming Considerations

- Who do you film?
  - All athletes?
  - Top ranked?
- When do you film?
  - All Jumps?
  - PR/PB jumps?
- What do you as the coach get out of filming?
  - Do you know what to look for?
- Does your athlete care to watch film?
  - Does your athlete know what to look for?



# Takeoff Lean Early



# Takeoff vertical



# Running at Bar



# Continuing Curve





Takeoff Lean Early (Good head pos.) Takeoff vertical (Bad head pos.)





Camera: 45 degrees at takeoff, looks good,  
not much information



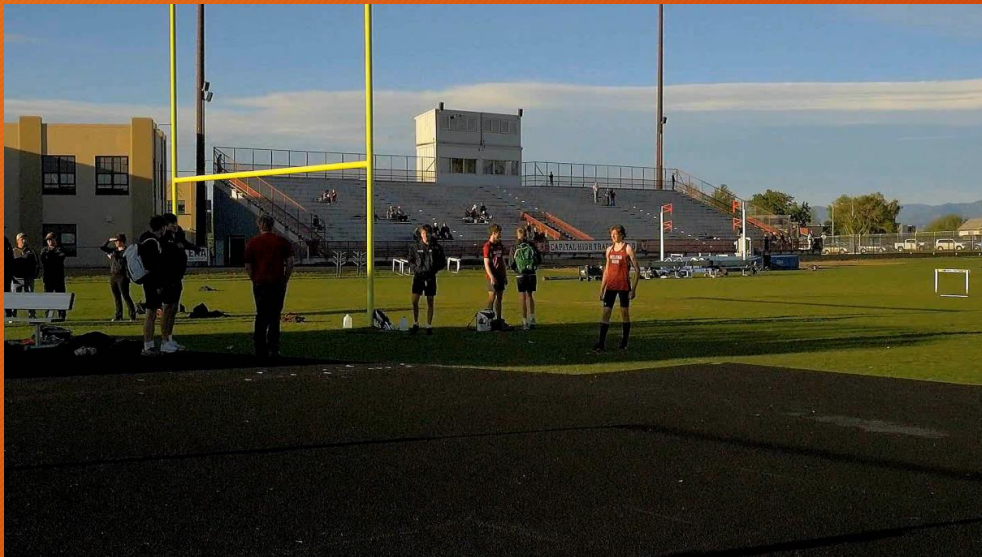


Camera: 90 degrees at takeoff, watches run and curve.



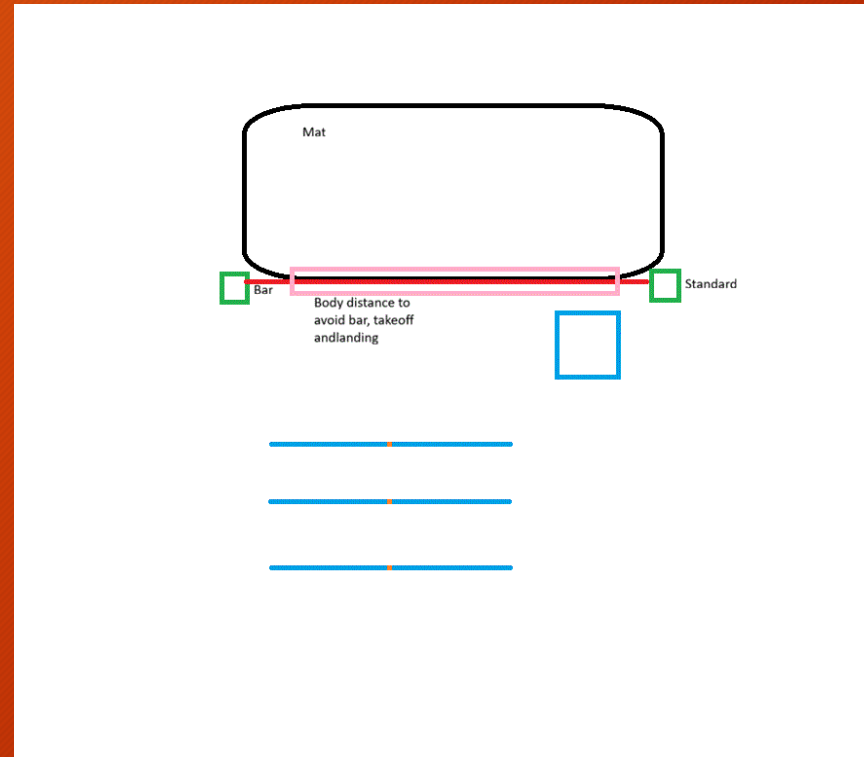
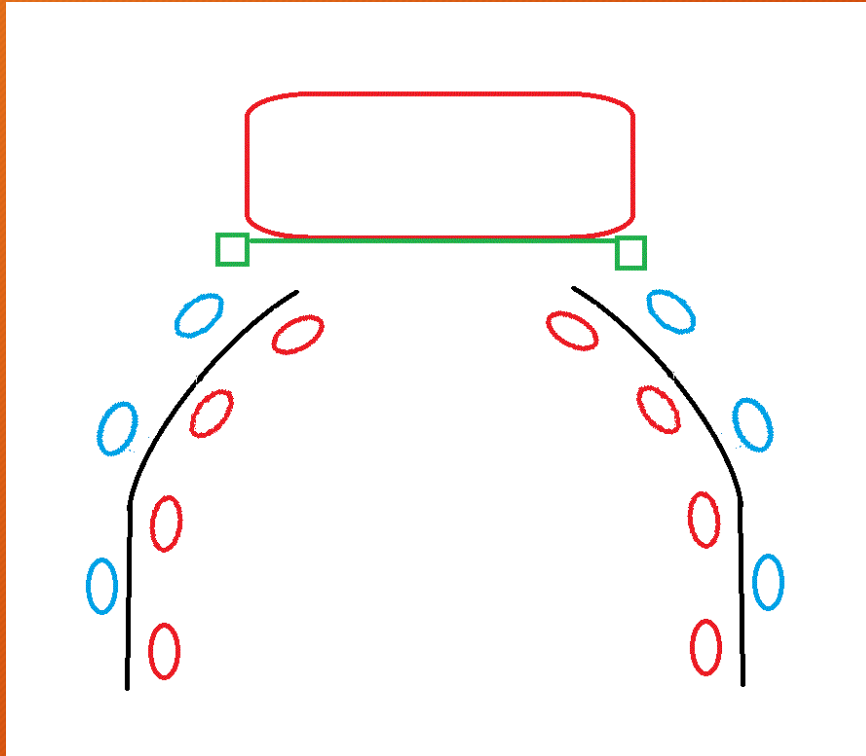


Down the bar, good for takeoff position and over the bar form.

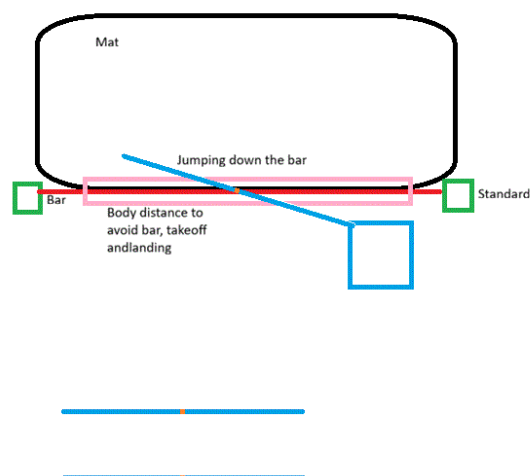




# High Jump Takeoff angles

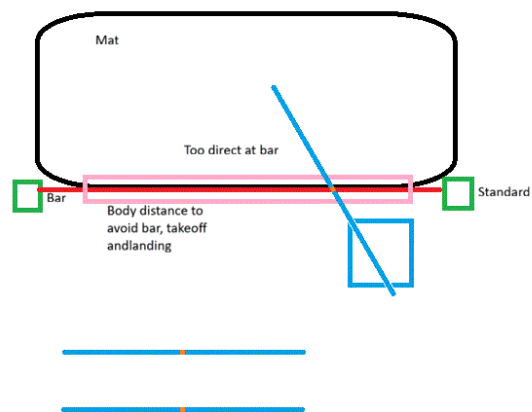


# Jumping Down the Bar

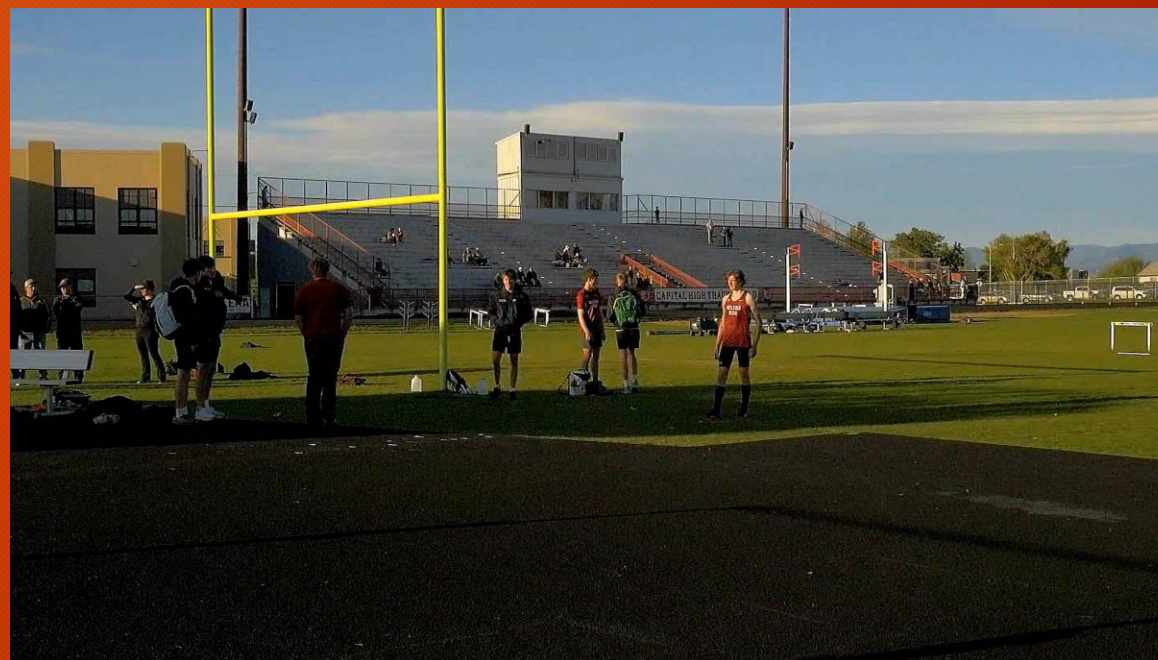
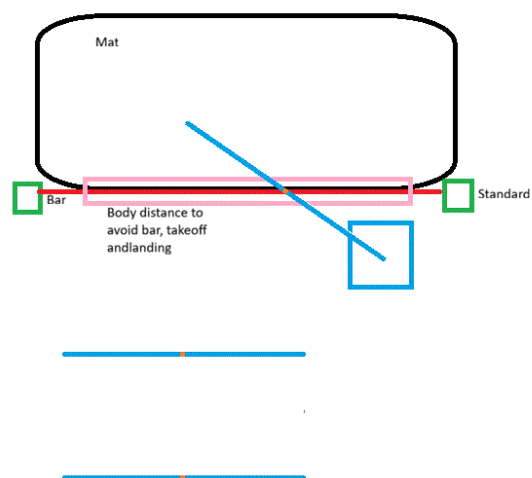




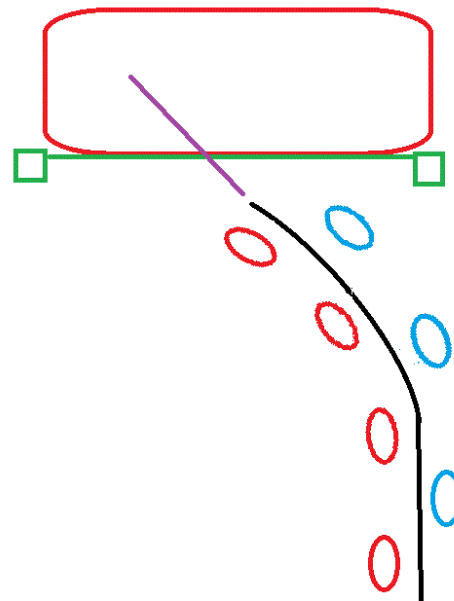
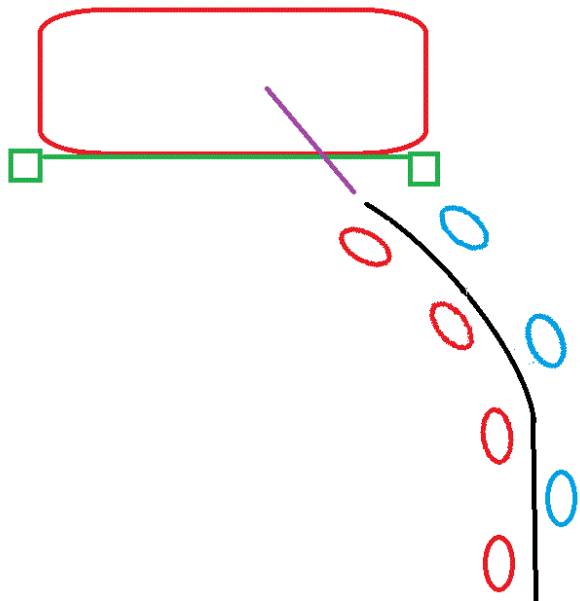
# Jumping At the Bar



# Jumping at roughly 45 degrees

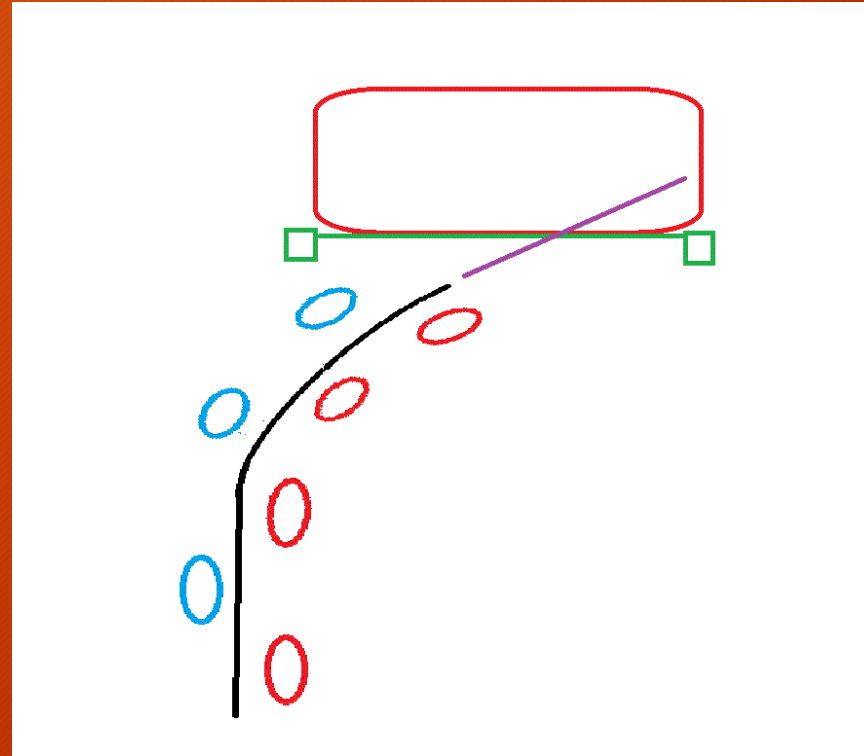
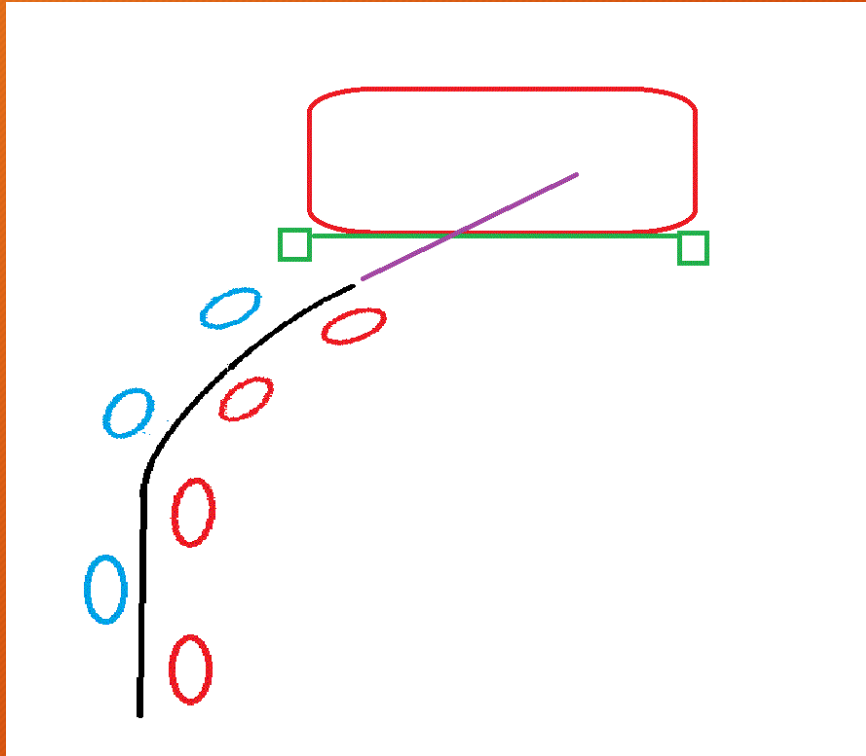


# Depth and Safety 1





# Depth and Safety 2



# Holding Layout

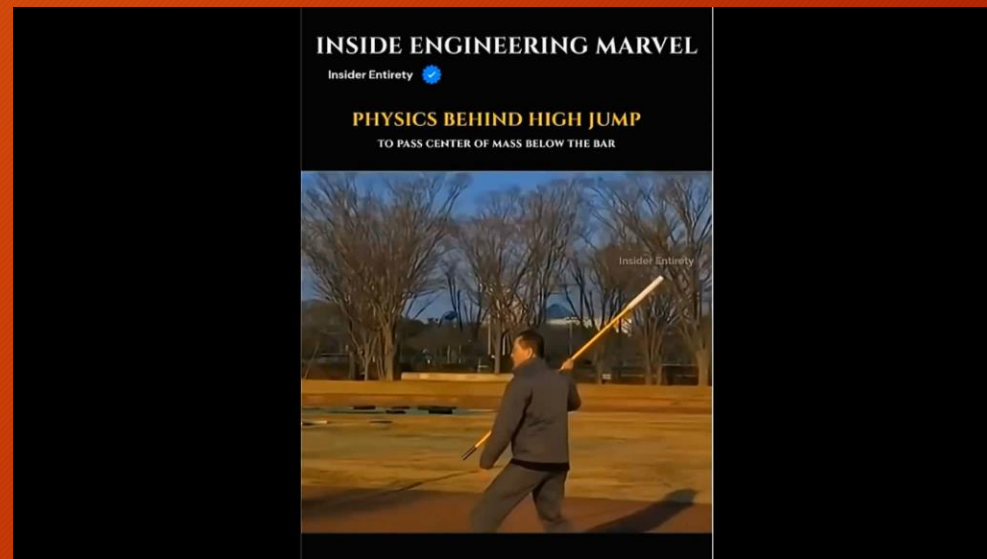
## Early Kick

## Holding



# High Jump rotation

- The first time I watched this video, Dave Kerin showed it to me. I was pissed.
- Strong core
- Less emphasis on arch
- Stephan Holm





# Limitations of Cameras

- Cameras can't see all the information you need from one angle.
  - What do you want to see?
- Seeing a jump through a camera, even replay, does not provide as much information as watching live.
- Some people need slow speed on cameras to catch mistakes.

Athletic.net

# Usefulness - Not High Jump Specific

- Track your athlete's progression.
- Track other athlete's progression.
- Track a team's success in an event.
- Track rankings
  - State, Nation
- Location - State Champion
- What other events do top athletes (high jump) do?
- How many meets do they compete in?
- Understand results also don't tell the full story.



# Trends

- Boys

- 30 over 7', 10 over 7' 2"
  - Of the 7' 2", only 2-3 of them consistently competed in other events.
- Main alternate events for the top 30 are long and triple jump.

- Girls

- 22 over 5' 10", 5 above 6'
  - Of the 6' jumpers, all competed in multiple events.
- Main alternate events for top girls long jump and hurdles.

# Online Resources - Coaches

- Lots of coaches post drills, exercises, and information online.
  - Understanding of the drill matters.
    - A beneficial drill for one coach could lead to bad technique for another. 3 step jump.
    - Some drills take a long time to understand which is hard in a short season. Circle runs
- Credibility
  - Lots of coaches were either good athletes or have trained amazing athletes. Does not mean their information is any better.
  - Odds of finding a top athlete increase when scouting or in large pools of athletes.
    - 20 kids going out for track vs 200 kids.
    - Running a club where top athletes seek assistance.

# Online Resources - Athletes

- Social media
  - The top athletes are talking to each other.
    - Positively and negatively.
    - Coaching each other up.
  - Athletes who want to improve are looking up their own information.
    - May not understand purpose of a drill.
    - May be getting bad information.
- Role Models
  - As a coach, why should they listen to you?
    - How do you interact with them?
      - Excited? Angry? Disappointed?
    - Past experience?
    - Past success?
    - What do you know about the event?
  - Personal belief.
    - Athletes are better now than they have ever been. Coaching high jump has trailed behind.



# Any Questions?

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