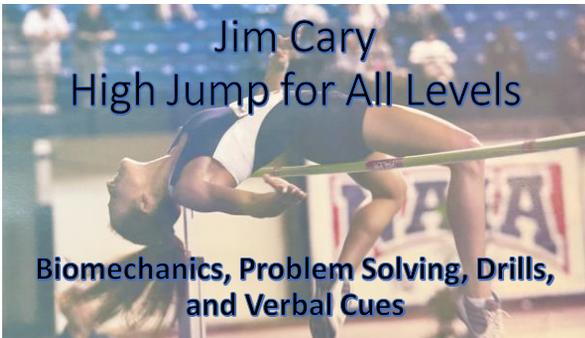




1



2

Part I: Biomechanics

Sir Isaac Newton...

...Could have been a great track & Field coach!



3

Levers

Long Levers → Slow but powerful

Short Levers → Fast but less powerful

4

Center of Mass

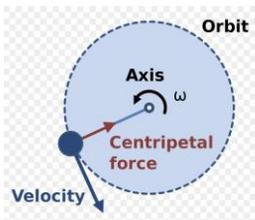
Generally, just below the naval and in the center of the body. This can change during the arch phase of their high jump.



5

Centripetal Force

The force that causes the body to follow an arc.



6

Action/Reaction

For every action there is an equal and opposite reaction.

Stretch Reflex-The more a muscle is stretched, the faster it will return to its normal position. Think of a rubber band.



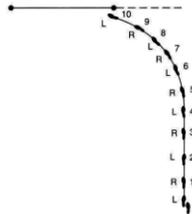
7

Part II: Basics of the J Approach

How many steps should a jumper take?

This depends on several factors.

I usually prefer 10 for high school athletes.



Where does the turn start?

4 to 5 steps from the bar depending on the athlete.

Turn mark

I ALWAYS use them. It helps both the coach and the athlete.

8

Posture on the Circle

Lean from the ground, NOT the waist



9

Posture on the Circle

Lean from the ground, NOT the waist



10

Posture on the Circle

Crossbar Drill



11

Posture on the Circle

Crossbar Drill



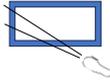
12

To Block, or Not to Block?

I prefer one but will talk about both. It depends on the athlete.

Direction of plant/takeoff

Between 20°-40°-In front of the back corner



Positions in the Air

This is the least important part of the jump but can give information about the jump.

13

Plant/Takeoff Drills

Last two steps into the plant

Cue: "flat, flat"



14

Plant/Takeoff Drills

Last two steps into the plant

Cue: "flat, flat"



15

Plant/Takeoff Drills

Last two steps into the plant

Cue: "flat, flat"



16

Other Drills

Using a ramp during practice



17

Other Drills

High Bar Drill



18

Other Drills

High Bar Drill



19

Other Drills

Ta Da! Drill



20

Other Drills

Ta Da! Drill



21

Other Drills

Gallop Drill



22

Other Drills

Gallop Drill



23

Part III: Problem Solving

**Always look at what occurred before the problem was seen!
This is where the problem was set up in a chain of events.**

24

Common Problems

Inconsistent Approach

- Examine the first step
- Check the direction of the run
- Did they hit the turn mark?
- Did they stay on the circle?

25

Common Problems

Inconsistent Approach

Drills to fix problems:

- Run the start to the turn mark
- Spikes, Spikes, Flat, Flat
- 3 Point Line-Use indoors
- Full J and out
- Run 16' to 20' circle

26

Common Problems

Hitting the bar on the way up

- Planting too close
 - Drills: Use chalk box in practice & hit turn mark
- Post Pattern from turn mark
 - Drills: Any drills that practice run
- Too erect at plant, leaning from waist, or reaching into pit
 - Drills: A lot of running the circle-Full J and out
4/6 step approach, grab high bar with inside hand
Run 16'/20' circle with bar on shoulders
- Driving head and shoulders toward the mat
 - Drills: Same as above

27

Common Problems

Verbal Cue for all of the previous problems

- I use motorcycle

28

Common Problems

Stalling on top

Improper Foot Plant

- Too long or poor aim
- Drills: Gallop on the 16'/20' circle
Cute guy/girl drill

29

Common Problems

Stalling on top

Decelerating on the circle-trying to jump too hard=long last step

- Drills: Gallop drill
Jump fast or get your left/right down
Run off the ground

30

Common Problems

Stalling on top

Decelerating on the circle-trying to get their back to the bar before leaving the ground

- Drills: Circle drill with with pole or bar on shoulder
Ta-Da drill
Jump, THEN turn

31

Common Problems

Sitting on the bar/Coming out of arch too soon

Chin drops to chest early or knees together or pulled up early

- Drills: Lay on mat with knees wide and heels together-pull knees together, feel hips drop

Lay on mat with knees wide, heels together-pull kneed up and feel hips drop

Focus on far standard, bring right shoulder to chest, spot mat w/peripheral vision

32

Common Problems

Sitting on the bar/Coming out of arch too soon

Chin drops to chest early or knees together or pulled up early

- Drills: Ribbon/tape drill at home

Bunk bed drill, 1 section on top of 2, short approach, hold layout on mat
- Cues: Work on your tan

33

Common Problems

Hitting the bar with calves

- Over Arching
 - Action=equal and opposite reaction-stretch reflex
- Knees too close
 - Lower leg caught under the bar
- Not brining jump foot into plic position
 - Drills for all three problems:
 - Bunk bed drill

34

Common Problems

Not getting their back square to the bar

- Trying to get their back to bar before actually jumping
 - This tends to over rotate the plant foot, slowing way down, losing core stability, slowing everything down
 - Drills: Cute guy/girl drill
Ta da drill
- Cues: Jump, THEN turn

35

Common Problems

Not getting their back square to the bar

- Trying to lay before actually jumping
 - Drills: Cute guy/girl drill
Ta da drill
- Cues: Jump, THEN turn

36

Common Problems

Not getting their back square to the bar

- > Reaching into the pit early
 - > Drills: Ta da drill
 - Bring shoulder to chin drill
 - Drive knee slightly across the midline-toward far standard
 - Short approach grab high bar with lead hand
 - Ribbon Drill near wall and hand stays inside the shoulder

37

Thank you to the Jumpers in This Presentation:

- Caroline Cronin**
- Eric Rydell**
- Liz Rydell**
- Erica Schamel**
- Taylor Washington**

38

Questions?



39

Contact Jim Cary

Phone: (314) 650-5274

Email: jimcary6769@sbcglobal.net
