

Long Jump Training

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Course Outline:

- *Long Jump Definition, Measurement*
- *Athlete Selection for Long-Jump*
- *Phases of Long Jump*
 - *Preparation*
 - *Approach*
 - *The Jump*
 - *Flight*
 - *The Landing*
- *Drills/Exercises*
- *Common Errors*
 - *Corrections*
 - *Drills*
- *Adaptations for certain Impairments*
- *Conclusion*
- *Q&A/Discussion*

Long Jump Definition:

- The **long jump** is a track and field event in which athletes combine speed, strength and agility in an attempt to leap as far as possible from a take-off point*

*more on take-off point on next slide.

- Long Jump is one of 2 “Horizontal Jumps” (other – Triple Jump)

Take-off Point:

- Take-off Point is a Physical Wooden Board embedded into the long jump runway, or a Painted/Taped Stripe on the long jump runway near “the pit” .
- A long jump is considered successful (will be scored/recorded) if the athlete’s foot (or blade) leaves the runway at or behind the take-off point.

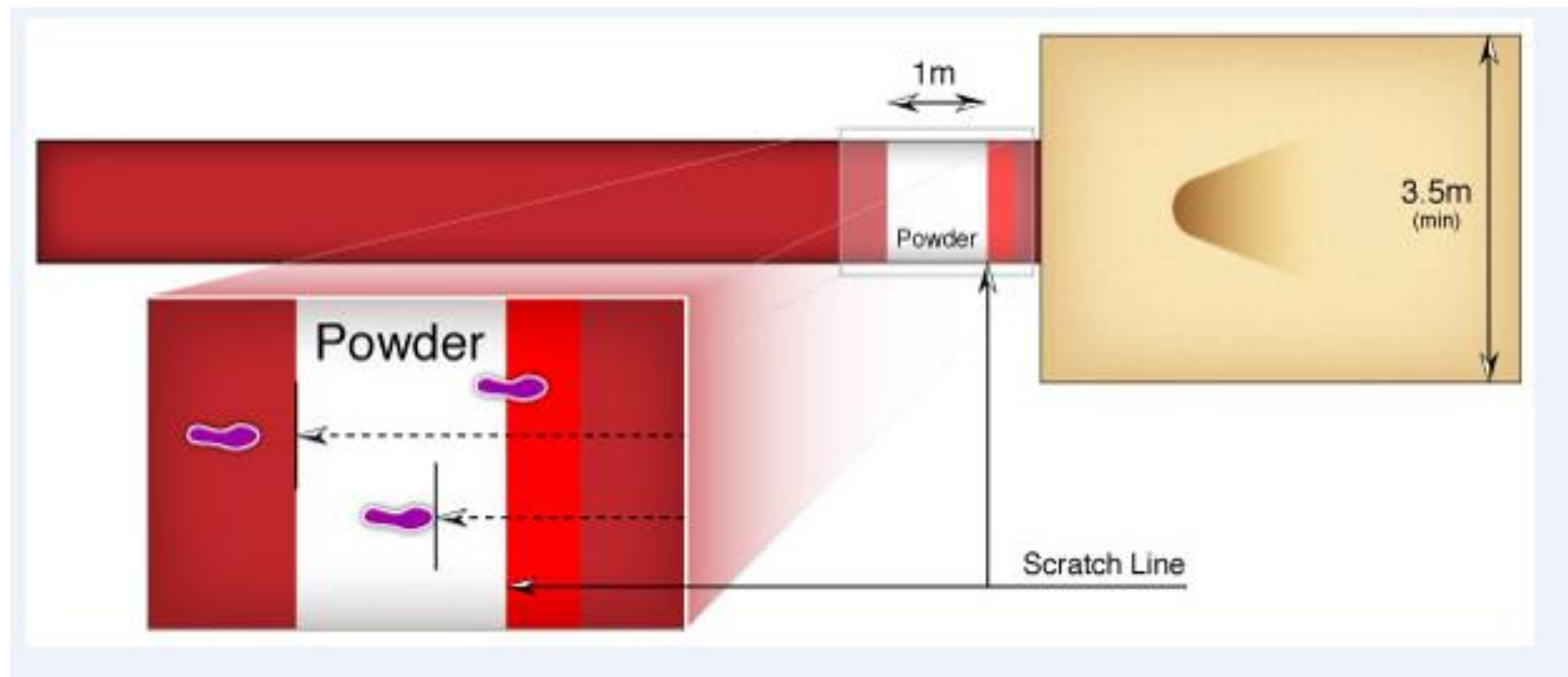
Take-off Point (cont..):

- Measuring the length of a jump always starts at the Take-off point, regardless of the point where the athlete actually jumps.



Take-off Point (cont..):

- However, for T11 and T12 Visually Impaired (VI) athletes (not T13), an area of chalk/powder is prepared 1 meter back from the jump board, to mark the point of take-off for the athlete. This actual jump point is then used to measure the jump distance.



Long Jump Measurement:

- Measurement of a Long Jump is the distance between the Take-off point and the mark(in the pit sand) closest to the Take-off point made by any part of the athlete's body.

Long Jump measurement (cont..):

- If the actual jump point by the athlete is beyond the Take-off point, the jump will be considered a “foul” or “scratch” and no measurement is recorded. The jump does, however, count as one of the allotted jumps (usually 3 or 6) for that athlete.

Long Jump measurement(cont..):

- Long jump competition results are based on the longest (non-foul) jump for each athlete (i.e. jumps are not cumulative).

Athlete Selection for Long Jump:

- Any Ambulatory athlete, including Visually Impaired (VI) athletes, are candidates for Long Jump.
- Recommend having most, if not all, ambulatory athletes try the long jump.
- Sometimes distance runners and other non-sprinters become accomplished long-jumpers.

General traits of advanced long-jumpers:

- Good to excellent sprint speed
- Leg strength
- Core strength
- Core balance
- Commitment to long jump training/practice (rare for an athlete to excel at long jump without significant practice)
- Positive mental attitude to overcome foul/scratch jumps

Phases of the Long Jump

- Preparation
- Approach
- Jump
- Flight (through the air)
- Landing

Preparation

- Warm up
 - Starting point/distance on runway
 - Measure and mark (if known by athlete)
 - Reverse run on runway to determine starting point*
- * (Determining Starting Point process detailed on next slides)

Determining Starting Point for Long Jump

1. Decide on number of strides. Rule of thumb: Number of strides is approx. equal to age. Stride = step with one foot. Example: 15 year-old may take 14-16 strides (7-8 steps with each foot), from starting point to take-off point. Usually not more than 20 strides.
2. Determine Jump foot and starting position (which foot is forward at start).

Determining Starting Point for Long Jump(cont..)

3. Position athlete on take-off point in their starting position, pointing away from pit. If they take-off to jump from their right foot and stand at the start of their run-up with this foot back, they need to take an odd number of strides.

If, however, this athlete prefers to start with their take-off foot forward, they need to use an even number of strides.

Determining Starting Point for Long Jump(cont..)

4. Have the athlete run up the runway, away from the pit, having their coach count athlete's strides, placing a marker (e.g. tape, stick) where the "take-off" stride (e.g. 15th stride) hits. Each athlete is allowed 1 mark on the runway.

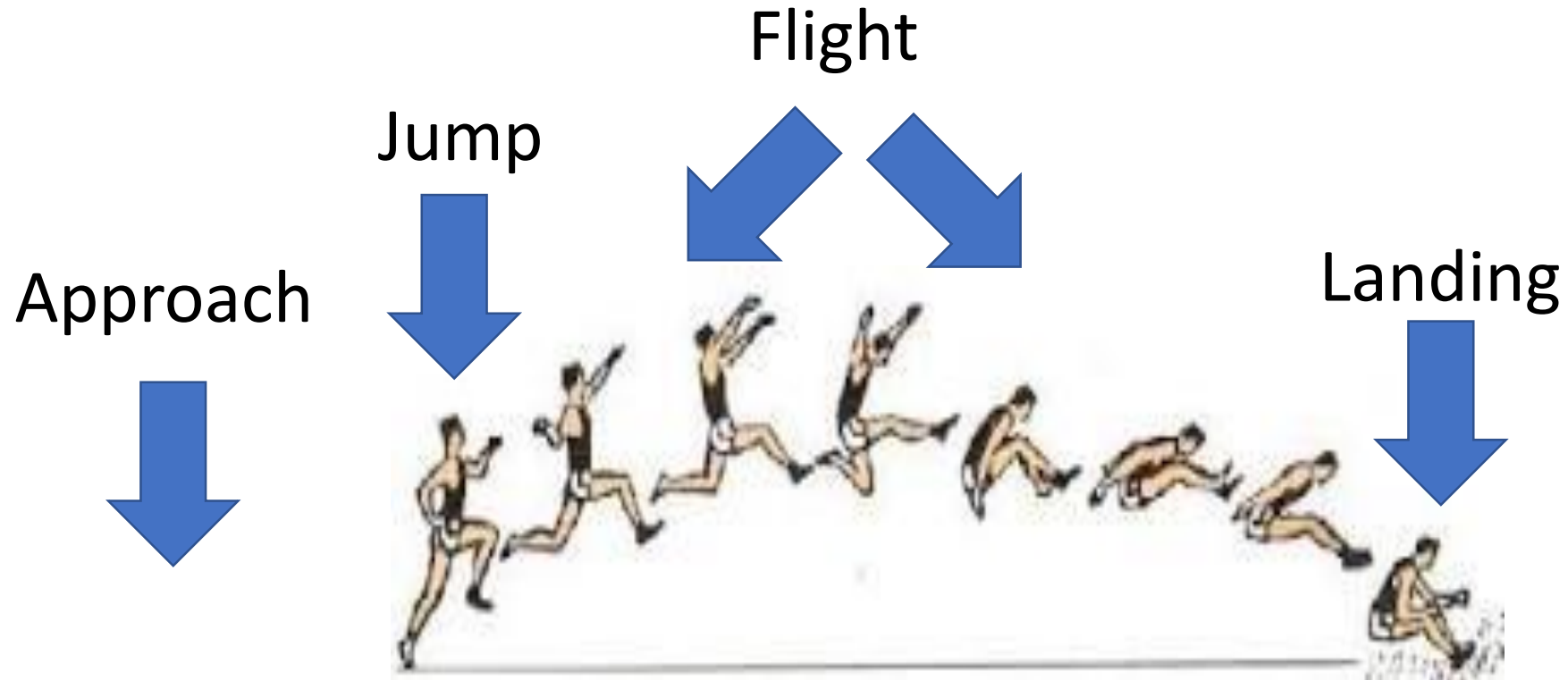
Repeat/refine as necessary.

Once finalized, uniquely identify this athlete's mark (e.g. their initials on the piece of tape), then measure and record for future.

Preparation (cont..)

- Remind athlete to start with same foot every time.
- Conditions adjustment (wind, temperature, fatigue, etc.).
- Run-throughs into pit (no jump).

Phases of Long Jump

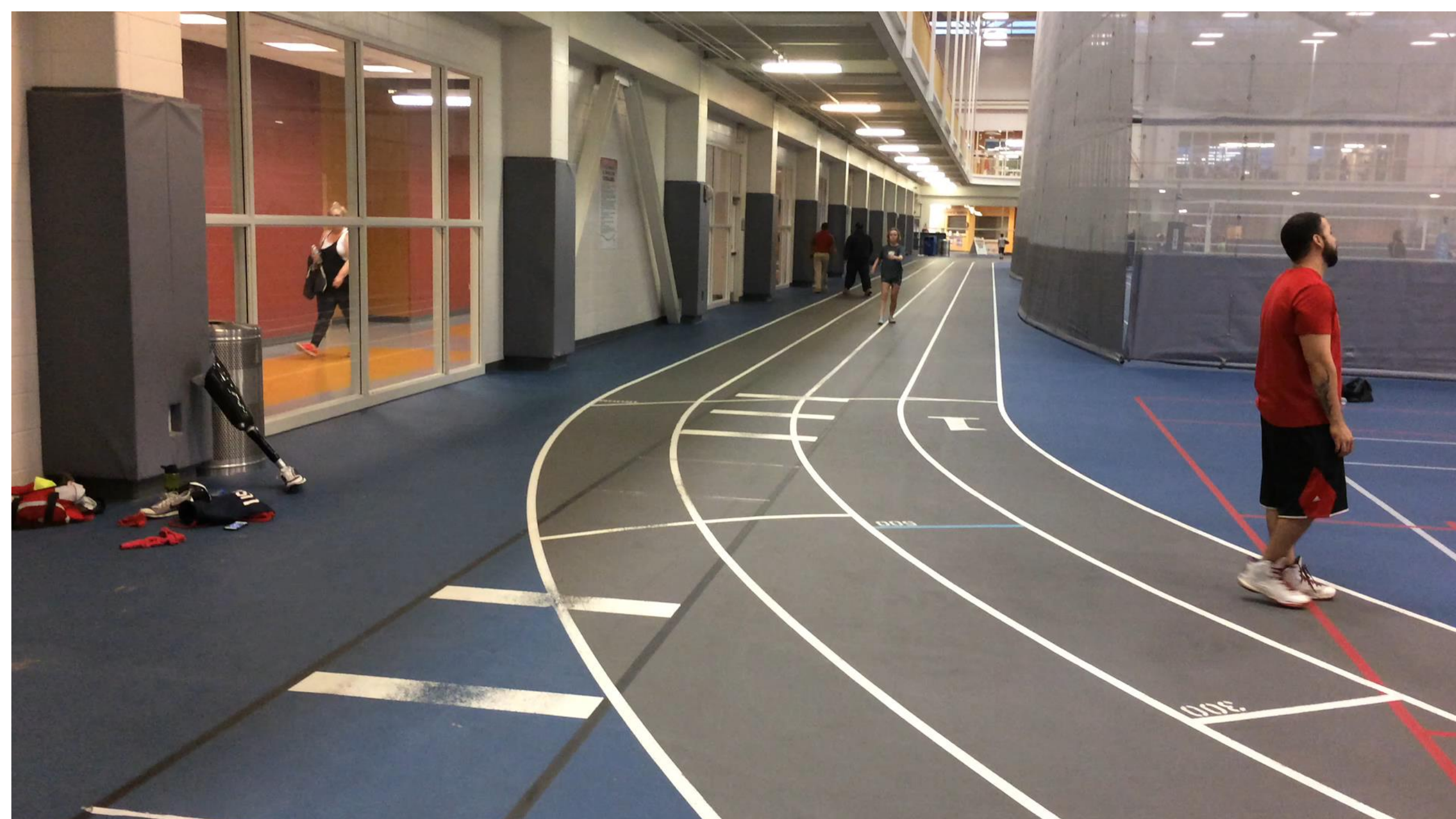


Approach - the run to point of jump

- Athlete should mentally review jump sequence just before starting running
 - * *Note: IPC Rule meets will have a 30 second time limit from official's call to start jump.*
- Approach run should achieve optimal jump speed for 2-4 strides, any more is wasted energy.
- Optimal speed is generally 90-95% of top sprint speed. Sometimes described as a “controlled sprint”.

Approach - the run to point of jump (cont..)

- Eyes should be straight-ahead (not down on runway), viewing a large fixed object well beyond the pit (e.g. treetop, building sign).
- Penultimate Step (second-to-last step). Much written/researched about this step. Key is to slightly shorten this step to lower center of mass and prepare to convert horizontal velocity to vertical velocity.



The Jump

- Jump step is usually about 90-95% of optimal speed stride (shorter by 5-10%). However, each jumper is different and some naturally reach (longer stride) on jump step. (e.g. Bob Beamon, 1968 Olympic champion and world record holder, had a *longer* jump step).
- Knee drive up (opposite knee of jump leg)



The Jump.

Note knee drive up.

The Jump (cont..)

- Arms should go overhead during jump or at start of landing, but key is to swing arms (like a swimming butterfly stroke), having hands pass hips (front to back) just before landing.
- Near end of jump, drive feet forward, almost to a sitting position, keeping head and torso forward.



The Jump.
Good arm height.



The Jump.

Extreme leg/feet drive forward

The Landing

- Feet drive forward, landing in front of body center of mass, but don't "sit down" but rather slide butt over feet imprints.
- Arms/hands should end up behind hips, but not touching sand/ground.
- Feet should land about shoulder-width apart, with heels equidistant from the jump line.

The Landing

Note seat is just above heels, landing in sand in same spot as feet landed.



The Landing

Note arms have swung from overhead to the sand, will continue driving backward from this point past the hips.



Long jump drills and exercises

Long jump drills and exercises (cont.)

- Core Strength and Balance

➤ “A” Skips



Long jump drills and exercises (cont.)

- Core Strength and Balance

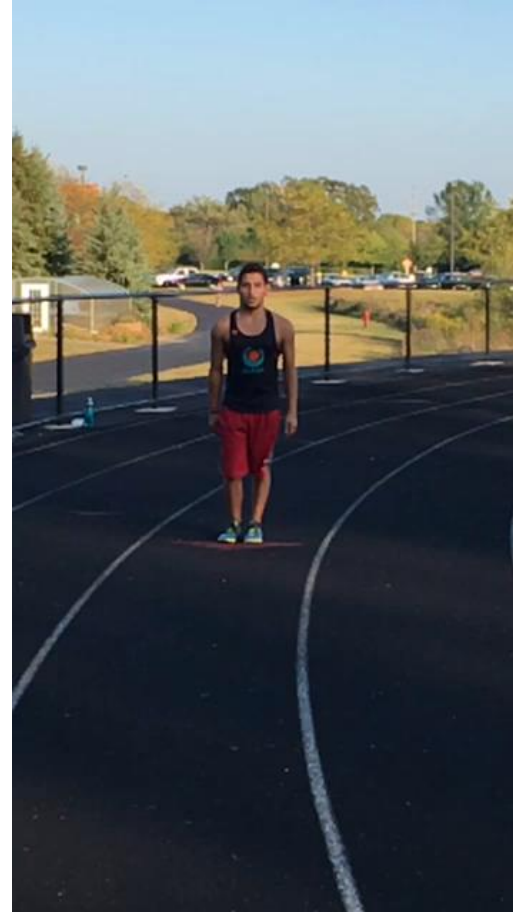
➤ “B” Skips



Long jump drills and exercises (cont.)

- Core Strength and Balance

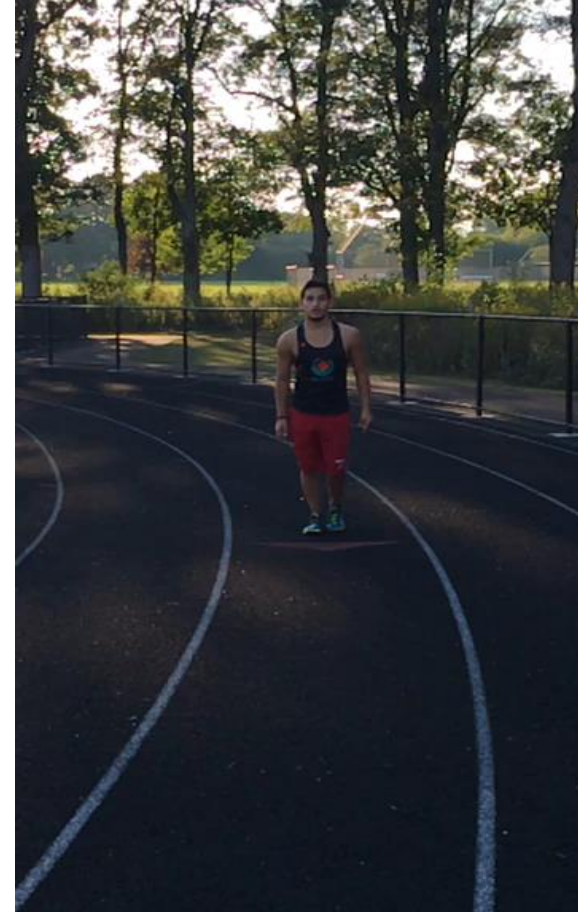
➤ “Butterfly”
Skips



Long jump drills and exercises (cont.)

- Core Strength and Balance

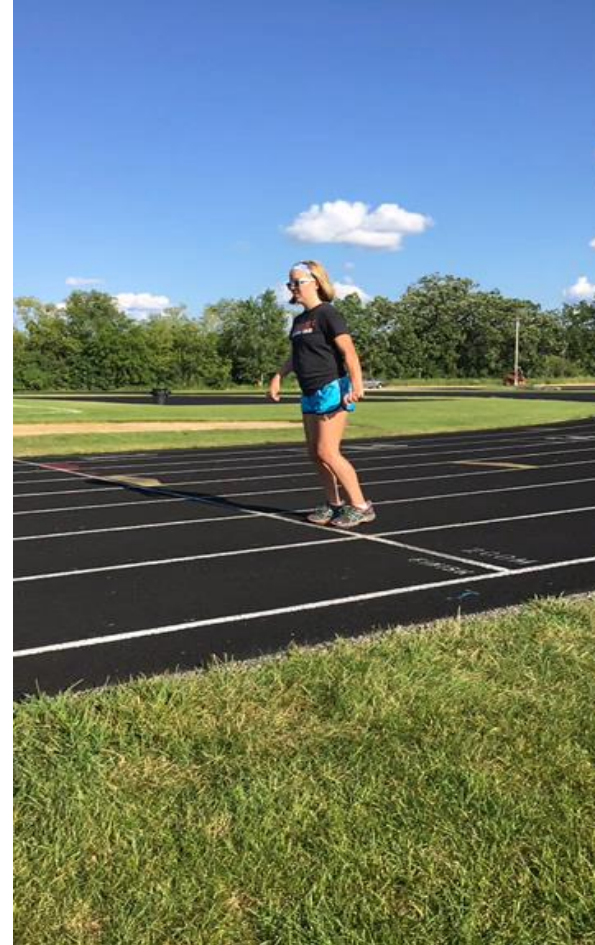
- “Jumping Jack”””
Skips



Long jump drills and exercises (cont.)

- Core Strength and Balance

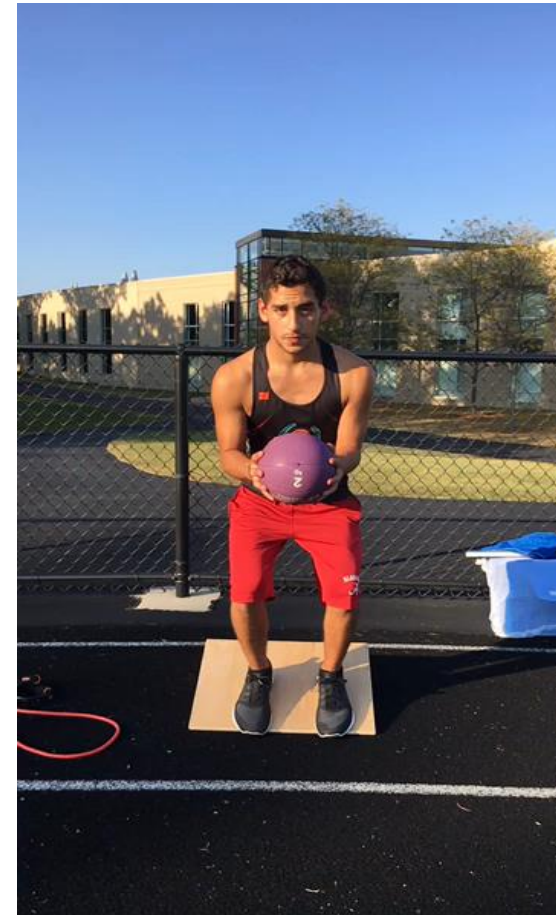
➤ Forward Lunges



Long jump drills and exercises (cont.)

- Core Strength and Balance

➤ Incline Squats



Common Long Jump Improvement Areas

➤ Corrections

✓ Drills

Common Long Jump Improvement Areas

➤ Approach too long

✓ Observe point of full speed,
recommend only 2 more strides from
that point

Common Long Jump Improvement Areas

➤ Athlete slows down approaching take-off

✓ Shorten approach distance

✓ Have athlete focus on object beyond jump pit (tree, building, etc.)

Common Long Jump Improvement Areas

- Athlete looks down on take-off
 - ✓ Focus on object beyond pit (tree, building, etc.)
 - ✓ One-step jump into pit without looking down.

Head and eyes well focused beyond pit



Head is up, but eyes are “peeking down” at take-off point.

Common Long Jump Improvement Areas

- Poor use of arms (remaining at sides or behind, not overhead, in front on landing)
 - ✓ One step jump with arms overhead, then swing arms to sides on landing
 - ✓ Position Object above pit for athlete to reach

Apparatus to emphasize Arm Reach and Height



Common Long Jump Improvement Areas

➤ Lack of height on take-off

- ✓ Focus on knee and arm drive
- ✓ Prevent head/eyes from looking down
- ✓ Introduce object (e.g. elastic band) across & slightly above jump pit for athlete to clear

Common Long Jump Improvement Areas

- Landing on only one foot
 - ✓ One-step jumps landing on 2 feet
 - ✓ Draw circle in sand and direct athlete to put both feet within circle
 - ✓ Remind athlete that there should only be 'one sound' upon landing

Common Long Jump Improvement Areas

- Legs underneath body and/or straight
 - ✓ Lead with knees
 - ✓ Gain confidence that pit is “safe landing area”
 - ✓ Landing in frog-like position
 - ✓ Practice standing long-jumps

Common Long Jump Improvement Areas

- Landing with legs too far apart or “staggered” (not equidistant from take-off point)
 - ✓ Mark area in sand to land within
 - ✓ Practice standing long-jumps



Good example of leg placement.
Heels shoulder-width and
equidistant from jump-point.

Adaptations for certain Impairments

➤ Weight imbalance (often with amputee athletes)

- Landing will often be “led” by lighter side

- ✓ Experiment with slight rotation in flight against (to counter) natural rotation

Adaptations for certain Impairments (cont..)

- Amputee athletes generally jump off bladed leg, but that may not be natural jump leg
 - ✓ Experiment with jumps from both legs
 - ✓ Increase jump drills on bladed leg

Adaptations for certain Impairments (cont..)

➤ VI Athletes

- ✓ Voice and/or clapping assistance from a Guide during approach. (Guide usually stands to the left or right of jump board but not in the pit to help guide (not coach). Athlete must exit the pit by themselves. T11 may have 2 Guides, T12 one Guide, T13 no Guides.)
- ✓ Step counts from coach and athlete to cue when to jump (e.g. athlete knows to jump on 8th step)

Conclusion

The Long Jump can be a very rewarding and successful event for a variety of athletes since it requires a combination of several skills and techniques.

The fastest/strongest athlete does not necessarily always win the long jump.

Q & A

Appendix:

Event Specific Drills – Long Jump

Special Thanks to:

Jeremy H. Fischer, *Lead Coach/ Program Director CVETC*

MAXIMUM VELOCITY ATHLETICS

www.maximumvelocityathletics.com



EVENT SPECIFIC LONG JUMP DRILLS

Standing Penultimate	Penultimate Leg Bent at Knee Up, Land with Heal Lead, Roll on and Off Foot
Take Off Drill Basic	Step into Take Off Slightly in Front of COM, Driving Knee and Blocking Opposite Arm
Continuous Knee Drive Drill	Drive Free Leg Knee Up and Down
Take Off Drill Step	Take Off Drill Step Into Take Off
Take Off Drill 3 Step	3 Steps into Take Off
Standing Penultimate to Take Off	Standing Penultimate then Step to Take Off Leg, Drive Free Leg to Parallel Thigh
Walking Penultimate Drill to Take Off	Take 3 Steps into Penultimate and into Take Off
2 Hurdle Penultimate Drill	Between Two Hurdles Roll Onto and Over Penultimate Leg
Run, Run, Jumps	Continuous Jumps working on Penultimate Over and Over
Horizontal Run, Run Jumps	Work on Going Horizontal
Vertical Run, Run Jumps	Work on Going Vertical
Swedish Bounds	Skip, Skip Jump Driving Knee Up
Power Skips	Alternate Jumps Working on Knee Drives

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EVENT SPECIFIC LONG JUMP DRILLS (cont)

Mini Hurdle Take Off	4 Step Pop Over Mini Hurdle
Continuous Mini Hurdle Take Offs	3 Mini Hurdles 1,2 Over Hurdle (3m Apart)
33" Hurdle Take Offs	Work on Vertical Components of Jump
Box Step on Step Off Drill	Work on Upright Body Position
Box Step on Step Off 1,2 Drill	Step on Step Off Box and 1,2 Pop Off Ground
Stride on Box Step Off 1,2 Drill	Stride on to Box then 1,2 Pop Off Ground
Box Pop Offs	Stride into and Pop Off Ground
Short Run Knee Holds	Stride into Take Off and Pop Off Ground Holding Free Leg Knee at 90* Angle
Standing Long Jumps Progressions	1- Land on Feet, 2- Land on Feet Get Into Seated Position 3- Land on Feet, Seated Position, Kick Heals Out 4- Land with Feet Hitting First and Scooping into Landing
Short Run Jumps	Various Short Run Jumps 4,6,8,10,12 Strides
Rhythm Runs	Approach Work Using 70-80% of Speed
Rhythm Runs with a Pop Off	70-80% Runs with a Pop Off at End

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