High Jump

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Philosophy

- Keep it as simple as possible
High Jump approaches are typically 8-10 steps. 4-6 on straight and 4-6 on curve.

I like 10 steps with most people.

Start by doing 15 step runs on a straight. Having them do these at a reasonable high jump tempo. And make sure they are accelerating as they go and I mark the 10th step. Do 5-6 of them and find a relatively consistent 10th step.

Transitioning this to the high jump apron. I will normally use 11-12 feet out for woman and 12-13 feet out for men. Then go back the distance you measured on the straight runs

This is very general but it normally gives you great starting point for an approach.

Once you move the approach to the apron you can play with curve radius.

Do approaches running through the take off and out the other side of the pit. Once you find an approach that you like do popups on to mat. Feel free to draw a curve or put little cones inside or outside of the athletes curve. I like to play with the radius of the curve when they do popups.
How to draw curve

1. Measure 3-3’6” out from standard
2. For a right handed jumper, measure 4.25m parallel to the bar away from the takeoff point.
3. Measure 10m back from the 4.25m mark.
4. Hypotenuse is 10.87m long. Hold the 0 at your takeoff point.
5. With your thumb hold either 6m, 6.5m or 7m on this hypotenuse. Have a partner hold a piece of chalk on 0 and swing the radius until you achieve a ¼ circle.
6. Generally, the higher a person jumps the larger the radius.
Coaching Cues

- Coaching eye and Other cues for approaches -
  - Mid mark - I like to do a mid mark on the 5th or 6th step. With beginners and multieventers I don’t have them pay much attention to it. I just use it as a coaching cue for me. As the athlete advances I have them pay attention to it.
  - First step mark - if the athlete’s approach is very inconsistent sometimes I will try a first step mark. Sometimes if you normalize the first step it will help make the approach more consistent.
  - I’m not a huge fan of walking, skipping or running into approaches especially with young athletes. The importance of the approach is to do the same thing over and over again. Make the approach as easy as possible.

- How much approach work do high jumpers need? We do approaches 2-3 times a week depending on the age of the athlete and time of season. Every high jump session I do starts with approaches. We will do a couple of straight runs, 4-6 Run throughs, 4-6 popups with a low bar. I really like to start Mondays with approaches.
What to look for in approaches?

- Good rhythm out of the back (first 4-5 steps)
- Transition from straight to curve smooth. Make sure athlete is staying on line when initiating the curve (not swinging out)
- Accelerating through end of approach
- Flat feet contacts around curve
- Shoulder and hip position through curve

Drills to teach rhythm and curve

- Circle Runs
- Circle runs with a takeoff. I like two takeoffs in the circle and use a cone or little hurdle. This helps athlete feel the rhythm and takeoff together.
- Full approaches without takeoff
- Full approaches with takeoff
Common Errors in the Approach

- **Common Errors**
  - Athlete taking off too close to the bar.
    - Tape or chalk a takeoff spot.
    - Talk to athlete about fear of not making it to the mat. If there is a fear show or explain why that should not be a concern.
  - Not accelerating to the bar
    - Circle runs with takeoff.
    - Put the bar low so they don’t have to worry about hitting it and have them run faster until they gain some confidence. You can scissor or jump with bar low.
  - Stepping out of curve
    - Put cones or other objects on outside of curve.
    - Draw the curve so they can see it.
The Penultimate Step

The Penultimate Step. The step immediately preceding the take off step. This is where you prepare for the take off.

This is where you lower your hips in anticipation of the take off. This should happen on the touchdown of the penultimate not before. The key to this is it must be done without sacrificing speed.

However, I don’t talk about hips lowering at takeoff. The concept of lowering the hips is easily confused with slowing and this concept is too complicated for most athletes. I talk about getting off of the penultimate fast its accomplishing the same thing just a simpler concept.

I want to see the penultimate step moving towards the takeoff step fast.
Penultimate Step
**Penultimate Step**

- **What to look for in the penultimate?**
  - Make sure the step is flat.
  - This step needs to stay in-line with the curve.

- **Drills to teach the penultimate**
  - Skipping Takeoffs - skipping for height doing high jump takeoff every other step
  - Long Jump takeoffs into high jump or high jump pit
  - Approaches with popup over low bar
  - Galloping
  - Short run approaches with
    - box three steps from takeoff.
    - Box three steps from takeoff and at takeoff
Common Errors in Penultimate

- Common Errors
  - Feet not flat
  - Stepping out of curve
  - Failing to get knee coming through fast
The Take off Step

- This step has to be out in front of the center of mass
- This step has to be a flat contact
- The angle of the takeoff leg at takeoff is super important
- Take off foot needs to be 45 degrees at takeoff. At worst parallel.
- Penultimate step (free leg) needs to come through fast and aggressive.
- Scissor legs
- Find what arms athletes like. Important that they use their arms to jump off ground but they can double arm or single arm. But they must block to help jump.
- Shoulders at take off - I like to keep the inside shoulder really high. Have that shoulder high and go towards opposite standard. This helps aid getting squared hips over bar
The Take off Step
The Take Off Step

- What to look for in the penultimate and take off step
  - Flat foot contacts
  - Setting up the takeoff by moving over/ getting off the penultimate step quickly
  - Continuing the curve. Pressing into the curve
  - Shoulders staying tall and inside shoulder staying high.
  - An aggressive jump off the ground. Aggressive free leg and arms
  - Take off leg being strong and relatively straight
Common Errors in Take Off

- Jumping into bar
  - Talk about inside shoulder staying high at takeoff
  - Talk about inside arm going across the body
  - Scissor jumps
- Athlete throwing head backwards at takeoff
  - Talk to athlete about the ear being attached to inside shoulder.
  - Talk to athlete about being tall at takeoff
  - Relate the takeoff to a basketball dunk or layup
- Remind athletes they must jump off ground
Bar Clearance

- Drive knee up holding it until the shoulders get to the bar.
- Hips extend and the body lies back towards the bar.
- Knees flex and drop below the bar and the shoulders drop and the hips rise.
- Once the hips clear the bar the jumper pulls their chin to their chest and clears out the feet.

What to look for when athlete is clearing the bar:

- Drive knee drives and stays up.
- Shoulders get parallel to bar.
- Arms aid in rotation. My favorite inside arm blocks off ground. Once over bar falls toward far back corner of pit.
- Once shoulders get above the bar they must come down for rotation.
- Head should be straight at take off. Should go towards inside arm. Can look down arm.
Bar Clearance

- Coach's eye and cues
  - Need to run a curve to get proper rotation
  - Drive knee must be aggressive and stay up
  - Once the knee is up have athlete open up hip
  - Make sure arms are helping not hindering rotation.
Common Errors in Bar Clearance

- No rotation
  - Box Jumps
  - Backovers on high jump mat
  - Jump from an elevated surface (box, ramp, spring board)
  - Don’t be afraid to try a lot of cues to find something that works.
    - I typically start with cues for knee drive. Like drive the knee aggressively and then open up the hip.
    - Then I will try talking about inside arm cues. Like drive the arm and then let it fall towards back corner of mat.
    - Most the time if the athlete is sitting on the bar they are landing on their butt on the mat. Try talking to them about landing on their shoulders.
Training Philosophy

- Keep it simple
- Create strength in takeoff position
- Unload in championship season
- Decide what is the most important to you in training and emphasis, everything else can me modified
Training – Pre Season

Monday
- Dynamic Warmup – Jog, strides, dynamic stretching, static stretching, sprint drills
- Sprint Training 10-60m sprints
- Low impact bounding - Force application and power. Rudiment series, remedial bounds, simple jumps low to medium intensity with small displacement. Specific for high jump. Standing Vertical, 3 stride vertical, 5 stride vertical. Low depth jumps, banana hurdles
- Weights (Olympic and Static lifts) or General strength Series

Tuesday
- Dynamic Warmup
- Hurdle walkovers
- Endurance runs - 4x 4x 100 (45") 4 min between sets, 2x Run 100 – walk back 50 for one lap, 2x2x250
- Sand Plyo Jumps circuit
- Weights (Olympic and Static lifts)

Wednesday – Recovery day
- Light jog or Off
Training – Pre Season

Thursday

- Dynamic Warmup – Jog, strides, dynamic stretching, static stretching, sprint drills
- Speed Training. – hills 30-80m, sled pulls 30-50m, sprints 30-60
- Low impact bounding – Force application and power. Rudiment series, remedial bounds, simple jumps low to medium intensity with small displacement. Specific for high jump. Standing Vertical, 3 stride vertical, 5 stride vertical. Low depth jumps, banana hurdles
- Weights (Olympic and Static lifts) or General strength Series

Friday

- Dynamic Warmup
- Stadiums, 150’s or 200’s
- Jumps Circuits in sand, high jump mat or ground
- Weights (Olympic and Static lifts)
Strength

Jump squats – (lower and core) stand with feet shoulder width apart. Squat down with hands on head and explode upward off ground extending hips, knees, and ankles as quickly as you can.

Incline push ups – (upper and core) pushups with hands on a bench, chair or something inclined.

V-ups – (abs) lying on back, arms above head. Lift upper and lower body simultaneously into "V" and back down. These are hard, key is to get upper body coming up a little before lower body so you can balance.

Jane fondas – (hips and core) starting on your hands and knees. Extend right leg behind with a straight leg, raising it as high as you can.

Tuck jumps – (lower and core) stand with feet shoulder width apart. Jump up into air and tuck knees to chest.

Burpees (I believe some people call these squat thrust) – (total body) start in standing position. Go to pushup position and then back standing and then jump as high as they can in the air.

Hypers (lower back) - on stomach, hands on head. Arch back and back down to floor. Leave your feet on ground.

Star jumps – (lower and core) start with feet shoulder width apart. Squat down at legs and explode up in the air, extending the whole body vertically. Extend your limbs outward in all four directions away from the body. Land on ground in starting position. Just like squat jump on make your body look like a star in the air.

Decline push ups - (upper body and core) pushups with feet on chair, bench or something inclined. Hands on ground.

Alt. Split jumps – (lower and core) – start in lunge position. Explode upward, extending the whole body vertically. Switch legs and land in the lunge position again.

Sky divers – (lower back) (also called supermans) Same as hypers only lift your lower body as well as your upper body.

Rocket jumps (lower body and core) – standing squat jumps only their hands must touch the floor between each jump by bending their knees (not bending at waist)

L Overs - (abs) lying on back, legs straight in the air (at 90 degrees), arms out to sides on ground. Take legs to left, tap ground and back to center. Take legs to right, tap ground and back to center. If they are unable to do these have them bend their legs , so lower leg is parallel to ground.
Capricorn
Pushups (upper and core)
Prisoner Squats - (lower body and core) Standing squats, hands on head or hips
Toe touches - (abs) lie on back with feet in air at 90 degrees. Crunch up to touch toes
Knee pull ups - (lower back) - on stomach, hands on head. Arch back and back down to floor. Leave your feet on ground.
Face plants - (lower body) knee on both knees. Have a partner hold athletes legs at ankles or calves. Let your body fall to ground as slowly as possible (using your hamstrings), then fall completely to ground. Using your arms push yourself back up but continue to use hamstrings during upward motion as well.
Side lifts - (abs) lie on side with legs straight. Top arm with hand on head. Bottom arm at 45 degree angle on ground. Then crunch lower body and upper body together. Your bottom arm will assist in balance and upper body crunch. The movement is like a side v-up.
Russian hammer exercise - (lower body and core) sit on butt, legs bent and arms behind you on ground ("M" position). Straighten one leg keeping knees together. Keeping arms straight, push up and down while straightening your body from shoulders to knees, return to starting position. Do reps with one leg then switch legs.
Planks - (upper body and core) push up with claps
Lunge walk - (lower body) lunges walking
Push up toe walk - (lower body, core and flexibility) do a pushup, then push feet to hands, then walk hands away from feet, returning to pushup position again.
Alternate reverse leg lifts - (lower back) lying on stomach, hands under chin. Raise one leg at a time keeping leg straight and their hips square to ground. (leg will come up 12-18 inches depending on flexibility). Make sure they are not twisting hips as they raise their leg.
Burpees (I believe some people call these squat thrust) - (total body) start in standing position. Go to pushup position and then back standing and then jump as high as they can in the air.

Med Ball #1 x 10
Between the legs forward
Overhead Backs
Squat Throws
Overhead toss (catching)
Kneeling chest pass
Hip catch and throw
Overhead Hike
Torso circles

Med Ball #2 x 10
Between the legs forward
Kneeling Overhead catch
Overhead Backs
Torso circles
Chest pass
Hammer hip throw
Leg toss
Partner exchange

PILLER
V-Sits - (abs) lying on back, arms above head. Lift upper and lower body simultaneously into "V" and back down. These are hard, key is to get upper body coming up a little before lower body so you can balance.
Hypers (also called superman and sky divers) (lower back) - on stomach, hands on head. Arch back and back down to floor. You can do them lifting both your upper and lower body together or just your upper body.
Single Leg ups - (abs) lying on back with legs straight. Lift both legs up about 6 inches off the ground. Bend one leg, knee to chest and then return to starting position. Keep both legs off the ground the entire exercise. Do reps with one leg then switch legs.
Leg Toss / Toe Touches - (abs) leg toss - with partner. One person sands other person lies on back holding partners ankles. Person on ground has legs at 90 degrees. Standing person pushes ankles down and lying person sort of resists and lets legs go almost to ground and then brings their legs back up. Can push legs forward or sideways. Toe touches - (abs) lie on back with feet at 90 degrees. Touch toes with hands.
Crunches - (abs)
Side Lifts (L-R) - (abs) lie on side with legs straight. Top arm with hand on head. Bottom arm at 45 degree angle on ground. Then crunch lower body and upper body together. Your bottom arm will assist in balance and upper body crunch. The movement is like a side v-up.
Hyper with twist - (lower back) on stomach, hands on head. Arch back, twisting left and back down to floor. Arch back, twisting right and back down to floor.
Crunches with twist - (abs)
L-Overs - (abs) lying on back, legs straight in the air (at 90 degrees), arms out to sides on ground. Take legs to left, tap ground and back to center. Take legs to right, tap ground and back to center. If they are unable to do these have them bend their legs, so lower leg is parallel to ground.
Bridge - (flexibility) back bridge. Like gymnastics.
Pelvic tilt - (abs) lying on back, knees bent, in a crunch position. Push lower back flat into the ground by rotating hips and thinking about pulling belly button into the ground. Hold 5 counts and release.
Pelvic tilt - low bicycle - (abs) lying on back, knees bent, in a crunch position. Push lower back flat into the ground by rotating hips and thinking about pulling belly button into the ground. Bicycle legs as low to the ground as the athlete can without lifting their back off the ground.
Pelvic tilt - lower body crunches - (abs) lying on back, knees bent, in a crunch position. Push lower back flat into the ground by rotating hips and thinking about pulling belly button into the ground. Lift feet off ground, kneels to chest and then return feet back to starting position. Keep back on ground during entire movement.

PEDALSTAL - Looks easy, try it. It's really hard. Works core and little muscles in butt and hip flexors.
Prone Elbow stand
Supine Elbow stand
Prone Hand stand
Supine Hand stand
Lateral Elbow stand - top left
Lateral Side Hand Stand - top left
Prone Flex knee elbow stand
Supine Flex Knee Hip lift
Low reach crunch
Low reach crunch with twist
General Strength Circuits - Explanations

TAURUS (You determine reps, more for abs, less for upper body)
- Push ups (upper body and core)
- Prisoner Squats (lower body and core)
- Standing squats, hands on head or hips
- V-ups (abs) lying on back, arms above head. Lift upper and lower body simultaneously into "V" and back down. These are hard, key is to get upper body coming up a little before lower body so you can balance.
- Hypers (lower back) - on stomach, hands on head. Arch back and back down to floor. Leave your feet on ground.
- Rocky's (upper body and core) - push-ups with clap
- Rocket Jumps (lower body and core) - standing squat jumps only their hands must touch the floor between each jump by bending their knees (not bending at waist)
- Straight Body Dips (upper body and core) - sitting on your butt, hands flat on ground pointed towards your feet (approximately 6-12 inches from butt). Raise your butt up to make a straight line, like a downhill slope. Bend arms like a dip.
- L-Overs (abs) lying on back, legs straight in the air (at 90 degrees), arms out to sides on ground. Take legs to left, tap ground and back to center. Take legs to right, tap ground and back to center. If they are unable to do these have them bend their legs, so lower leg is parallel to ground.
- Bridge - (flexibility) back bridge. Like gymnastics.
- Alternate Reverse Leg Lifts (lower back) lying on stomach, hands under chin. Raise one leg at a time keeping leg straight and their hips square to ground. (leg will come up 12-18 inches depending on flexibility). Make sure they are not twisting hips as they raise their leg.
- Burpees (I believe some people call these squat thrust) - (total body) start in standing position. Go to push up position and then back standing and then jump as high as they can in the air.

LEO
- Incline Pushups x 15 - (upper and core) pushups with hands on a bench, chair or something inclined.
- Single Leg Squats x 5 ea. - (lower body and core) non-squating leg in front, side and back
- Crunches x 25 - (abs)
- Decline Pushups x 15 - (upper body and core) pushups with feet on chair, bench or something inclined. Hands on ground.
- Side Lifts x 25 ea. - (abs) lie on side with legs straight. Top arm with hand on head. Bottom arm at 45 degree angle on ground. Then crunch lower body and upper body together. Your bottom arm will assist in balance and upper body crunch. The movement is like a side v-up.
- Rocky's x 10 - (abs) push ups with clap
- Single Leg Toe Raises x 10 ea. - (lower body) standing, go up on one toe then the other (opposite foot will flex as you go up)
- Hypers with twist x 15 ea. - (lower back) on stomach, hands on head. Arch back, twisting left and back down to floor. Arch back, twisting right and back down to floor.
- Lunge walk 2x30m - (lower body) lunge walking
- Prisoner Squats x 15 - (lower body and core) standing squats, hands on head or hips
- Duck Walk x 2x30m - (lower body and core) forward squat walk

SCORPIO
- Forward Squat Walk - (also called duck walks or cereal isle walks)
- Reverse Squat walk (same thing backwards)
- Lateral Squat walk (L-R) (same thing laterally)
- Push up Walk

Jump rope circuit
- 50 crunches
- 25 knees to elbows (bicycle abs)
- 12 v-ups
- 10 sky divers
- 60 sec jump rope
- 15 rocket jumps
- 15 ea. At split jumps
- 15 star jumps
- 15 push ups
- 3 x 30m skip for height
- 15 dips
- 60 sec jump rope
- 50 crunches
- 15 sky divers
- 20 toe touches
- 15 janes fondas
- 60 sec jump rope
- 30m straight leg bound
- 30m A skips
- 30m running A's (High knees)
- 15 star jumps
- 15 push ups
- 15 dips
- 60 sec jump rope
- 50 crunches
- 25 knees to elbows
- 60 sec jump rope

Moon Dog
- Jump rope 60 sec
- Burpees
- Push ups
- Lunge walk
- V-ups
- Jump rope 60 sec
- Mtn climbers
- Prisoner Squats
- 3 way crunches
- Jump rope 60 sec
- Partner wheel barrow
- Dips
- Star Jumps
- Sit ups
- Jump rope
- Crab walk
GENERAL STRENGTH
(PEDESTAL)

1. Prone, Elbow Stand Single Leg Raise

2. Supine, Elbow Single Leg Raise

3. Prone, Hand Stand Single Leg Raise

4. Supine, Hand Stand Leg Raise

5. Lateral, Elbow Stand Single Leg Raise

6. Lateral, Hand Stand Single Leg Raise

7. Prone, Flex Knee Elbow Stand Hip L

8. Supine, Flex Knee Hip Lift

9. Crunch, Low Reach

10. Crunch, Low Reach with Twist
Training – Pre Competition

Monday
- Dynamic Warmup
- High Jump Prep - 8-10 Approaches, Banana Hurdles reactive jumps
- Sprints on curve - 3x30, 3x40, 1x60
- Weights (Olympic and Static lifts) or General strength Series

Tuesday
- Dynamic Warmup
- High Jump Specific – Box Jumps, Circle Runs, Approaches, Full approach jumps
- Plyos – Depth and reactive jumps, Weighted Stadiums, Repeat takeoffs
- Depth Jumps: Rebounding efforts performed from a short fall from some elevated surface. Examples: fall from a box jump on to another box, fall off a box jump over a hurdle, fall off a box jump forward for distance. Very advanced drill and very physically demanding. Take care with these as they can cause injury if not properly executed.
- Weights (Olympic and Static lifts)

Wednesday - Recovery / Regeneration Day
- Jog and strides, Shin Circuits in sand
Thursday
- Dynamic Warmup
- High Jump Specific - Approaches, short approaches jumps (with or without a takeoff box)
- Plyos - Depth and Reactive jumps, Hurdle hops, low runs
- Med Ball Series
- Weights (Olympic and Static lifts) or General Strength Series

Friday
- Dynamic Warmup
- Endurance Running - 150’s or 200’s

Or
- Extensive Bounding - Skips for height, Alternate Bounds, Single Leg Bounds, Repeat Takeoffs
- Weights (Olympic and Static lifts)
Training – Competition
(with meet at end of week)

Monday
- Dynamic Warmup
- High Jump Specific – Approaches, short jump
- Plyos – Depth and Reactive jumps, Extensive hurdle hops, repeat takeoffs
- Weights (Olympic and Static lifts) or General Strength Series

Tuesday
- Recovery day – jog and strides

Wednesday
- Dynamic Warmup
- High Jump Specific – Approaches, full approach jumps
- Weights (Olympic and Static lifts) or General Strength Series
Training – Competition
(with meet at end of week)

Thursday
- Dynamic Warmup
- 30m Sprints
- Light hurdle hops

Friday
- Jog and Strides
- Light Bounds

Saturday
- Compete
Other Training and Coaching Ideas

- One cue at a time!!! One goal for practice.
- For most productive high jump sessions jump when the athlete is freshest. Make sure if you want to do several things at practice you start with high jump. If you have a heavy plyo session Monday, Tuesday is probably not going to be your best option to high jump.
- Basketball
  - Slow it down in their heads. Break it up into sections.
  - Less is sometimes more
    - Less coaching. We don’t have to say something every time an athlete jumps. Let them do it a couple of times. Let them feel it out
    - Less high jumping
    - Less training
HIGH JUMP

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