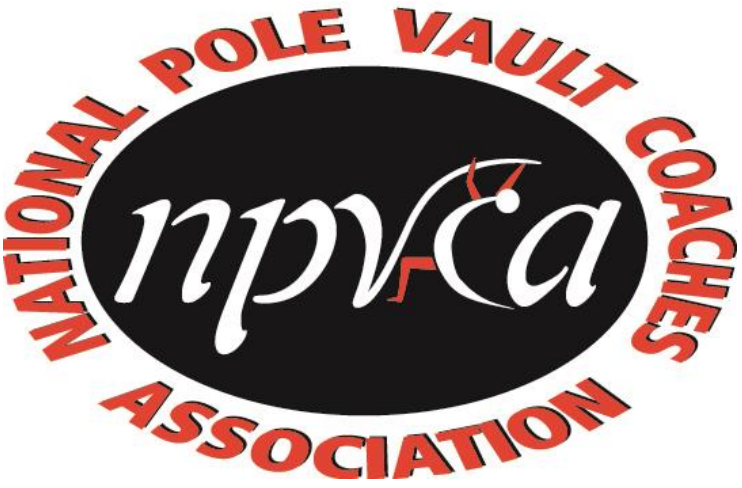
NPVCA BOOKLET



Basic Technique

1. **THE GRIP**

Figure A, See Drill #2

Importance

The handgrip is the beginning of a chain that connects all phases of the pole vault. Too wide or too narrow a grip causes technical flaws and disrupts the chain.

Technical Model

The width of the grip should approximately equal the distance between the pole vaulter's shoulders. The top hand grips the pole with the palm facing upward, and the bottom hand assumes a grip with the palm down. For best results the top hand should be held 6" – 12" from the top of the pole.

Drills

Some suggestions how to teach the correct grip:

1. Grip the pole with just the top hand. Turn sideways to the pit and reach the top hand back as far as possible. Next, place the bottom hand on the pole in a position underneath the armpit of the top arm.
2. Face the pit and hold the pole horizontally across the body. Place the hands on the pole with the width of the grip equal to the width of the shoulders. Pull the pole to the chest making sure both hands hit the body on the inside edge of the armpits. **(See Figure A)**
3. Place the pole in the vault box with the tip hitting the back. Then have the vaulter simulate the Take-Off position. Extend the top hand upward fully and grip the pole. Make sure a line drawn downward from the top hand would intersect the front of the take-off foot's toes. Rise up onto the

take-off foot's toes and lift the lead-leg knee into a drive position. Grip the pole with the bottom hand extended from the body to the pole at a 45 degree angle. This method of teaching the correct Grip is popular, because it matches the handgrip to the proper Take-Off Point. **(See Figure B)**

Coaching Points

A too-wide grip makes the pole easier to carry, but it forces the take-off foot to land inside the correct Take-Off Point. This disturbs the vertical movement of the pole after the vaulter takes off. A too-wide grip causes athletes to force-bend the pole. This causes the Swing to end quickly making it ineffective.

A too-narrow grip also makes it difficult to control the vertical movement of the pole during the Take-Off. Even if the Take-Off Point is correct, it is still difficult to make the pole rise to the vertical during the Take-Off. A narrow grip produces a long Swing phase, but it causes erratic vaults because it is so hard to control the Take-Off.

Figure B, See Drill #3

Basic Technique

2. **THE POLE CARRY**

Figure C. See Drill #2

Importance

An effective Pole Carry allows the athlete to run at top speed during the Approach Run. When the Carry is correct, the vaulter is able to run with a sprinter's erect posture while maintaining top speed. If done poorly, the Pole Carry is uncomfortable and restricts the athlete's ability to run at top speed.

Technical Model

Carry the pole with the pole tip raised and angled slightly across the body so the hips can move freely. It is personal preference how high the pole tip is elevated. We suggest raising the tip to a position that feels comfortable.

The right-hander positions the right (top) hand next to the right hip so it can bear most of the pole's weight. The right hand is held directly under the right elbow and both face forward towards the landing pit. The left hand holds the pole in front of the chest. A right angle is formed from the left hand to the left elbow. Another right angle is created from the left elbow to the left shoulder. The left hand holds the pole in a relaxed manner and guides the pole during the Approach Run. The hands remain shoulder width apart and do not change position. We suggest moving the pole up and down slightly during the Approach Run. Do not allow the vaulter to pump the pole forward and backward at any time during the Approach Run.

Drills

1. Have the vaulter hold a broomstick and check his or her Pole Carry in front of a mirror at home. The athlete should check the right angle formed by the hands and elbows when facing the mirror and turned sideways.
2. Use a long or weighted pole to check hand and elbow positions. Then practice walking and running with the overweight or longer pole to improve balance plus core body, top arm and shoulder strength. Keep the pole tip raised to make the drill more effective. **(See Figure C)**

Coaching Points

Make sure vaulters do not change the width of their grip when carrying the pole. A wider distance between hands makes the pole feel lighter, but it disturbs the planting action that follows the Approach Run. Keep the pole tip elevated to make the pole feel lighter.

Take particular care to make sure young vaulters don't pump the pole forward and backward when they run. This causes over-striding, disturbs balance and interferes with the timing of the Plant.

The shoulders remain square to the pit throughout the Approach Run. The only time the shoulders turn is during the second step of the Plant.

Basic Technique

3. **THE APPROACH RUN**

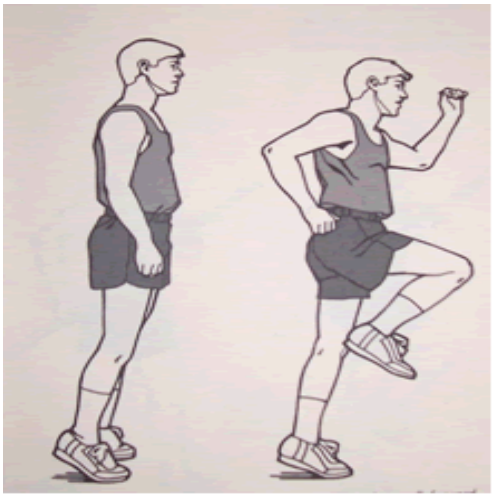


Figure D, See Drill #1

Figure E, See Drill #2

Importance

The Approach Run must produce enough speed and power to help the athlete successfully complete the phases of the pole vault that follow. Develop a consistent stride pattern. Do not slow down, over stride or press too hard for greater speed at the end of the run. Maximum controllable speed produces the most efficient speed and power, and should occur at the end of the run.

Technical Model

Start beginners with an Approach Run no longer than five (5) take-off steps. Have the right-handed vaulter count each left step as it hits the runway. This builds a consistent running rhythm and will make it easier to teach the planting action that follows the Approach Run. When the beginner shows improvement you can increase the number of steps, but keep the Approach Run between 60’ and 90’ (5 – 7 take-off steps) until the vaulter becomes more proficient.

The vaulter must run “tall”. Maintain good posture - chest up, shoulders back. Each foot lands underneath the knee to produce maximum power as the toes contact the runway in a clawing action.

Begin the Approach Run slowly, then increase rhythm and intensity to reach maximum controllable speed just before Take-Off.

Use two checkmarks, one at the start of the Approach Run and the other at the vaulter's Take-Off mark.

Hold the pole tip high during the early part of the Approach Run, and gradually lower the tip until the pole is parallel to the runway when the vaulter reaches the next-to-last take-off step. At that point, the vaulter is ready to plant the pole.

Drills

1. Stand erect - feet together, chest up, shoulders back. (without the pole) Then rise up onto the toes and begin to walk in place. Emphasize good posture with each foot landing powerfully on the ground under the knee. Swing the arms in a natural sprinting action. Walk forward for about ten yards. Next, begin to stride slowly. Accelerate gradually for forty (40) yards, building up to 75% of full speed while maintaining correct posture and rhythm. Repeat daily 7 – 10 times. Count each take-off foot as it strikes the ground, so the vaulter will get into the habit of doing so. **(See Figure D)**
2. Pick up a pole, raise the tip and prepare to start the Approach Run. Run slowly and rhythmically for forty (40) yards. Count each take-off step. Running slowly makes it more difficult to maintain form and rhythm. Repeat 5 times. **(See Figure E)**
3. Have the athlete use his or her regular length Approach Run. Simulate the Approach Run by starting slowly then building speed and rhythm gradually and exploding through the Take-Off Mark. Vary the number of take-off steps to help the athlete become more proficient at counting steps and building rhythm.

Coaching Points

Many athletes don't realize how important the Approach Run is to success. We suggest devoting full practices to working on it with beginners.
Make sure the vaulter does not begin the Approach Run too fast. This leads to a big slow down at Take-Off with subsequent injuries.
Check the vaulter's stride length throughout the Approach Run. It should be consistent. There is a tendency to over stride as the vaulter nears the Take-Off. This must be curbed, since it destroys speed.
Don't let vaulters swing the pole forward and backward during the Approach Run. Instead, a gentle up and down movement is recommended, since it will help with the planting action that follows.

Basic Technique

4. <u>THE PLANT</u>

Figure F

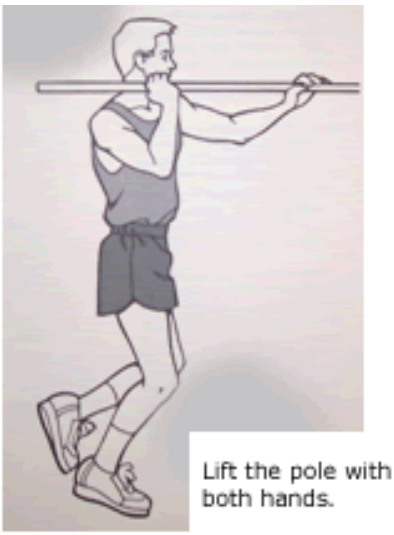


Figure G

Importance

The Plant is perhaps the most important link in the pole vault chain. When done correctly, it creates a bridge that is used to convert the horizontal Approach Run into vertical lift-off. When the Plant is not done well, it becomes very difficult to execute later phases of the vault naturally and dynamically. When the vaulter plants the pole correctly, he or she normally will land safely in the pit. A poor Plant causes erratic vaults.

Technical Model

During the Approach Run, the pole tip is gradually lowered until the pole is parallel to the runway, waist high. **(See Figure F)**. The Plant starts as the next-to-last take-off step is about to land. Both hands drive upward, not forward, to smoothly convert horizontal movement to vertical lift.

As the last non-take-off step hits the runway, the top hand drives up to a position close to the ear. The bottom hand also lifts so the pole is kept parallel to the runway about ear high. **(See Figure G)**

Do not push the lower hand towards the box! Lift it upward. Keep both elbows underneath the hands. The planting action resembles an upward punch.

Figure H

Figure I

The vaulter drives both hands upward and forward during the final step. **(See Figure H)**. The top hand passes just in front of the ear as it moves upward. The lower arm also drives upward. The pole tip lands in the box approximately 2/3 back. As the pole tip slides towards the back of the box, the vaulter continues to drive the top of the pole upward and forward while jumping off the runway. **(See Figure I)**.

If the Plant is done correctly, the pole tip slides to the back of the box instead of being thrust against it. Pole bending is delayed, and the vaulter and the top of the pole are able to continue moving upward.

Drills

The 3-Step Drill (also called the 1-2-3 Drill) is the best way to teach beginners how to plant the pole. Hold the pole parallel to the runway waist high, and face the pit with feet slightly apart. Assuming the vaulter is right-handed, the step sequence is left, right, left. Lift the pole with both hands while taking the first step and continue to lift it during the next two steps as described above in the Technical Model section. Emphasize the simultaneous lifting and upward extension of the entire body during the entire planting procedure.

Start the beginner with a broomstick, since it is easier to handle than a pole. The coach calls out 1-2-3 to guide the vaulter. Use a slow cadence at first and emphasize good technique.

Have the beginner use a pole and quicken the cadence once he or she attains some proficiency. As the vaulter gets better and better at walking the Plant, call out 1-2-3 fast enough to make the beginner run the sequence. Variations of the 3-Step Drill include planting at the end of a full-speed Approach Run. Vary the length of the Approach Run to get the vaulter used to beginning the Plant at the proper time.

Coaching Points

1. Maintain good posture throughout the Plant. Frequent mistakes include leaning back, over striding and turning sideways.
2. Start the Plant on time. The most common mistake made by vaulters during the Plant is starting late and not being able to complete the Plant.
3. Make sure the vaulter lifts both hands during the Plant. Many athletes lift only their top hand. This will cause the pole tip to hit the back of the box too soon, which makes the pole to bend prematurely.

Basic Technique

5. THE TAKE-OFF AND DRIVE SWING

Importance

The Take-Off and Drive Swing are products of a well executed Approach Run and Plant. Driving off the runway with upright posture and following the inward bending pole produces the dynamic energy needed for a powerful vault.

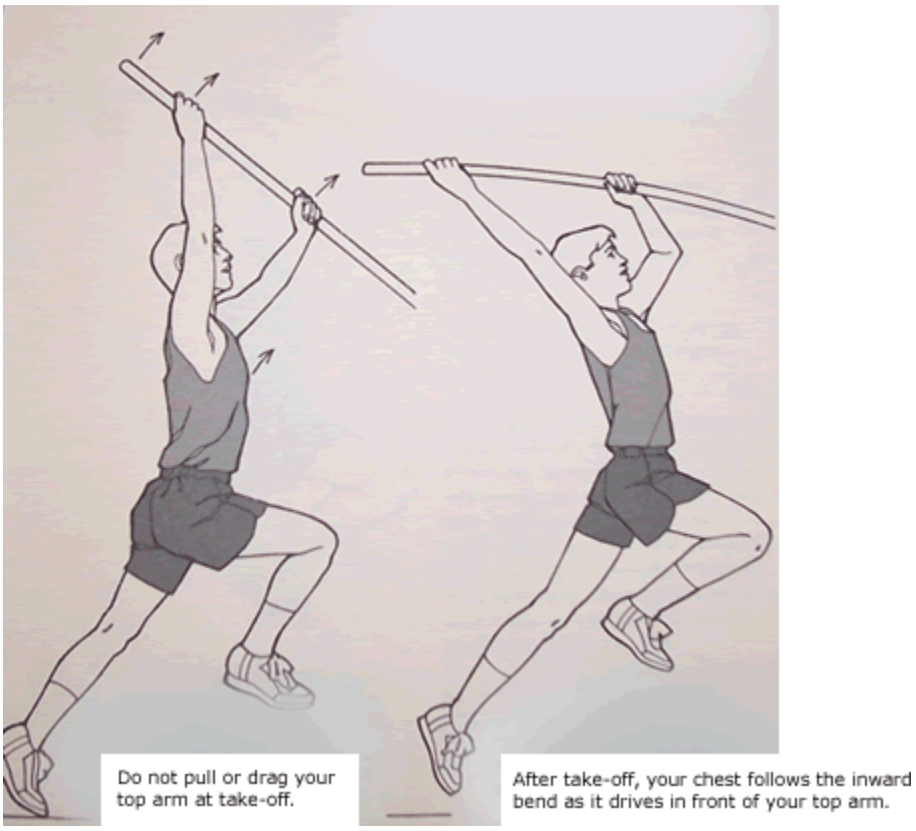


Figure J

Technical Model

The Take-Off follows the completion of the Plant. It is the moment the pole tip hits the back of the box, the arms extend upward/forward fully and the vaulter leaves the runway. Everything happens simultaneously, like an explosion. Keep the top arm straight and drive the top of the pole forward/upward as the Take-Off merges into the Drive-Swing. **(See Figure J)**.

Figure K

Make sure the vaulter remains upright and does not pull the pole. As the pole bends, the chest moves ahead of the straight top arm to form a reverse letter "C". (watching from the right side of the runway). **(See Figure K)**.The bottom arm exerts pressure on the pole during the Plant and Take-Off, but the left elbow bends during the Drive-Swing to allow the chest to drive in front of the top arm. The chest stays in front of the right arm during the Drive-Swing as the vaulter remains upright. This delays the Swing-Up and prevents an early rock-back. The vaulter stretches top arm up and back to create a pocket between his/her arms. It's a 2-way stretch. Lower arm pushes upward and forward while the top arm extends up and back.

Drills

Short Run Vaults are a safe and effective way to teach the Plant, Take-Off and Drive-Swing. The vaulter is able to learn the fundamentals using a low grip and short run. Start with a three take-off step Approach Run. Hold the pole straight up and reach the bottom hand up as high as possible on the pole. Then place the top arm on the pole about a shoulder-width higher to get the proper Grip. Next, have the vaulter simulate the Take-Off Position by placing the pole tip at the back of the box and fully extending both arms upward. Now draw an imaginary line down from the top hand down to the toe of the take-off foot to get the correct Take-Off Position. The vaulter swivels around to face away from the pit, runs back three take-off steps and plants the pole. Mark the third take-off step, since that will be the start of the Approach Run.

The vaulter faces the pit, runs three take-off steps and plants the pole. The Take-Off and Drive-Swing will follow naturally and powerfully if the Approach Run and Plant are done effectively. Repeat this drill until the

pole passes a vertical line from the back of the box up to the top hand. That means it's time to raise the grip. Move the grip up one handgrip (3"-4") at a time until the pole stalls out and does not reach vertical.

There should be no effort made to bend the pole during short vaults. In addition to raising the grip, have the vaulter add a take-off step or two as long as the pole top is rising to the vertical position. "Straight-poling" is a great way to teach the fundamentals. It's safe, and the vaulter should be able to land in the pit easily.

Coaching Points

1. Make sure the vaulter and the pole drive together towards vertical at Take-Off. This happens when the pole hits the back of the box as the vaulter simultaneously leaves the runway. If the timing is not right, lower the grip until the timing is correct. Then move the grip up gradually.
2. Check the Take-Off Step. Make sure a straight line can be drawn down from the top hand to the take-off toe when the last step hits the runway. This indicates whether or not the Plant is being done correctly. Don't move the vaulter's check-mark right away. Instead, see if his or her stride pattern is consistent. Many times vaulters take longer, slower steps at the end of their Approach Run. This causes the last step to land inside the proper Take-Off Point. Also, the vaulter may be starting his or her Plant late. This causes the Take-Off Step to be too long. When vaulters take-off outside their Take-Off Point, it may be the result of an erratic Approach Run.
3. Check to see if the vaulter is missing the correct Take-Off Point, because he or she is running faster or slower than usual. A consistent rhythm to the Approach Run is vital.
4. Once the vaulter is able to execute the approach run, plant and take-off, teach him/her to bend the pole. Continue to use a 5-step run with a light pole. Hold the top hand just high enough to bend the pole. Then explain that, once the plant is completed, the vaulter drives in front of the top arm to create a "pocket" between his hands.

Basic Technique

6. **THE SWING-UP**

Importance

The Drive-Swing builds speed and power. It leads to the Swing-Up – where the vaulter fully inverts before the pole unbends. When done correctly, he or she is in great position to be thrust upward and over the crossbar by the power of the unbending pole. The vaulter continues pushing upward with both arms to maintain the "pocket". The top arm drags to allow the vaulter room to swing up. If the top arm moves forward, the swing-up ends before he/she is able to complete swinging to an upside-down position behind the bent pole. The chest stays in front of the top arm as long as possible to allow the swing to continue until the vaulter is upside-down with the body core behind the bent pole.

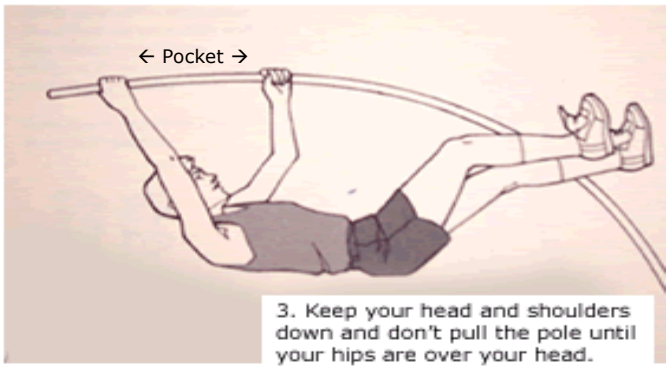


Figure N

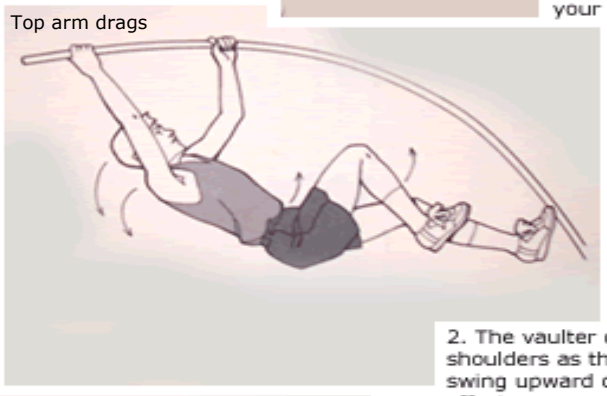


Figure M

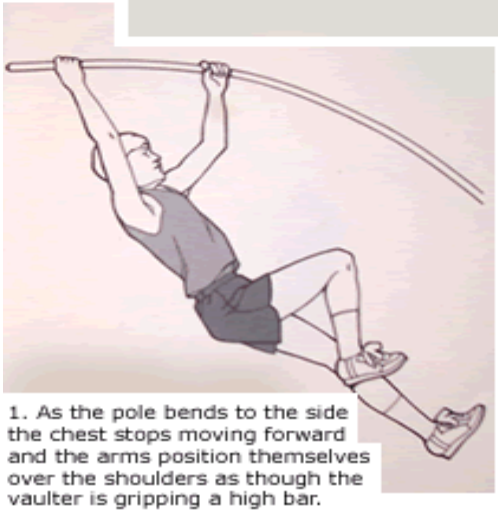


Figure L

Technical Model

The Drive-Swing ends when the pole stops bending inward. The Swing-Up begins when the pole bends to the side. (left for right-handers, right for left-handers) The vaulter swings in a wide arc like a gymnast on a high bar. (See Figures L, M, N). The take-off leg whips through as the hips swing upward and inward toward the shoulders. The head and shoulders then drop down underneath the hands to allow the hips and legs to continue going up the pole until the vaulter is completely upside down. (See Figures O, P, Q). That is the end of the Swing-Up. Warning: Do not pull with the arms during the Swing-Up. Allow the power built up from the previous phases to propel the hips and legs up the pole.

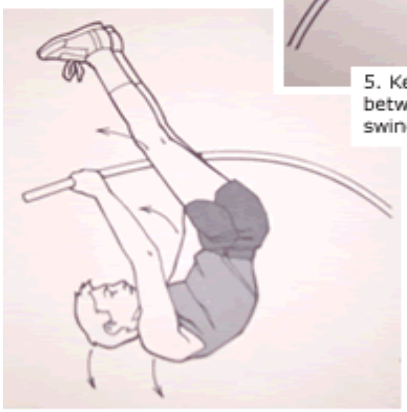
Note: If everything is done well, the vaulter's hips and legs are rising behind the bent pole- helping him/her to utilize the tremendous unbending power of the fiberglass pole. Visualize a bow and arrow. The vaulter is the arrow while the bent arrow is the pole if the vaulter's core is behind the bend of the pole, ready to be thrown up and over the crossbar.

6. The swing-up is complete when the vaulter is upside down.

Figure Q

5. Keep your body positioned between your arms during the swing-up.

Figure P



4. The upper body and head drop. This keeps the pole bent and enable your hips to rise.

Figure O

Drills

Rope Drill #1. Grip the rope like a pole. Hang from the top hand. Then swing the legs and the hips up until you are completely inverted. Repeat several times.

Rope Drill #2. The vaulter gets a running start and grabs the rope as he or she leaves the ground. As the rope moves forward, the vaulter swings into an inverted position. The momentum created by the run produces a dynamic swing action.

High Bar (or Rings) Grasp the bar like a pole and swing from it. Swing as high and close to the bar as possible. Once the vaulter is able to swing the hips and legs to the bar, practice lowering the head and shoulders to allow complete inversion. Repeat several times. More advanced moves are front up rises and giant swings.

Coaching Points

It is vital to keep the pole bent during the Swing-Up. Do not let vaulters help themselves get upside down by pulling the pole. Do not row! The arms keep pressure down the pole's shaft, but they do not move forward, because that unbends the pole too soon. Let the momentum built up from the Approach Run, Plant and Take-Off supply the power for the Drive-Swing and Swing-Up. Also, make sure the vaulter does not throw his or her head back. That flattens out the swing and stops inversion before it is complete.

Basic Technique

7. **EXTENSION-PULL-TURN**

Importance

As the Swing-Up finishes, the Extension – Pull – Turn takes over. The vault is almost complete, but you need to put the frosting on the cake to maximize the height. If done well, the Extension – Pull – Turn shoots the vaulter upward to a handstand over the top arm to take advantage of the unbending pole. If done incorrectly, the vault is ruined.

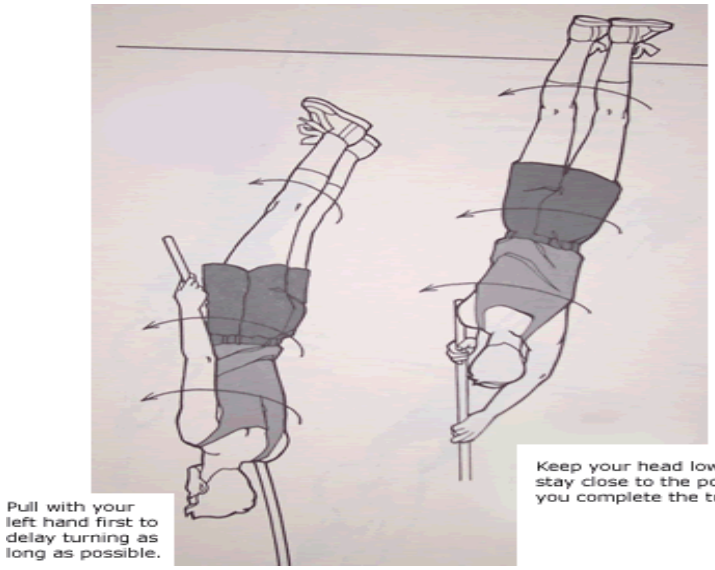


Figure R **Figure S**

Technical Model

The vaulter is inverted, facing forward on a bent pole, as the hips and legs extend upward. The lower arm pulls down towards the hip to continue upward movement and to keep the body straight. **(See Figure R)**. Make sure the lower arm's elbow bends and moves inside the unbending pole. Continue to face forward until the lower arm finishes pulling and upward extension of the body is completed. Then the top arm, which has been straight, begins to pull and the entire body executes a full unit turn around the pole. (to the left for right-handers) Stay close to the pole during the turn. **(See Figure S)** When the turn is completed, the vaulter will be facing back towards the runway. Keep the legs together and stay close to the pole as you are poised to be thrown upward over the crossbar by the power of the unbending pole.

Drills

1. Use the Vault Trainer or a rope hanging from the ceiling. Face forward, feet together, and grab the rope. Pull yourself upside down, extend the lower body upward then execute a unit turn to a handstand position. (Note: this drill should be done with a mat underneath you)

2. Use a flexible pole and wedge the tip into a corner. Hold the pole to your left if you are right-handed and face away from the corner. Move your hands up the pole and walk away from the corner until you bend the pole. Then sit down and lift your heels. As the pole begins to unbend, slide across the floor and execute a unit turn on the floor. You will need sweat pants in order to slide across the floor.

Coaching Points

1. Emphasize that the vaulter should not pull too early, before the hips and legs start upward. That causes the hips and legs to go outward away from the pole instead of up the pole.
2. Another common fault is moving the top arm across the body too soon instead of keeping it straight above the shoulder. That causes the top of the body to turn prematurely while the lower body stops rising and drives outward, not upward. This is called "flagging," since the body's angle resembles an American flag.
3. Teach the vaulter to visualize that there is a basketball hoop above the top of the pole. He or she should try to go straight up through the net and over the basketball rim. This can only be done if the vaulter does not turn too soon.

Basic Technique

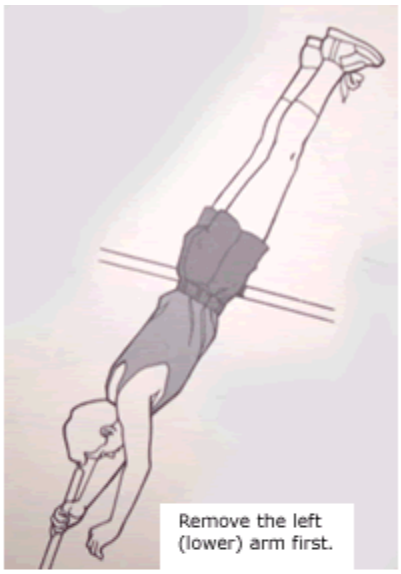
8. **THE FLY-AWAY**

Importance

The Fly-Away is the final phase of the pole vault. If previous phases are done well, the vaulter is in position to be catapulted up and over the crossbar with great power. The Fly-Away happens naturally. The vaulter should not try to manipulate things. Just go with the flow!

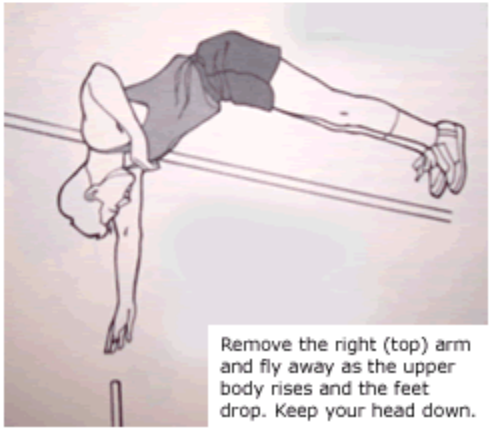
The vaulter is in position to be thrown upwards by the unbending pole.

Figure T



Remove the left (lower) arm first.

Figure U



Remove the right (top) arm and fly away as the upper body rises and the feet drop. Keep your head down.

Figure V

Technical Model

As the vaulter booms off the pole, the bottom hand releases first. **(See Figures T & U)**. The elbow points out as the hand is brought into the chest to avoid dislodging the crossbar. Keep the head low and the feet high until the hips clear the crossbar. Raising the head too soon will lower the hips onto the crossbar. **(See Figure V).**

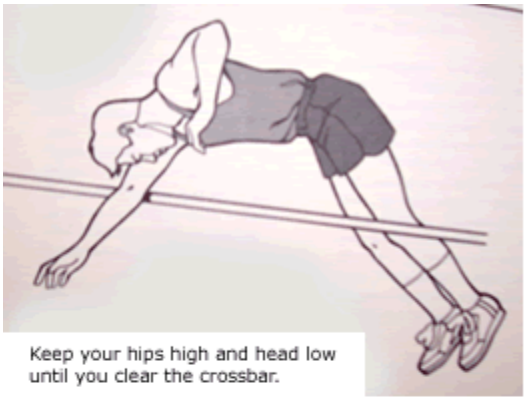


Figure W

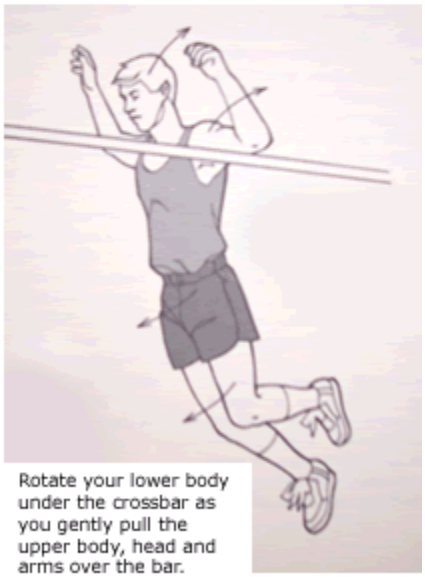


Figure X

Get a final push with the top hand before removing it and gently lifting it upward as the hips continue to rise over the crossbar and the legs drop. **(See Figure W).**

The head rises as the torso clears the bar while the hips drop. Then the vaulter lifts both hands keeping the hands close to the chest and the elbows out to avoid the crossbar. **(See Figure X)**.
After clearing the crossbar, the vaulter prepares to land on his or her back with both knees bent.

Drills

1. The vaulter does a backward roll into a handspring. Add a crossbar when the vaulter becomes comfortable with the drill. This will make it more like an actual vault.
2. Under-water vaulting is a good drill. The vaulter is weightless making it easier to become inverted and execute a good unit Pull-Turn and Fly-Away. Make sure someone holds the pole straight up and down, since the vaulter goes under the water during the drill.
3. Shot run vaults are excellent for practicing the Fly-Away and the complete vault. The athlete is able to take a lot of vaults, since the Approach Run is short.

NFHS Track and Field Rules

Rule 7
Jumping Events

The NFHS does not perform scientific tests on any specific items of equipment to determine if the equipment poses undue risks to student-athletes, coaches, officials or spectators. Such determinations are the responsibility of equipment manufacturers.

Section 1 Definitions

ART. 1... A trial is an attempt in a jumping event. Each competitor is allowed a specific number of trials in the horizontal events.
ART. 2... A flight is a round of trials for a group of competitors in jumping event competition.
ART. 3... To qualify is to win the right to participate in finals.
ART. 4... A foul jump is one which is counted as a trial but which is not measured.
ART. 5... Horizontal events include the long and triple jumps.
ART. 6... Vertical events include the high jump and pole vault.
ART. 7... The zero point is located at the top of the back of the plant box.

Section 2 General Rules

ART. 1... The order in which competitors take their first trials shall be determined by lot or by the games committee. If weather or other conditions might result in unfairness to any competitor, the referee may alter the established order of trials.
ART. 2... The time at which the preliminaries in each horizontal jumping event shall terminate should be set by the games committee. Any competitor who does not complete all preliminary attempts within the time specified shall forfeit any remaining preliminary trials.
ART. 3... If there are preliminaries and finals, the order of competition in the finals shall be the reverse of the best performances in the preliminaries; i.e., the competitor having the best preliminary performance will be last in order.
ART. 4... In two-session meets, it is recommended all competition in jumping events be conducted in one session.
ART. 5... Contestants shall report promptly to the event judge at the designated location when the event is announced. A competitor shall initiate a trial that is carried to completion within:
a. One and one-half minutes in the pole vault.
b. One minute in all other jumping events, after being called for a trial, unless excused by the event judge to participate in some other event.
However, when three or fewer competitors remain in the competition, the high jump competitors will be

allowed three minutes and those in the pole vault four minutes to initiate a jump. When one competitor remains in the high jump, he/she will be allowed up to five minutes and the pole vaulter six minutes to initiate a jump. The competitor may elect to pass a trial which must be communicated to the event judge before the clock is started.

Penalty: An unsuccessful trial is charged.

ART. 6... The head event judge may change the order of competition to accommodate those who may be excused to participate in other events. In the horizontal events, competitors may take more than one trial in succession.

ART. 7... Time limit for competitors excused to compete in another event shall be determined by the games committee.

ART. 8... To place in a jumping event, a competitor must have had at least one successful jump.

ART. 9... Warming-up shall not be allowed in any jumping venue unless supervised by a coach or an official and, in pole vault, poles have been inspected and approved for use. At the conclusion of any jumping event, there shall be no further practice and, in the pole vault, vaulting poles shall be removed from the area (7-5-5).

Penalty: Warming up without a coach or event official at the site shall result in a warning and, if repeated, disqualification from that event. If the incident recurs, the athlete will be disqualified from further competition in the meet.

ART. 10... Competitors in the jumping events shall not use any weights or artificial aids. They shall not wear a shoe or shoes which incorporate or contain any device that gives the competitor an unfair advantage. In addition, illegal aids shall include pushing the vaulter on his/her back at take-off in the pole vault, in the warm-ups or during competition.

ART. 11... A competitor shall not use an illegal implement during warm-up or competition.

Penalty: (Arts. 10, 11) Disqualification from the event.

ART. 12... If improperly fastened supports slip downward when a jumper hits the crossbar without displacing it, the head judge of the event shall rule no jump, and allow the jumper another trial. Should the bar be displaced, it shall be a failed attempt.

Section 3 Breaking Ties

ART. 1... A tie in a jumping event occurs when two or more competitors finish with the same distance or height.

ART. 2... When there is a tie at any height or distance in the finals of a jumping event, places and points scored shall be awarded as follows:

a. For places determined by distance:

1. If the distance resulting from the best performance of competitors is identical, the higher place is awarded to the tying competitor whose second best performance is better from either the preliminary trials or the finals.

2. If after (a1) the tie remains, the higher place is awarded to the tied competitor whose third best

performance is better than the third best performance of any tied competitor, etc.

b. For places determined by height:

1. The competitor with the fewest number of trials for the height at which the tie occurs, i.e., the last height successfully cleared, shall be awarded the higher place.

2. If the tie still remains, the competitor with the fewest total number of unsuccessful trials throughout the competition, up to and including the height last cleared, shall be awarded the higher place.

3. Passed trials shall not count as misses.

4. If the tie remains after applying (1) and (2) and:

a) If it concerns first place, the competitors tying shall make one more attempt at the height at which they failed. If no decision is reached, the bar shall be lowered in increments of 1 inch in the high jump and 3 inches in the pole vault. If two or more of the tying contestants cleared the height, the bar shall be raised by intervals of 1 inch in the high jump and 3 inches in the pole vault. Each competitor shall attempt one trial at each height until a winner is determined.

Notes:

1. If the height which the tied competitors last attempted is not the same, because of a passed height by one of more of the remaining competitors, the bar shall be lowered to the lowest height last attempted by any of the remaining competitors to begin the jump-off.

2. No passed heights shall be permitted in the jump-offs.

b) If the tie concerns any place other than first, the competitors shall be awarded the same place.

ART. 3… In the vertical jumping events, a competitor shall be credited with his/her best achievement if it occurs in a jump-off for first place.

ART. 4… If there is a tie by any number of competitors for any scoring places, the points for tied places shall be added together and divided by the number of competitors who are involved in the tie.

Section 5 Pole Vault

ART. 1… The inclination in the approach shall be limited to 2:100 (2 percent) laterally and 1:1000 (0.1 percent) in the running direction in the jumping direction.

ART. 2… The vaulting pole may be of any material and of any length and diameter. It may have a binding of not more than two layers of adhesive tape of uniform thickness. However, the bottom of the pole may be protected by several layers of tape, PVC, metal, sponge rubber or other suitable material to protect it when placed in the planting box.

ART. 3… The competitor's weight shall be at or below the manufacturer's pole rating. The manufacturer must include on each pole: the pole rating that shall be a minimum of ¾ inch in a contrasting color located within or above the top hand-hold position; a 1 inch circular band indicating the maximum top hand-hold position with the position being determined by the manufacturer.

Prior to competition, the coach must verify that all of the schools' pole vaulters meets these requirements.

Note: Each state association shall determine its own procedure regarding coaches verification.

ART. 4… A competitor shall not use a variable weight pole, a pole which is improperly marked or a pole rated below his/her weight during warm-up or competition.

Penalty: Disqualification from the event.

ART. 5… Prior to warm-up, the field referee, head field judge or assigned inspector of implements shall inspect each pole to be used in the competition to verify that the poles are legal equipment, per Rule 7-5-3. This includes checking the placement of a top hand-hold band, numerical pole ratings a minimum of ¾ inches in a contrasting color located within or above the top hand-hold band, and the proper binding of not more than two layers of adhesive tape of uniform thickness. The binding shall not be on or above the top hand-hold band.

ART. 6… The recommended length of the runway is a minimum of 130 feet (40m). Where conditions permit, it should be 147 feet, 6 inches (45m). The runway should be 42 inches (1.07m) wide whenever possible.

ART. 7… The overall size of the pole vault landing system shall be a minimum of 19 feet, 8 inches (6m) wide by 20 feet, 2 inches deep.

The landing surface measured beyond the back of the standard bases, shall be a minimum of 19 feet, 8 inches (6m) wide. The landing surface measured beyond the back of the standard bases, shall be a minimum of 19 feet, 8 inches (6m) wide. The dimension of the landing surface in back of the vaulting box to the back of the landing system shall be 16 feet, 5 inches (5m) deep.

The material in the system shall be high enough and of a composition that will decelerate the landing. When the landing system is made up of two or more sections, the landing surface shall include a common cover or pad extending over all sections.

ART. 8… The front sections of the landing system, known as front buns, shall be a minimum of 16 feet, 5 inches (5m) wide so as to cover the entire area around the landing box to the inside edges of the standard bases up to the front edge of the plant box. The maximum cutout for the planting box shall be 36 inches (914mm) in width, measured across the bottom of the cutout. The edges of the front of the landing system immediately behind the planting box shall not be placed more than 3 inches (76mm) from the top of the back of the planting box. The front pad shall be attached to the main landing pad or encased in a common cover. **Note:** In the pole vault, the front cutout tapered away from the planting box allows the pole to bend uninhibited.

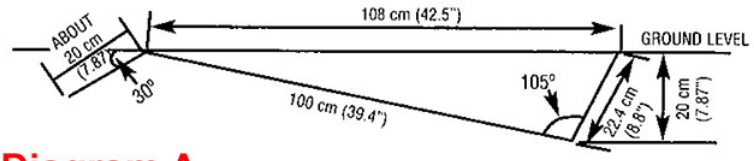


Diagram A

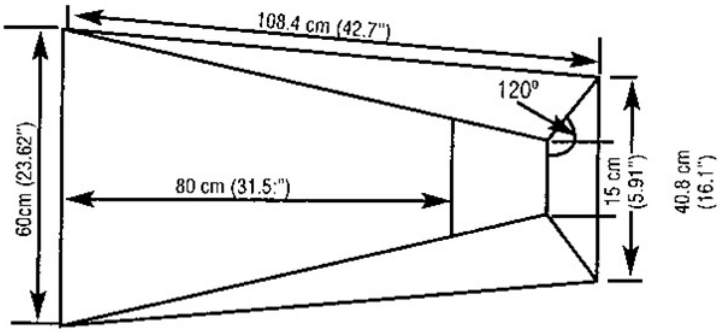


Diagram B

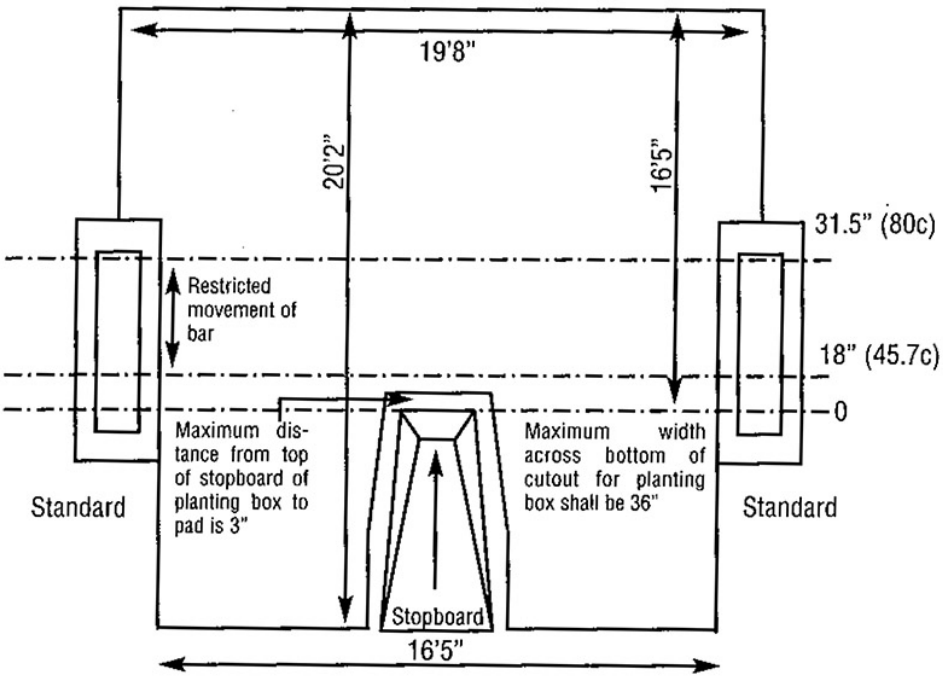


Diagram C

ART. 9… Hard or unyielding surfaces, such as but not limited to concrete, metal, wood, or asphalt around the landing pad, or between the planting box and the landing system, shall be padded or cushioned with a minimum of 2 inches (50mm) of dense foam or other suitable material(s).

Note: It is recommended that any excess material such as asphalt or concrete that extends out from beneath the landing pad be removed.

ART. 10… The width between the pins that support the crossbar shall be not less than 13 feet, 8 inches (4.16m) or more than 14 feet, 8 inches (4.48m) apart. The pins shall be round, of uniform thickness not exceeding ½ inch (13mm) in diameter, with the upper surfaces smooth, without indentations or aids of any type which might help hold the crossbar in place.

The pins shall project at right angles from the side which is opposite the runway and shall not exceed 3 inches (76mm) in length from the upright. Cantilevered uprights may be used. The specifications for the crossbar are the same as those for the high jump. The standards shall have all exposed projections on the base covered or padded and be secured or weighted in a way as to prevent them from tipping over.

ART. 11… The nonmetal crossbar shall be 14 feet, 10 inches (4.52m) in length, of uniform thickness, and shall have a weight of not more than 5 pounds. It may be square with beveled edges and not more than 1 1/8 inches in thickness; or triangular with each face not more than 13/16 inches; or circular with a diameter of not more than 1 3/16 inches and with the ends flattened to a surface of 1 3/16 inches by 6 – 7 1/4 inches (150-200mm).

ART. 12… A planting box shall be located midway between the standards. This box shall be constructed of concrete, fiberglass, metal or other hard surface material into which the vaulting pole is placed so that the top edges are at ground level. The front edge of the box shall not extend above the grade of the runway surface. The box shall be of dimension indicated in the accompanying diagrams A and B, and it shall be placed so the top edges are at ground level. The box in diagram B shall be constructed so that the sides slope outward at the end nearest the landing pit.

The stopboard at the end of the planting box shall be placed at an angle of 105 degrees with the base of the box.

Note: It is recommended the planting box be of a color contrasting to the color of the runway.

ART. 13… The zero point, located at the top of the back of the plant box, is used to determine the distance the crossbar travels towards the back of the landing surface, the starting point of the runway, and to identify the proper placement of the landing surface. (See diagrams, A, B, and C)

ART. 14… Planting box padding meeting the applicable ASTM Specification Standards is required and shall cover any hard and unyielding surface including between the planting box and all pads. Such padding can be incorporated into the design of the planting box or can be a padding addition to an existing planting box.

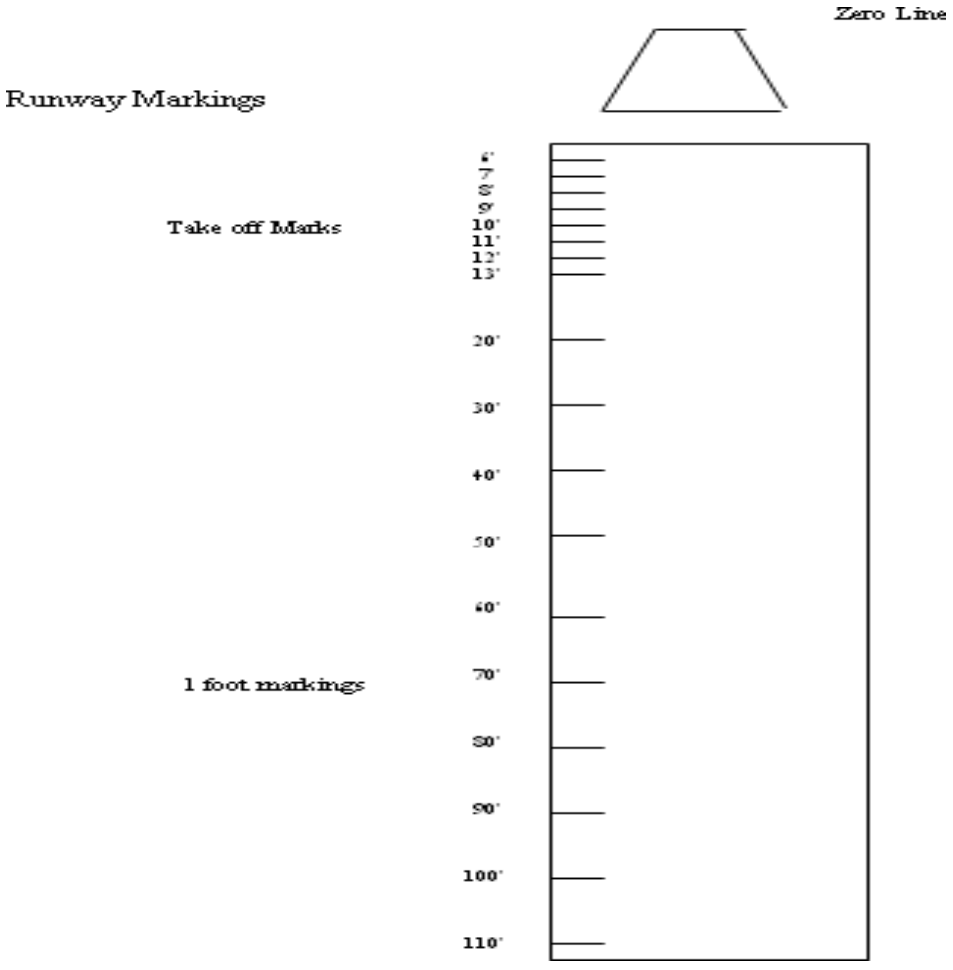
ART. 15… A pole vault competitor (s) who has passed three consecutive heights and has not entered the competition should be permitted two minutes of warm-up jumps per the number of competitors entering at that height without the crossbar in place. The competitor(s) shall enter the competition at that height. Such warm-up must be taken at a height change.

ART. 16… The judges shall place the crossbar at the starting height as determined by the games committee. If desired, a cloth marker may be placed on the crossbar for sighting purposes.

Note: When only one competitor remains in the competition, the competitor may determine successive heights of the crossbar.

ART. 17… A competitor shall have the standards or uprights set to position the crossbar from a point 18 inches (45cm) measured beyond the vertical plane of the top of the stopboard, up to a maximum distance of 31.5 inches (80cm) in the direction of the landing surface.

ART. 18… A mark or marker shall not be placed on the runway, but it is permissible to place markers at the side of the runway. Meet management may provide check marks, not more than three inches long, on the runway. Starting at the back of the planting box, mark intervals in the following manner: 6', 7', 8', 9', 10', 11', 12', 13', 20', 30', 40', 50', 60', 70', 80', 90', 100', 110', 120'.



ART. 19… Taping of any part of the hands or fingers shall not be permitted unless there is an open wound that must be protected by tape. Taping of the wrist is permissible. Gloves are not permitted. Competitors may use chalk or an adhesive or similar substance such as rosin on their hands during competition.

ART. 20… It shall not count as a trial if a competitor's pole is broken during an attempt.

ART. 21… A competitor shall not be allowed to use the pole of another individual without the consent of the owner. The event judge shall approve the use and verify that the pole is rated weight-appropriate.

Penalty: Disqualification from the event.

ART. 22… The planting box shall not contain any foreign materials.

ART. 23… No person shall be allowed to touch the vaulting pole unless it is falling back and away from the crossbar. If there is a tailwind that might cause a properly released pole to fall forward, the referee should appoint an official and authorize him/her to catch the pole after it has been properly released.

ART. 24… After competition has started, the bar shall not be lowered, except to determine a first-place winner when a tie for that place is involved.

ART. 25… An accurate measurement of the height of the crossbar will be taken before each record attempt. Any displaced crossbar should be placed on the standards in exactly the same position as before its displacement. To ensure this, one face should be marked for identification.

ART. 26… Measurements shall be recorded to the nearest lesser ¼ inch or centimeter. Measurements shall be made with non-stretchable tape such as fiberglass, nylon, steel, or certified scientific measurement device (laser). Measurement of the official height shall be from a point on the same level as the takeoff to the lowest point on the upper side of the crossbar.

ART. 27… It is a foul if the competitor:

a) Displaces the crossbar from the pins on which it originally rested, with the body or the pole.

b) Leaves the ground in an attempt and fails to clear the crossbar.

c) During the vault, raises the hand which is uppermost when he/she leaves the ground to a higher point on the pole, or if the hand which was underneath is raised to any point on the pole above the other hand.

d) Allows any part of his/her body or the pole to touch the ground or the landing system beyond the vertical plane of the top of the stopboard, without clearing the bar.

e) Fails to initiate a trial that is carried to completion within the defined time period (1 ½ minutes) after being called and after the crossbar and standards have been set.

f) After clearing the crossbar, contacts an upright and displaces the crossbar.

g) Clears the crossbar with the uprights positioned incorrectly.

h) Steadies the crossbar with a hand(s) or arm(s).

i) Grips the pole above the top hand-hold band.

Penalty: An unsuccessful trial is charged, but not measured.

ART. 28... Breaking ties for places:

a) The competitor with the fewest number of trials for the height at which the tie occurs, i.e., the last height successfully cleared, shall be awarded the higher place.

b) If the tie still remains, the competitor with the fewest total number of unsuccessful trials throughout the competition, up to and including the height last cleared, shall be awarded the higher place.

c) Passed trials shall not count as misses.

d) If the tie remains after applying (a) and (b):

1. If it concerns first place, the competitors tying shall make one more attempt for the height at which they failed. If no decision is reached, the bar shall be lowered by three inches. If two or more of the tying competitors clear the height, the bar shall be raised by intervals of three inches. Each competitor shall attempt one trial at each height until the winner is determined.

2. If the tie concerns any place other than first place, the competitors shall be awarded the same place in the competition.

3. A competitor shall be credited with his/her best achievement if it occurs in a jump-off for first place.

Notes:

1. If the height which the tied competitors last attempted is not the same, because of a passed height by one or more of the remaining competitors, the bar shall be lowered to the lowest height last attempted by any of the remaining competitors to begin the jump-off.

2. No passed heights shall be permitted in the jump-offs.