



Knuth's Clinic...The Horizontal Jumps:

Larry Knuth researched and co-authored the first American book on the triple jump- The Triple Jump Encyclopedia. It is still the most extensive American book on a field event and received strong international reviews. Since publication he has worked with TJ experts Willie Banks, Alan Simms, Kevin McCarthy, John Tansley, Charlie Craig, and Cameron Cary.

- **Running for all the jump events, pole vault included, is underrated** by most coaches at the high school level. Ask yourself how much sprinting your jumpers are doing over a two week period.
- Runway length must be based on the athlete's basic speed, i.e. a **slower athlete reaches top speed faster and should have a shorter run**. Many top prep coaches begin their young jumpers at 12 stride approach and work up to 14 or perhaps 16 by season's end. International level jumpers in the horizontals often have runs over 120 feet because their basic speed is so great. However speed with control at board take off is critical for all jumpers.
- Like all field events the coach must view **what is a cause and what is a symptom**. Board fouls most often are because of what the athlete does in the first four strides of the run. Keep it simple with young jumpers and have them push, not accelerate out of the run. You will see fewer fouls than with an athlete gradually accelerating through the run. Many coaches use a check mark at four strides, others none depending upon the athlete.
- With beginning jumpers the biggest learning curve is getting the penultimate step down to increase the angle of takeoff and the parabola of flight. **Daily grass drills** as part of the warm up for the long jumpers go from walking (flat foot to take off foot, and drive off the ground...repeat) then to slow jogging to flat foot and on to take off foot and drive off the ground. A demonstration by an advanced jumper on the team will help as will video watching.
- Flight in the long jump with young jumpers often is characterized by not staying tall in the air and breaking at the waist prematurely. So the eye focus off the end of the pit and the arm action in delaying forward rotation must be



practiced. A four inch wooden box can help the jumper get many jump reps in practicing the take off drive arm action and opposite arm help with delaying forward rotation. A red cone is used by some coaches at the end of the pit to drive home the focal point of the eye focus. The box or gymnastic jump board will give aid to the jumper in providing time in the air in doing multiple jumps.

- The hip flexors must be used as the jumper approaches the pit and a coaching key (Arnie Robinson-'76 Olympic LJ Champ) of “sticking your heels” often helps the athlete’s visualization of maximizing their landing.
- Obviously your drills work up to five and/or seven stride board take off, flight, and landing technique drills.
- Runways at most schools are constructed to have the aiding wind at the jumper’s backs. So...athletes at competition site should do their practice run ups WITH the direction they use in competition, not from board backwards...AND not with bottom sweats on. Coaches: ALWAYS carry your own measuring tape to away meets...do not assume anything...some have their top jumpers in each jump event carry a tape for the group.
- Triple jumpers learning double arm take off must practice, practice, practice in walking and then jogging drills. Willie Banks, former American and world record holder, did walking double arm drills EVERY practice for his first month at UCLA under legendary Coach Tom Tellez.
- Work to avoid “the Bat”...i.e. long high hop, breaking down into short step, and big LJ into the pit...the flight pattern resembles “the Bat.”

LONG JUMP WORKSHEET

Principles:

1. Coach Causes NOT Symptoms

2. Jump distance determined by horizontal velocity (runway speed AND vertical) impulse (board take off angle)

3. Penultimate stride (stride before takeoff) dictates long then short steps thus hips rise at board take off.



4. **Block** with drive arm at board take off.
5. **Arm** movements delay forward rotation of upper body in air.
6. **Hitch kick** or **Hang** with legs to delay forward rotation.
7. **Hip flexors** important to get legs into landing position.
8. **Arms sweep BACKWARD** prior to pit landing to move center of mass (hips) slightly forward.
9. **Think stick the heels** to get full leg extension into the sand.
(from Arnie Robinson- 76 Olympic LJ Champion)
10. **Hips** move through hole in sand and arms come forward to help body leave the hole.

DRILLS 4 inch box great aid (two by four, plywood, abrasive strips)
; penultimate walk drills; 5 & 7 stride reps; **Speed Volume** work;
Multi joint power work; **Plyometrics**?

YOUTUBE and **I Pad Pixs** Are you using these resources to the max?