



# The Triple Jump

Abilities, Demands, Mechanics



# Abilities Required

- Complex Motor Abilities
- High Neuromuscular Function
- Coordinative Abilities
- Elastic Response
- Special Strength





# Demands of the TJ



- High Risk factor
- Motor Control
- Foot Contacts
- Elastic Response
- Speed
- Aggressive nature

# MECHANICS—THE APPROACH

- LJ AND TJ APPROACHES ARE MECHANICALLY SIMILAR
- $\frac{1}{3}$ ,  $\frac{1}{3}$ ,  $\frac{1}{3}$
- CHECKMARK SYSTEMS: ATHLETE/COACH
- STEPS: USING FEWER THAN LJ APPROACH SINCE VELOCITY MANAGEMENT IS IMPORTANT
- SINCE LJ AND TJ TAKEOFF FOOT ARE NOT ALWAYS THE SAME IT IS OKAY TO HAVE A DIFFERENT FOOT LEADING WHEN INITIATING THE RUN
- OPTIMAL VS MAXIMAL RUNWAY SPEED



# ESSENTIAL COMPONENTS OF THE TJ: BOUNDING

- BOUNDING SKILLS ARE ESSENTIAL TO EFFECTIVE TJ TECHNIQUE
- CONSERVATION OF POSTURE: NEUTRAL HEAD/NECK/PELVIS
- COMMON TECHNICAL ERRORS: FORWARD LEAN, BACKWARD LEAN, PELVIC TILT DOWNWARD

# BOUNDING SKILLS





# ESSENTIAL COMPONENTS OF THE TJ: GROUND DYNAMICS

- STABILIZED ANKLE— FOOT IN A DORSIFLEXED POSITION
- QUAD TENSED IN PREPARATION OF CONTACT
- FOOT CONTACT SHOULD OCCUR ONLY SLIGHTLY IN FRONT OF THE COM
- FLAT FOOT GROUND CONTACT
- HEEL-TOE ROLLING ACTION OF THE FOOT
- “LET THE GROUND COME TO YOU”

# GROUND DYNAMICS





# APPROACH SETUP

- BEGIN APPROACH WORK ON THE TRACK
- TAKEOFFS ARE ESSENTIAL TARGET PRACTICE SO STANDARDIZING THE RUN ON THE RUNWAY IS A KEY TO BEING AGGRESSIVE AT TAKEOFF
- ONCE THE APPROACH IS STANDARDIZED ON THE TRACK MOVE THE APPROACH TO THE RUNWAY
- RUNWAY WORK IS A KEY INGREDIENT TO ULTIMATE SUCCESS IN THE HOP PHASE

# APPROACH SETUP: PREPARATION

- UNLIKE LJ THE TJ DOES NOT REQUIRE LOWERING OF THE COM...PREPARATION IS MINIMAL
- TAKEOFF ANGLE IS 11-15 DEGREES...LJ 18-22 DEGREES
- NO REAL NEED FOR A PENULTIMATE STEP
- CUE IS “RUN OFF THE BOARD” OR “RUN THROUGH THE HOP” AND “LEAVE THE TAKEOFF FOOT BEHIND”



# PREPARATION



# APPROACH SETUP: THE TAKEOFF

- POSTURE CONSERVED FROM THE APPROACH RUN
- TAKEOFF FOOT GROUNDED UNDERNEATH THE HIPS WITH VERY LITTLE FRONTSIDE
- HORIZONTAL FORCES CONSERVED AS MUCH AS POSSIBLE
- MUCH LESS VERTICAL COMPONENT AT TAKEOFF THAN IN THE LJ
- THE PATH OF THE COM SHOULD REMAIN RELATIVELY HORIZONTAL AND THE CHEST SHOULD FEEL LIKE IT IS MOVING FORWARD NOT UPWARD
- THE TAKEOFF FOOT SHOULD PATIENTLY REMAIN BEHIND THE BODY AS THE CHEST MOVES THROUGH THE TAKEOFF
- THIS DISPLACEMENT CAUSES A STRETCH-REFLEX TO OCCUR WHICH ASSISTS THE SWING LEG TO MOVE RAPIDLY FORWARD TO INITIATE THE STEP PHASE
- DOUBLE OR SINGLE ARM TAKEOFFS ARE ACCEPTABLE



# THE TAKEOFF



# TJ PHASES: THE HOP

- TJ IS A HOP-CENTRIC ACTIVITY
- TWO MAJOR TJ THEORIES: RUSSIAN AND POLISH
- RUSSIANS DICTATE A BIGGER HOP AND JUMP PHASE RELATIVE TO THE STEP
- POLISH DICTATE A MORE EVEN PATTERN
- I SUBSCRIBE TO THE RUSSIAN PHILOSOPHY BECAUSE EITHER WAY THE STEP IS GOING TO BE SHORTER THAN THE OTHER TWO PHASES



# TJ PHASES: THE HOP

- A GOOD HOP PHASES ESTABLISHES POSTURE FOR THE REMAINDER OF THE TWO FOLLOWING PHASES
- RECOVERY OF THE TAKEOFF LEG SHOULD BE DELAYED
- VOLITIONAL CYCLING OF THE LEG IS NOT RECOMMENDED
- THE CYCLE SHOULD OCCUR AS A NATURAL EXTENSION OF PROPER TAKEOFF
- PREMATURE CYCLING OF THE LEG OFTEN CAUSES EXCESSIVE VERTICAL PUSH AT TAKEOFF
- THE CYCLE SHOULD BE A PULL-THROUGH THE ENTIRE HOP
- THE TRAIL LEG WILL STAY LONG AND SWING THROUGH BECAUSE OF THE NATURAL STRETCH-REFLEX CAUSED BY PROPER CYCLING MECHANICS
- FRONTSIDE GROUND CONTACT SHOULD BE MINIMIZED
- VERTICAL PUSH SHOULD BE ACCENTUATED

# THE HOP





# TJ PHASES: THE STEP

- BOUNDING MECHANICS
- SUCCESS IN THE STEP PHASE IS A BY-PRODUCT OF AN EFFECT HOP
- STEP PHASE WILL NOT BE EQUAL TO THE OTHER TWO PHASES
- FLAT ROLLING CONTACTS OF THE FOOT (ROCKING CHAIR EFFECT)
- IF STEP IS POOR GO BACKWARD AND LOOK AT TAKEOFF AND HOP MECHANICS FIRST

# THE STEP





# TJ PHASES: THE JUMP

- EFFECTIVE BOUNDING SKILLS SHOULD PREPARE THE JUMPER FOR AN EFFECTIVE FINAL PHASE
- MINIMIZE FRONTSIDE DISTANCE OF THE FOOT RELATIVE TO THE COM
- EXCESSIVE FRONTSIDE DISTANCE WILL RESULT IN A POSITION INADEQUATE TO GAIN VERTICAL HEIGHT AT TAKEOFF
- HANG STYLE TECHNIQUE

# THE JUMP





# THE LANDING

- KICK-OUT OR TURNOUT ARE ACCEPTABLE
- AS LEGS EXTEND ARMS WILL BEGING BACKWARD MOVEMENT
- HIPS PRESS TOWARD FEET

# THE LANDING





# TJ TRAINING

- APPROACH ASSEMBLY: OFF RUNWAY/ON RUNWAY
- BOUNDING SKILLS
- COMPLEX JUMPS: RR-LL/LL-RR/R-LL-R/L-RR-L/SL  
HOPS/FOUR BOUNDS + JUMP/SL SPRINTS
- SHORT RUN TAKEOFFS INTO SAND
- SHORT RUN JUMPS 4-6-8 STEP
- SPEED WORK SIMILAR TO SPRINTERS

# THANKS TO ALL

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