

Track and Field Techniques: Developing Warm-Ups and Cool-Downs

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Overview of Warm-Ups

Purpose

- Prepares the body for activity
- Sets the tone of the practice (focused vs. fun)
- Consider warm-ups as part of the practice
- Team building in a minimal-team sport
- Improves basic athleticism like coordination, mobility, flexibility, conditioning
- HS kids feel invincible and ready-to-go but pay the price over time when skipping warm-ups with soreness, tightness, injury, etc.
- Many ways to accomplish the same goal

General versus Specific Warm-Ups

- General is basic physical preparation, applies to all events and activities (Sprints, jumps, throws, distance, weights, plyometrics, cross training, etc.)
- Specific is preparation specifically for a type of activity or event (E.g. shoulder circles, towel pull-throughs and standing throws for javelin)

Time Length

- Just enough to get the job done
- First extreme, too short (bear in the woods theory)
- Second extreme, too long (warm-up is a workout itself, need a warm-up to warm-up!)

Adaptability

- Warm-ups need to adapt based on location, weather, equipment, etc. (Indoor vs. outdoor, wet vs. dry, cold vs. hot, spacious vs. cramped, equipment vs. none)
- Take caution with rigid set routines as variables out of your control may disrupt them

Components of a Warm-Up

General Activity

- Increases the temperature of the body through blood flow

- Creates lubrication for the joints
- Examples: jogging forward, jogging backward, skipping, skipping various directions, snaking runs, etc.
- Skipping is a poor man's vibration machine
- Nothing wrong with jogging for 5-10 minutes
(Multi-plane movements are nice but still believe runners need to run)
- "Slow cook the goose moist to the bone"

Stretching

- Static stretching, 20-30 second holds for major muscle groups
- Why KHS went back to static stretching during warm-ups
 1. Forces our kids to stretch, every time an injured athlete receives outsourced therapy they are told they are inflexible and need to stretch
 2. During high pressure meets our athletes resort to static stretching due to nervousness, if we don't regularly stretch then this introduces a new variable on meet day
 3. Static stretching does reduce power but any losses are then regained through dynamic activities that excite the nervous system
 4. Static stretching serves as a spot check for tightness and sets a baseline
 5. Martial artists and ballerinas stretch a lot before practice yet possess some of the fastest leg speeds and highest jumps in the world
 6. The older studies showing static stretching reducing power didn't test athletes, newer studies do: "Negative effect of static stretching restored when combined with a sport specific warm-up component" (Taylor KL et. al., J Sci Med Sport 2009)
 7. World class track coaches still prescribe static stretching
- Dynamic stretching and movements
 - Moving limbs and joints through wide range of motion
 - Progress from slow to fast, controlled movements
 - At higher speeds begins to excite the nervous system
 - Hurdle over/unders
 - One hurdle or set of 10+
 - Examples: forward over, lateral over, backward over, forward under, lateral under, etc.
 - Various multi-plane movements
 - Arm circles, leg swings, wrist circles, ankle mobility, lunging, squatting, bending, twisting, etc.

Running Drills

- Is both a dynamic stretch and specific movement for running
 - Improves range of motion, stretches posterior chain, teaches body control and posture, exposes bilateral imbalances
 - No correlation with running faster
 - Perfect at slow speeds then speed up
 - Drills flowing into acceleration (20 meter “A” skip then 15 meter accel)
 - Example 2x30 meters each: “A” march, “B” march, butt kicks, high knees, groin in/outs, “A” skip, “B” skip

Specific Activity

- Event specific movement or rehearsal
 - Sprints: Build-ups/accelerations
 - Jumps: Build-ups/accelerations, then approach jumps
 - Vault: Build-ups/accelerations, then vault approach drills
 - Hurdles: Build-ups/accelerations, then specific hurdle drills
 - Distance: Build-ups/accelerations if doing fast interval work
 - Throws: Throwing drills, may do short accelerations
 - Javelin: Build-ups/accelerations, then specific javelin drills

Sample Warm-Ups

See appendix for KHS warm-up/cool-down program

Warm-Up Considerations

Multiple Warm-Ups

- Different warm-ups for different days, easy for easy days (or following hard days) and more dynamic for high intensity days
- Seen upwards of 5 differing warm-ups per week
- Types of warm-ups: long building exciting, long relaxed, short dynamic, short and easy
- We use two for our athletes, one more dynamic and one less dynamic * see appendix

Track Meets

- Team warm-up or individual?

- We let the athletes choose what they want to do, security when nervous. Will correct next day if glaring errors (too little, too much)
- Do what is familiar, both for physical and psychological reasons
- Warming-up multiple times per meet
 - 20 minutes between events or 2 hours? Weather? Type of previous event?
- If athletes feel better during their second event they may not have prepared correctly
- Vary warm-up based on athlete composure
 - If wired and edgy then slow building warm-up
 - If “dead” or flat feeling then short and very dynamic warm-up

Cool-Downs

Purpose

- Often neglected by both coaches and athletes
- Physical and mental unwind
- Prepares body for the next workout!!!

Components

- General activity (see warm-ups general activity section) but in a descending manner
- Remedial and preventative work
 - Shin exercises, rotator cuff, medial gluteals, barefoot walking, etc.
- Stretching
 - Static stretching to reset muscle tone and re-lengthen muscle
 - Shotgun (all major muscles) versus prescribed by event or athlete
 - Nightly homework
- Therapy if needed
 - Icing, ice baths, contrast showers, self-myofascial release (foam roll)

Warm-up One

[Sprints, Hurdles, Jumps, Vault, Javelin, Throws - Low Intensity/Recovery days]

2 - 3 Laps

Jog forward, Skip Forward, Jog Backward, Skip Backward, Side Shuffles

Team Static Stretch

Shoulder/Chest
Butterfly
Seated Wide Groin
Seated Hamstring
Hip Twist
Kneeling Hip Flexor
Quads
Calves

Drills

Arm Swings
Marching "A"
Marching "B"
Glute Kicks
Straight Leg Bound
High Knees
Backwards Run

Build-ups

1 Lap, 3x80 meters
60%, 80%, 80%

Warm-up Two

[Sprints, Hurdles, Jumps, Vault, Javelin - High Intensity/Speed days]

2 - 3 Laps

Jog forward, Skip Forward, Jog Backward, Skip Backward, Side Shuffles

Team Static Stretch

Same as warm-up one

Dynamic Stretching

Shoulder Circles
Upper Body Twist
Leg Swings Side-to-side
Leg Swings Front-to-back
Leg Swing Trail Leg/Fire Hydrant

Drills With Accelerations

Marching "A"
Glute Kicks
Straight Leg Bound
Skipping "A"
Skipping "B"
High Knees

Build-ups

1 Lap, 3x80 meters
60%, 80%, 100%

Cool Down

2 Laps

Jog forward, Skip Forward, Jog Backward, Skip Backward, Side Shuffles

200 Meters Walking

Heel Walk and Backwards Walk

Static Stretch

Shoulder/Chest
Butterfly
Seated Wide Groin
Seated Hamstring
Hip Twist
Kneeling Hip Flexor
Quads
Calves

