



# 300/400 Hurdle Training

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# Introduction

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- Hurdling deviates as least as possible from normal sprinting.
- This hurdle event demands the ability to run a fast 400m as well as possess the stamina of a 600 – 800m performer.
- Our focus, first, last, and always must be establishing and maintaining SPEED between and over the hurdles!
- The hurdler must learn to hurdle with either leg.

# Specifics to the 300/400 hurdles



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- Strides to the first hurdle:
  - Men: 19-23 strides
  - Women: 22-25 strides
- Strides between the hurdles:
  - Men: 12 -15 strides
  - Women: 14-19
  - \*\* (developmental hurdlers may need to take more steps until they become stronger and faster)
- Takeoff distance to the hurdle:
  - Men: 2.25 -2.30m
  - Women: 2.04 – 2.05m
- Touchdown distance off the hurdle:
  - Men: 1.22 -1.32m
  - Women: 1.10 – 1.25m
  - \*\* (distances may vary based on non-fatigue and fatigue state)



# Measurements in Hurdling

RACE	Distance to 1 <sup>st</sup> Hur	Distance Between Hurdles	Run-In Distance off last hur	Hurdle Height
400H	45 m	35 m	40 m	30/36"
300H	45 m	35 m	10 m	30/36" (8H)
200H	16 m	19 m	40 m	30/33" (5H)



# Mechanical Demands

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- Learn to hurdle with both legs.
- Attack each hurdle and negotiate it with which ever leg that comes up in the process of normal striding (no studder-step)
- Getaway stride with trail leg is longer than in the sprint hurdle race.
- Economy of motion is extremely important both between and over the hurdle.
- Run the race like a flat 400m; avoid unnecessary deceleration
- Allow for the possibility of leading with the right leg in the turn, and run toward the center of the lane to avoid possible disqualification
- Left leg is the preferred lead leg on the turn
- Touchdown times: series of splits to hit based on goals and training performances



# Technical Demands

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- Apply force at takeoff to move through the hurdle and minimize deceleration
- Perform effective and efficient hurdling skills with both legs
- Maintain a consistent rhythm for 10 hurdles
- Manage race distribution efficiently.
- Touchdown times: series of splits to hit based on goals and training
- Takeoff to the hurdle is further away than in the short hurdle race; allows for a full speed approach to the hurdle and efficient trajectory
- Drive phase at the start ensures proper momentum development, assisting in the achievement of good running and hurdling mechanics





# Technical Demands

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- Athlete must have a good sense of pace and understand the race plan and stride pattern
- Don't let the stagger confuse you; run your race plan
- Develop an ability to 'read' the hurdle and make adjustments to negotiate the barrier without sacrificing speed and hurdling efficiency (steering)



# Critical Components of the Race

- Stride length and stride frequency are inversely proportional
- Aggressive mental approach with a high level of concentration
- Competitive nature
  - To overcome a variety of setbacks that can occur during the race: broken
- Strength
  - High levels of both maximal strength and strength endurance
- Endurance abilities
- Acceleration, absolute speed, and power



# Suggested Training Priorities



- Develop sprinting ability
- Develop speed/strength endurance
  - Rhythm
  - Lactacid power and capacity
- Rhythm Exercises
  - space hurdles at 19-22m
  - 9-11 strides
  - Runs over 4-5 hurdles
  - Runs using non-preferred leg
- Acquire and refine steering ability
  - Runs over 6-9 hurdles at 19-22m
  - Spacing should be different to force athlete to 'read' hurdle and make adjustments
  - Smooth transitions using either leg



# Suggested Training Priorities

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- Develop maximum and specific strength and power
- Develop ability to race over 200m
  - Enhance speed and speed endurance qualities to establish a baseline for 400m improvement
  - Your best 400m should be approximately  $2 \times (\text{best } 200\text{m}) + 3.5''$ ; To this add 2.5-3.5'' for a predictor of best 400m performance.
- Develop ability to race over 400m
  - Learn proper distribution of effort
  - Use 4x400m relay with inexperienced athletes to build confidence.
- Some training should be done over barriers to rehearse certain segments of the race



# Thank you!

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- Questions and Answers
  - References:
    - USATF Coaches Education Level I and II Curriculum Manual, 2006