Men’s Lacrosse

Philosophy: Train sport-specific movement patterns, correct muscular imbalances, optimize energy system efficiency to build a faster, more explosive, and healthier athlete.

Note: Dominant energy system describes the energy system that produces the majority of energy. Most sports fall on the continuum of energy systems with very few being 100% one way or the other. In lacrosse’s case, most positions operate on the sprint-rest-sprint basis characterized by brief explosive effort followed by a short amount of rest time. For example, on attack, this might be a dodge followed by a pass that starts the ball rotation. The player would then be considered at rest although he may still be moving in a low-effort manner. And again, it could be 50% one system, 25/25 two other systems and the 50% system would still be considered dominant even though others are used.

Positions
• Attack
  o Dominant Energy System: Anaerobic-Alactic (1-10 seconds of no-rest effort)
  o Qualities Required
    ▪ Fast, explosive, and agile to rapidly start, stop, and change direction
    ▪ Rotational hip strength to power the shot
    ▪ Durable body to take checks from defense
  o Injury Concerns
    ▪ Impact injuries from body and stick checks
    ▪ Shin splints
  o A strength program for attackmen would focus on developing maximal strength and rapid rate of force development, as well as building supporting musculature to increase durability. Sleds, hills, and short-rest sprints would be used to develop explosive speed, conditioning, and mental toughness.

• Midfield
  o Dominant Energy System: Anaerobic-Alactic (1-10 seconds of no-rest effort)
  o Qualities Required
    ▪ Fast, explosive, and agile to rapidly start, stop, and change direction
    ▪ Rotational hip strength to power the shot
    ▪ Sprint endurance to be able to run longer distances than defense and attack, often with shorter rest
  o Injury Concerns
    ▪ Impact injuries from body and stick checks
    ▪ Shin splints
  o A strength program for midfielders would focus on developing maximal strength and rapid rate of force development, as well as building supporting musculature to increase durability. Longer sprints as well as sleds and hills would be used to develop explosive speed, conditioning, endurance, and mental toughness.

• Defense
  o Dominant Energy System: Anaerobic-Alactic
  o Qualities Required
    ▪ Fast, explosive, and agile to rapidly start, stop, and change direction
    ▪ Lower, core, and upper body strength to issue powerful body checks
    ▪ Fast reflexes to react to cutting and dodging attackmen
  o Injury Concerns
    ▪ Occasional impact injuries
    ▪ Shin splints
  o A strength program for defensemen would focus on developing maximal strength and rapid rate of force development, as well as building supporting musculature to
increase muscle size. Sleds, hills, and short-rest sprints would be used to develop explosive speed, conditioning, and mental toughness.

- **Goalie**
  - Dominant Energy System: Anaerobic-Alactic
  - Abilities Required
    - Quick, explosive, accurate movements
    - Maximum sprint speed to clear the ball
    - Fast reflexes to react to the shooter
  - Injury Concerns
    - Bruises caused by impact from shots
  - A strength program for goalies would focus on developing maximal strength and rapid rate of force development, as well as building supporting musculature to provide protection for the bones. Sprint training would be used to develop explosive speed.

**Summary**

Lacrosse positions do not vary greatly in demand, so positions can train similarly. The most common three injuries can be largely preventable with strength training. Concussion risk can be decreased by training the supporting neck and upper-back musculature. ACL tear risk can be decreased by strengthening and balancing the quadriceps, hamstrings, and gluteus muscles. Shin splints can be avoided by building supporting musculature to allow for correct running mechanics. All positions will benefit from increased strength, power, and explosive speed, qualities that can be developed most effectively by strength and conditioning training, not by simply playing lacrosse. Lacrosse is a contact sport and your body is your armor.

As lacrosse becomes more popular, the "6' 175 pounds" body type is dying out. Even at the collegiate level, some players feel that stick skills and so-called “foot speed” are enough to get them on a starting roster, but these players will eventually be surpassed by bigger, stronger, faster, and healthier players who can move their body more explosively and stay injury-free for longer. Strength is never a weakness.

“A yearlong commitment to weight training, quickness training, and speed drills is necessary to compete at the highest levels and stay off the injured list.”

—Jay Dyer, Johns Hopkins Lacrosse Strength Coach