Infrastructure & Expertise

A Model to Investigate Effective Training Through LTAD

Kelly L. Lockwood & Greg Jackson
Physical Education & Kinesiology; Sport Management
Brock University

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What We Know ~ What We Don't

- **Athlete-Specific Level**
  - What is sport-specific training?
  - What is optimal training for LTAD?
- **System-Wide Level**
  - What is effective sport infrastructure?
  - How can it be integrated with sport system?

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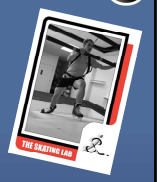
LTAD STAGES	HOCKEY	*System Level* Qualitative Data		*Athlete Level* Quantitative Data
		Surveys	Interviews	
ACTIVE START	Learn to Skate (male & female)	Parents	Sport Leaders	Biomechanical Analysis to assess Skill Acquisition
FUNDAMENTALS	Atom A House League (male & female)			
LEARNING TO TRAINING	Pee Wee Rep (male & female)	Parents	Coaches Sport Leaders Talent Scout/Agents	Biomechanical Analysis to assess Skill Acquisition Physiological Measures
TRAINING TO TRAIN	Bantam Rep (male & female)	Parents	Coaches Sport Leaders Talent Scout/Agents	Biomechanical Analysis to assess Skill Acquisition Physiological Measures
TRAINING TO COMPETE	Junior (male) Midget Rep, Intermediate (female)	Parents	Coaches Sport Leaders Talent Scout/Agents	Biomechanical Analysis to assess Skill Acquisition & Refinement Physiological Measures Sport-Specific Performance Measures
TRAINING TO WIN	OHL, AHL & NHL draft (male) CIS, NCAA, Junior (female)	Parents	Coaches Sport Leaders Talent Scout/Agents	Biomechanical Analysis to assess Skill Acquisition & Refinement Physiological Measures Sport-Specific Performance Measures
ACTIVE FOR LIFE	Masters, Old Timers (male) Masters, Senior Recreational (female)	Athletes	Coaches Sport Leaders Talent Scout/Agents	Biomechanical Analysis to assess Skill Acquisition Physiological Measures

HIP Overview

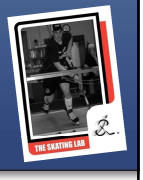


F - 1 x /wk for 12 weeks

I - Age & ability appropriate

T - 60-75 min/session

T - Sport specific training including Skate Treadmill Training and SAQ



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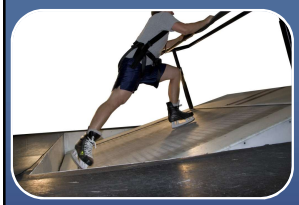
Skate Treadmill Training



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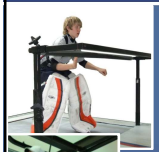
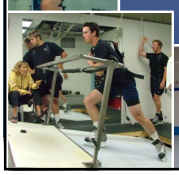
HIP: Athlete Level Data





- Significant conditioning differences
- Significant mechanical differences
- Positive transfer to performance

HIP: System Level Data

- Understanding of Infrastructure Support
- Timing of Infrastructure Support
- Type of Infrastructure Support
- Purpose of Infrastructure Support

Policy Implications

- Alternative infrastructure (e.g. Skate treadmill training) is as an effective way to teach, learn and train "FUNdamentals" at all stages of development.
- Skate treadmill training as an alternative to scarce and expensive ice time.
- The need for accreditation/certification of instructors and facilities in sport.

Bridging the Gap

SCIENTIFIC FINDINGS

PRACTICAL APPLICATIONS

NEXT STEPS

Next Steps

- Mechanical literacy or training mechanical movement has the potential to significantly enhance sport performance at all stages of development.
  RECOMMENDED: Build a model of mechanical literacy through all stages of LTAD.
- Skating ability has been called the most important skill in the sport of ice hockey. However, the transfer of skating-related research knowledge to fundamental development of athletes' skating skills is lacking and neglected.
  RECOMMENDED: Develop effective tools for teaching, training, tracking and /monitoring fundamental movement skills such as skating mechanics.
- Provide a template for like-sport (e.g. women's hockey, ringette, sledge hockey, special needs games) organizations to include alternative infrastructure and expertise.

Stakeholders

- International Hockey Federation
- National Hockey League
- Hockey Canada
- Provincial Hockey Associations
- Local Minor Hockey Leagues
- Ringette Canada
- Provincial Ringette Associations
- Local Ringette Leagues
- Coaches Association of Canada
- Canadian Sport For Life

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