Male youth training considerations
By Chris Chucas and Louis Richards
1. The long term perspective
2. Demands of the sport
3. Prevention is better than cure
4. Movement
Disclaimer

- My thoughts
- Stop me!!!!
THE LONG TERM PERSPECTIVE

Who has a S&C coach?
ENERGY SYSTEMS

- Musculoskeletal system
- Aerobic system
- Anaerobic
Range of motion
Movement quality
Capacity
Strength
Reactivity

CHASSIS
(MUSCULOSKELETAL SYSTEM)

FASTER RUNNING
FASTER SWIM/BETTER RUNNING/MORE ECONOMICAL
NO SHIN INJURIES
RUNNING TECHNIQUE
SWIM POSITION
Total Output (Overall quality of work, total work created, etc.)

Most Productive
Here, your input leads to productive returns. It pays to invest more time, effort.

Point of Diminishing Returns
Each added input leads to a decreasing rate of output. It's best to stop somewhere within this phase.

Point of Maximum Yield

Negative Returns
Never get here. Not only do you not get a return for your effort, you decrease your overall output!

Total Input (Time, effort, resources invested)

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It’s easier to maintain than to gain!
### YOUTH PHYSICAL DEVELOPMENT (YPD) MODEL FOR MALES

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<thead>
<tr>
<th>Chronological Age (Years)</th>
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<tbody>
<tr>
<td><strong>Age Periods</strong></td>
<td>Early Childhood</td>
<td>Middle Childhood</td>
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<td>Adulthood</td>
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<td><strong>Growth Rate</strong></td>
<td>Rapid Growth</td>
<td>Steady Growth</td>
<td>Adolescent Spurt</td>
<td>Decline in Growth Rate</td>
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<td><strong>Maturation Status</strong></td>
<td>Years Pre-PHV</td>
<td>PHV</td>
<td>Years Post-PHV</td>
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<td><strong>Training Adaptation</strong></td>
<td>Predominantly Neural (Age-Related)</td>
<td>Combination of Neural and Hormonal (Maturity-Related)</td>
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<td><strong>Physical Qualities</strong></td>
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<td><strong>Training Structure</strong></td>
<td>Unstructured</td>
<td>Low Structure</td>
<td>Moderate Structure</td>
<td>High Structure</td>
<td>Very High Structure</td>
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**Physical Qualities**:
- **FMS**: Functional Movement Screening
- **SSS**: Selective Sensory Integration

**Training Adaptation**
- Predominantly Neural (Age-Related)
- Combination of Neural and Hormonal (Maturity-Related)

**Physical Qualities**:
- Mobility
- Agility
- Speed
- Power
- Strength
- Hypertrophy
- Endurance & MC

**Training Structure**
- Unstructured
- Low Structure
- Moderate Structure
- High Structure
- Very High Structure
THE LONG TERM PERSPECTIVE

You can’t do it all at once!
It’s worth identifying your limiting factor, and reaping the rewards
Then, it’s easier to maintain!
Demands of the sport

Who likes to understand the numbers behind the sport?
16 mins 30s

5.3 W/Kg

28 mins 30s

Range of motion

Movement quality

Capacity

Strength

Specific

Aerobic

Anaerobic
Range of motion

Movement quality

Capacity

Strength

Specific

Aerobic

Anaerobic

25-30 km pw

~26s 50m

150% 3RM Pull up

Core

Open water swimming!

Shoulders, rotation, catch
5.3 W/Kg

- Anaerobic
- Aerobic
- Specific
- Strength
- Capacity
- Movement quality
- Range of motion

10-16 hours pw
6s PP 1000+ Watts
x4 BW SL ISO
General

T spine and hip flexion
28 mins 30s

Range of motion
Movement quality
Capacity
Strength
Specific
Aerobic
Anaerobic

40-60 miles pw
200m <30s good form
1.9 RSI
X3.5 BW Isocalf
Core and calf
Running model
KTW, hip flexors
Demands of the sport

Your goals
How are you going to achieve your goals?
Prevention is better than cure

Who has been injured?
RED-S
Relative Energy Deficiency in Sport
Tendinopathy
Training Response / Adaptation

Mileage

12 month period

Mileage
Linear (Mileage)
Training Response / Adaptation

Red dotted line shows the gradual increase in training over the year.
Movement

Brace

Squat

Pull

Rotate

Push

Lunge

Range of motion

Movement quality

Capacity

Strength

Specific

Aerobic

Anaerobic
Prevention is better than cure

Get the right balance!!!
Summary

• Train for 10 years time not 10 months time
• Understand the Sport and how you’re going to train for that
• Smart training; Focused, consistent, sensible training
appendix
performance assessment weekend in Loughborough

Male youth training considerations

Chris Chucas and Louis Richards
Potential contents

• Male youth training considerations;
• Managing the training dose (Periodisation)
• Holistic approach (Being a human/No burn out/Balance etc/stress is stress)
• Management around the growth spurt (YPD model. Watch out for/opportunities)
• Common myths
• Common problems
• Other?

• Impact of being an early/late developer (what this looks like)
• Look at some of the physiological demands of the sport linked to delivering certain speeds i.e swimming a 17min 1500m. I can pull together the various speeds/benchmarks if you want?
Time=45 minutes

audience= athletes and parents

14-19 yo male athletes

Aim= parents and athletes to go away with useful information that they will put into practice

Chris Chucas
## Very Brief Summary of Energy Systems

<table>
<thead>
<tr>
<th>Energy System</th>
<th>Duration (sec.)</th>
<th>Classification</th>
<th>Energy Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATP + CP</td>
<td>1-4</td>
<td>Anaerobic</td>
<td>Muscle ATP Stores</td>
</tr>
<tr>
<td></td>
<td>4-20</td>
<td></td>
<td>Muscle ATP &amp; CP Stones</td>
</tr>
<tr>
<td>Anaerobic Lactic Acid</td>
<td>20-40</td>
<td>Anaerobic</td>
<td>Muscle ATP, CP, &amp; Glycogen Stores</td>
</tr>
<tr>
<td></td>
<td>40-120</td>
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<tr>
<td>Aerobic</td>
<td>120-2400</td>
<td>Aerobic</td>
<td>Muscle Glycogen &amp; Lactic Acid</td>
</tr>
<tr>
<td></td>
<td>2400-6000</td>
<td></td>
<td>Muscle Glycogen &amp; Fatty Acids</td>
</tr>
</tbody>
</table>
Potential contents
1. Training as Play
Learning to love training.

2. Informed Choice
Learning to make great decisions with good information.

3. Learning to Lead
Learning to take ownership of your journey.

4. Intelligent Training
Learning to train with clarity and purpose.

5. Intelligent Racing
Learning to make winning decisions in racing.

6. One Day One Race
Learning to deliver your best when it really matters.
17:45 - 18:35 Session 2 - Intelligent Training & Informed Choice
Male Athlete Development - Louis Richards and Chris Chucas
This session will look at a number of areas related to male athlete development which include; the importance of focusing on the longer term, the demands of the sport and how to train for those & preventing injury to allow for consistent training.
1. Training as Play
   Learning to love training.

2. Informed Choice
   Learning to make great decisions with good information.

3. Learning to Lead
   Learning to take ownership of your journey.

4. Intelligent Training
   Learning to train with clear purpose and clarity.

5. Intelligent Racing
   Learning to make winning decisions in racing.

6. One Day One Race
   Learning to deliver your best when it really matters.
Rx

- Movewell (Generally)
- Hip, knee, ankle strength
- Calf endurance
- Core work
- Shoulder and upper back mobility
- Running mechanics

- How many times per week?