UNIVERSITY OF TORONTO

SwimBikeRun
Introduction to Triathlon Training

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Intro to Triathlon Training
Agenda

1. Executive Summary

2. How to Build a Season Plan

3. Training Tips

4. Quantitative Testing & Performance Measurement

5. Questions

6. Appendix: Starting from Scratch; Where to Start; Resource List

Intro to Triathlon Training
Executive Summary

Swim – bike – run – eat – sleep – repeat.

"Train often, mostly easy, sometimes hard."

Suggested approach to starting a plan:

1. Decide on what type of racing to focus on.

2. Identify your strengths and limiters.

3. Determine appropriate training to improve limiters.

4. Consider time available for training.

5. Set a plan!

Types of Racing
What's your distance?

Race distances and associated training

- **Sprint:** 0.75K swim, 20K bike, 5K run

- **Olympic:** 1.5K swim, 40K bike, 10K run

- **Half Iron:** 1.9K swim, 90K bike, 21.1K run

- **Ironman:** 3.8K swim, 180K bike, 42.2K run

Strengths and Limiters
## What defines your performance?

Race results are determined by the interplay of your *speed potential* and your *durability*.

Speed potential: predictive pace over varying race distances based on current performance in shorter than race distance efforts in swimming, cycling and running.

Durability: your body's ability to carry speed over distance without failing.
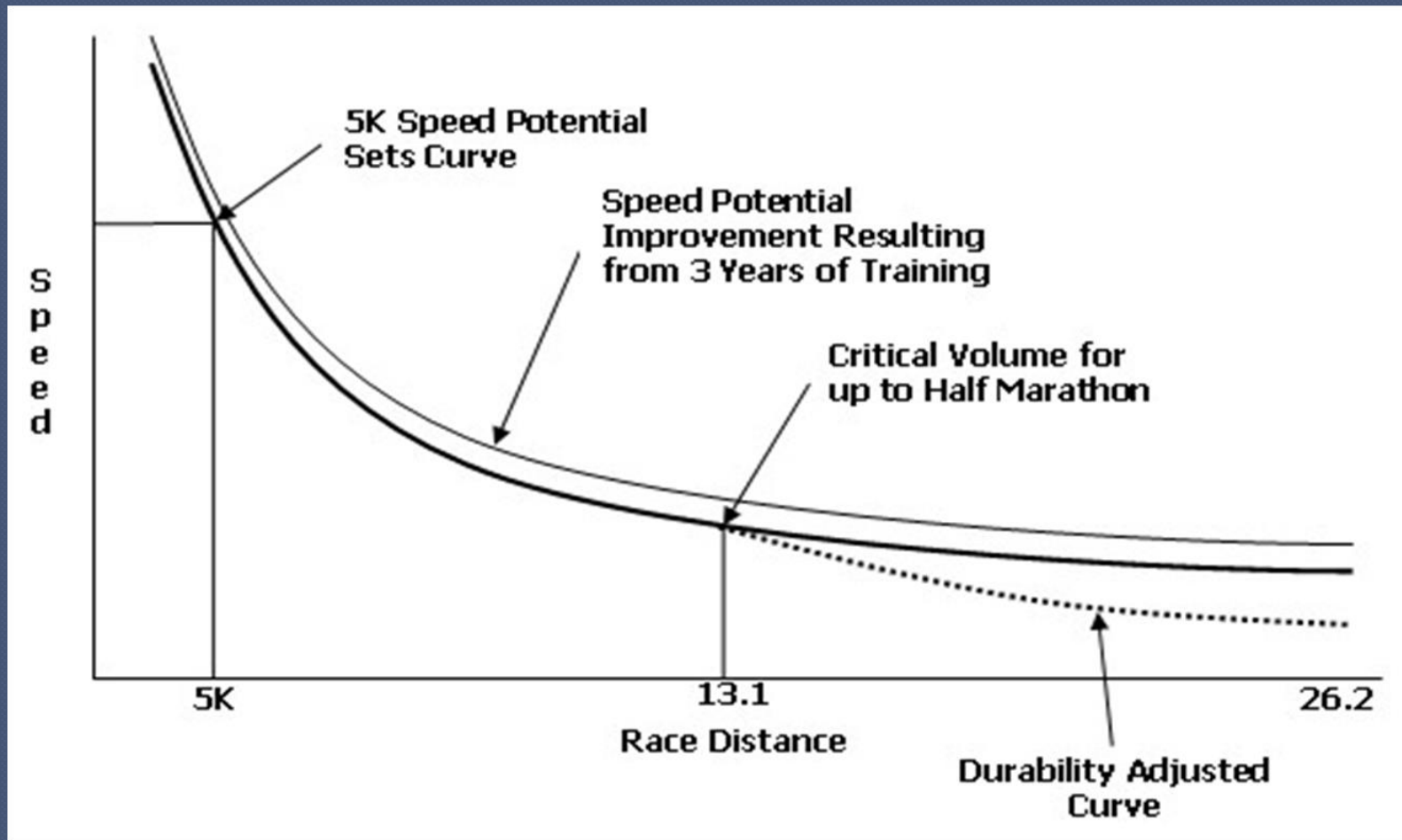
Strengths and Limiters
By sport

Athletes tend to have either a speed potential or durability limiter in each sport.

- By identifying these limiters, workout types can be identified that will work on improving these limits.

- What tools can we use to identify limiters?

Strengths and Limiters
Speed vs Durability

Ways to assess if speed or durability is a limiter:

- Past race results (stronger/weaker performance as race distance increases)
- Performance in workouts versus teammates/training partners
- Perception – really excited about certain workouts and dread others
- Quantitative testing and comparison against established data

Appropriate Training
Four key zones to structure your workouts

Intervals: Short in duration (1-6 minute repeats), long rest intervals (equal rest to effort). Feels like: *hating life, full body meltdown.*

Tempo/FTP: Longer in duration (5-20 minute repeats), shorter rest intervals (1-4 minutes, about 20% rest per effort). Feels like: *breathing heavy but not max effort.*

Marathon/HIM: Long duration with no rest intervals, or very short rest intervals (5-10% rest per effort). Feels like: *uncomfortable but sustainable.*

Easy: Should comprise the largest percentage of your training. Slow enough to allow for easy conversation. Feels like: *all-day pace.*

Appropriate Training
Four key zones to structure your workouts

All four key zones are useful for both speed and durability limiters. However:

- Those with speed limiters can include a higher proportion of interval and tempo/FTP training to increase speed.

- Those with durability limiters should focus on 'easy' training first until they are able to reach the critical volume required for their races before adding intensity.

Appropriate Training
Critical Volume - By race distance

SPRINT	OLYMPIC	HALF IM	IRONMAN
SWIM	SWIM	SWIM	SWIM
2K/Week (1 Hour)	4.5K/Week (1.5-2 Hours)	5.7K/Week (2-2.5 Hours)	11.4K/Week (4-5 Hours)
BIKE	BIKE	BIKE	BIKE
55K-80K/Week (2-3 Hours)	105-160K/Week (3.5-6.5 Hours)	240-360K/Week (8-14.5 Hours)	480-720K/Week (16-29 Hours)
RUN	RUN	RUN	RUN
12K/Week (1-1.5 Hours)	24K/Week (2-3 Hours)	50K/Week (4-6 Hours)	100K/Week (8-12 Hours)
Total: 4-5.5 Hours	Total: 7-11.5 Hours	Total: 14-23 Hours	Total: 28-46(!!) Hours

Appropriate Training
Injury risk increases as intensity increases

Intervals

Tempo/FTP

Marathon/HIM

Easy

RISK OF INJURY

Appropriate Training
One zone to avoid in your training

'Grey zone': A speed that doesn't fit one of the four defined speeds previously discussed.

Too slow to get the desired training effect from focused speed work, yet too fast to allow for the body to prepare itself for the next quality session.

Time Available for Training
Be honest with yourself!

Matching your time available for training to the distance you're interested in racing helps set realistic expectations.

If your schedule only allows for four hours of training a week, racing an Ironman becomes a challenging (and risky) proposition.

Set a Plan!
Plan for success

Working to a plan helps mental preparation for workouts and provides structure and accountability.

Ways to set a plan:

- Join a club that has a set workout schedule.
- Read, research and put your own plan together.
- Outsource (hire a coach)

General considerations for setting a plan:

1. Start with the current weekly volume you've maintained over the last month.

2. Gradually increase volume (<10% increase weekly) across all three sports between now and the period 1-3 weeks prior to your goal race.

3. Your last two weeks before your taper should target the 'critical volume' for your race.

4. Add intensity at only one workout per week, then gradually increase over the weeks as your body adapts.

Training Tips
Multisport Observations

1. Have fun!!
2. Don't do anything today that will compromise tomorrow.
3. Consistency trumps epic-ness.
4. Log your workouts.

Quantitative Testing
How to figure out your training zones?

Swim: Pace is your best indicator of effort (use the pool clock), followed by RPE, followed by heart rate.

Bike: Power is your best indicator of effort, followed by RPE, then heart rate. Pace is not as indicative in cycling because of the impact of wind resistance, terrain, and drafting.

Run: Pace is your best indicator of effort (using a GPS watch), followed by RPE, followed by heart rate.

Quantitative Testing
Power versus Heart Rate
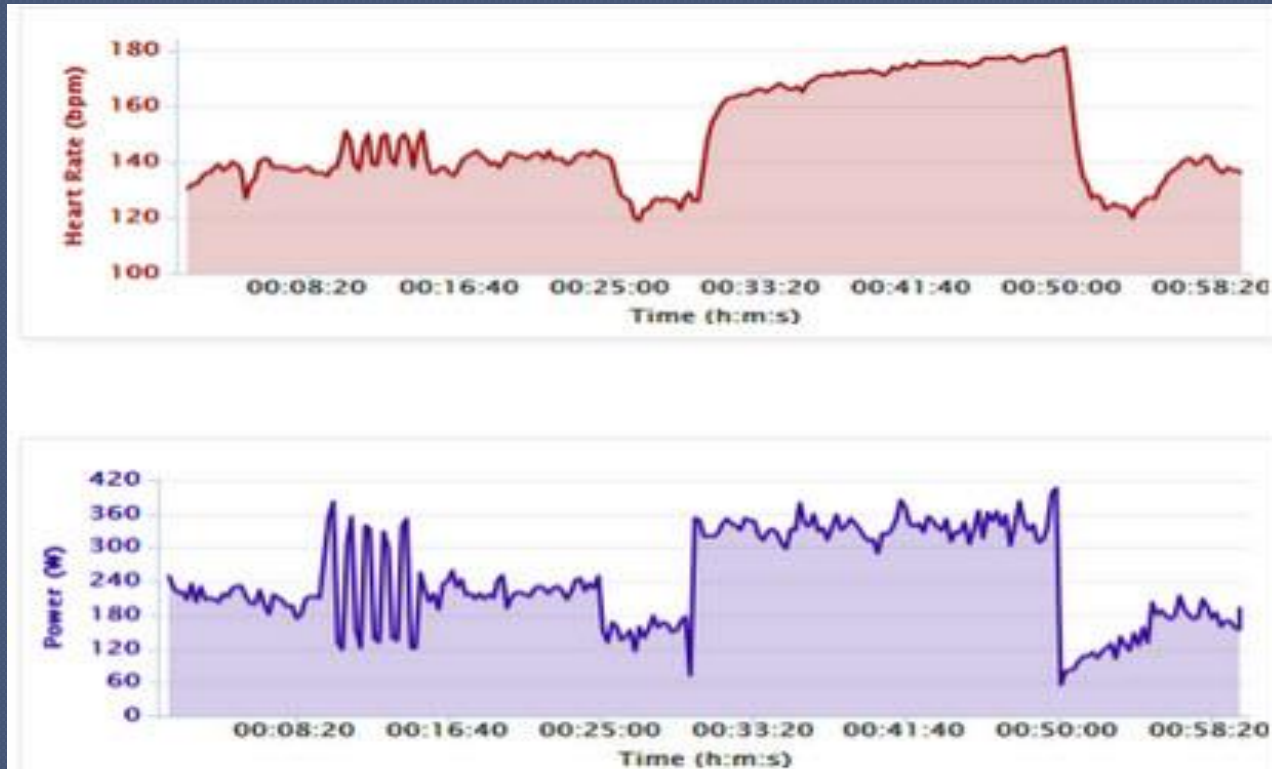
For a (relatively) even power output, HR rises over a given timeframe.

Quantitative Testing
'Triathlon calculator' inputs

The following are strong indicators of speed potential across all triathlon distances:

- Swim: 400m time-trial

- Bike: 20 minute time-trial (ideally on a trainer or outdoors with no coasting or stopping: using power, HR if no powermeter)

- Run: 5K

These distances are long enough to be reasonably accurate predictors of speed but short enough to not require a huge aerobic base.

Quantitative Testing
Calculators!

Output from time-trials can be plugged into various 'race calculators' available online.

Where your race performance for a given distance is slower than your predicted performance, this is an indicator of a durability limiter.

- QT2 systems triathlon calculator

- McMillan running calculator

- Daniels VDOT calculator

- SwimSmooth critical swim speed calculator

Questions?

Feel free to contact me with any questions on this presentation or training-related queries:

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Appendix: Advice for starting from scratch
If I could do it all over again…

- Join a tri club or swim team.
  - Meet training mates and mentors, take advantage of coaching.
- Buy a road bike either used or a prior year model.
  - Ride with a club, learn how to handle a bike, build fitness before going aero.
- Run frequently, and only fast once you've 'earned' it.
  - The riskiest of all sports in terms of injury.
- Start with sprints and bridge up one 'distance' per year.
- Buy as little as you can at full price or brand new!
- Lofty goals require lofty preparation.
  - Consult a specialist.

Appendix:
What do you need to train and race?

TOTAL COST TO RACE IRONMAN CANADA:

$7,300 – $26,500
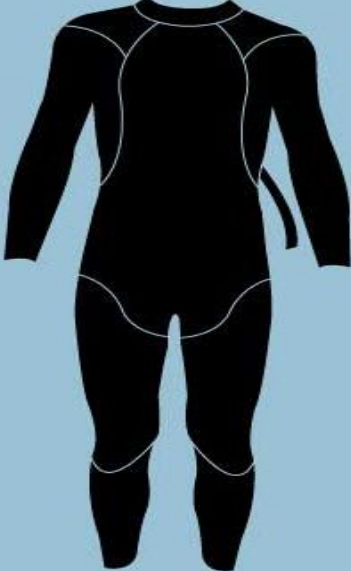
As estimated by imcguide.com, taking into account equipment and training costs, race fees, travel and accommodation.

Don't be intimidated by this cost! Greatly overstated if you take care in your planning and purchases.

Appendix:
What do you need to train and race?

THE SWIM

Tri-suit: $80 – $300

Wetsuit: $200 – $800

Swimcap: Provided

Goggles: $20 – $100

Body glide: $5 – $20

Anti-fog: $5

Timing chip/strap: Provided, but $75 U.S.- if lost

Digital GPS/timing device (Garmin etc.): $50 – $300

Sunscreen: $ varies

Start with the essentials – swimsuit and goggles.

Appendix:
What do you need to train and race?

Start with the essentials – bike, helmet, shoes, repair kit.

Appendix:
What do you need to train and race?

THE RUN

Racing shoes:	Water bottle/ hydration belt:	Spare socks (if necessary):	Running visor/hat:	Nutrition (gels, bars, chews):	Band-aids:	Baby powder:
$80 - $250	$30 – $50	$5 - $15	$20 – $60	$ varies	$3 – $10	$3 – $5

Start with the essentials – shoes.

Resource List
Helpful books, websites and podcasts

Books
- *Going Long* by Gordo Byrn and Joe Friel.
- *Daniels' Running Formula* by Jack Daniels.
- *Training and Racing with a Power Meter* by H.Allen & A.Coggan

Websites
- Slowtwitch: http://www.slowtwitch.com/
- SweatScience: http://sweatscience.com/
- PhysFarm: http://physfarm.com/
- Swim Smooth: http://www.swimsmooth.com/

Podcasts
- The Real Coaching Podcast with Joel Filliol and Paulo Sousa
- Babbittville Radio with Bob Babbitt
- TRS Radio with Ben Hobbs

Many professional triathletes and coaches are very open through social networking, lots of good information can be received through blogs and twitter.