How (not) to train for an ironman triathlon

(and why my first paper was published in the third year of my PhD)
• What is an ironman triathlon?
• The different ways in which you can die
• My weird reason to do one anyway
• Training, nutrition, injuries, …
• The D-day (Aug 25, 2013)
• An accident, a fightback, and other stuff
Ironman triathlon

- **3.8km** open-water swim, **180km** road bike ride, **42km** road run ("Ironman-140.6")

- Starts 7am, ends midnight

- 4 distances: **Sprint** (0.75, 20k, 5k), **Olympic** (1.5k, 40k, 10k), **Half-Iron** (1.9k, 90k, 21k), **Full-iron** (3.8k, 180k, 42k)
Ironman triathlon

- [Videos: 3 crazy finishes]
Triathlon deaths

- Annals of Internal Medicine research study. 9 million participants from 1985-2016: 135 deaths OR cardiac arrests (13 survivors due to emergency medics).

- Most drown in open-water swim (cramping, stampede, hyperventilation, heart attack, etc) (90 swim, 7 bike, 15 run, 9 just after = 120 deaths)

- Dehydration, heatstroke, etc …

- Study concludes that for vast majority of people, engaging in regular exercise will yield more benefit than harm.
My (weird) reason to run a marathon

• Didn’t want to do a triathlon initially, no idea what an ironman was. In 2011, I had never run more than a couple of miles, or ever ridden a road bike, never ridden a bike more than 5km, and I used to “swim” (aka did not sink) with my head above the water.

• Went down to see the Pittsburgh marathon as the route went past my house. Watched videos later.

• Wanted to understand deeply why some people cry when they finish a half marathon or full marathon.
Timeline

- **May 2011**: Thought long-distance stuff was “boring”, watched Pitt marathon, got inspired, signed up for Atlanta half marathon in Nov 2011.

- **Summer/Fall 2011**: Swollen ankles and knees, shin splints. ICE. Did not use ibuprofen. Cannot run more than twice per week. Begin to ride a bike more than 5 miles, learning how to swim (CMU pool), yoga to stretch it all out.

- **Nov 2011**: Completed Atlanta half, painful but did not cry, signed up for Pittsburgh full in May 2012. Genuinely learnt to swim. **Jan 2012** Lasik eye surgery.

- **May 2012**: Completed Pitt full, painful but did not cry, headed to MSR Cambridge (UK) for a summer internship. Registered for Wales “triathlon weekend” in Jun 2012.

- **Jun 2012**: Rented and used my first ever road bike. Finished Wales, easy so did not cry, registered for Marlow olympic tri in Jul 2012.

- **Jul 2012**: Rented road bike, second time ever. Finished Marlow, easy so did not cry, registered for Grafham half-iron in Aug 2012.

Training

• Commitment devices

• Mix it all up (swim, bike, run, intervals, yoga, weightlifting)

• Company: less fun training alone

• Nutrition, sleep, rest, ice (recovery and maintenance)

• Smaller goals along the way (timings or distances)

• Injury management
<table>
<thead>
<tr>
<th>WEEK</th>
<th>Mon</th>
<th>Tues</th>
<th>Wed</th>
<th>Thurs</th>
<th>Fri</th>
<th>Sat</th>
<th>Sun</th>
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<tbody>
<tr>
<td>1</td>
<td>Swim 1000yds (400yds Drills)</td>
<td>Bike 10 miles</td>
<td>Swim 1000yds (400 yds Drills)</td>
<td>Run 2 miles (75% Effort)</td>
<td>Recovery Day</td>
<td>Swim 1000yds Bike 10 miles</td>
<td>Run 4mi Easy</td>
</tr>
<tr>
<td>2</td>
<td>Swim 1200yds (400yds Drills)</td>
<td>Bike 12 miles</td>
<td>Swim 1200yds (400 yds Drills)</td>
<td>Run 3 miles (75% Effort)</td>
<td>Recovery Day</td>
<td>Swim 1000yds Bike 12 miles</td>
<td>Run 4mi Easy</td>
</tr>
<tr>
<td>3</td>
<td>Swim 1500yds (400yds Drills)</td>
<td>Bike 15 miles Run 10 min</td>
<td>Swim 1500yds (400 yds Drills)</td>
<td>Run 4 miles (75% Effort)</td>
<td>Recovery Day</td>
<td>Swim 1000yds Bike 15 miles</td>
<td>Run 6mi Easy</td>
</tr>
<tr>
<td>4</td>
<td>Swim 1800yds (400yds Drills)</td>
<td>Bike 18 miles Run 15 min</td>
<td>Swim 1800yds (400 yds Drills)</td>
<td>Run 4 miles (75% Effort)</td>
<td>Recovery Day</td>
<td>Swim 1000yds Bike 18 miles</td>
<td>Run 6mi Easy</td>
</tr>
<tr>
<td>5</td>
<td>Swim 2000yds (400yds Drills)</td>
<td>Bike 18 miles Run 20 min</td>
<td>Swim 2000yds (400 yds Drills)</td>
<td>Run 4 miles (75% Effort)</td>
<td>Recovery Day</td>
<td>Swim 1000yds Bike 20 miles</td>
<td>Run 7mi Easy</td>
</tr>
<tr>
<td>6</td>
<td>Swim 1000yds (400yds Drills)</td>
<td>Bike 12 miles</td>
<td>Swim 1000yds (400 yds Drills)</td>
<td>Easy Warm Up, Run 10x60 sec at Race Pace, Cool Down.</td>
<td>Recovery Day</td>
<td>Swim 1000yds Bike 10 miles</td>
<td>RACE DAY</td>
</tr>
</tbody>
</table>
Training for runs

• (Early on) Pick a route that’s longer than your current endurance.

• Two runs per week: one intervals, one long endurance. If a third run, then add one “tempo run”.

• Sign up for running groups, make running friends, sign up for 10k, halfs, fulls, etc.

• Run outdoors in winter also when sun is out and not “icy”. Very refreshing and oddly adrenaline-rushing.

• Experience “bonking” or “hitting the wall”.

• Running after a lot of biking is very different. **Knees buckle.**
Training for biking

• First, buy a road bike that fits you. I bid on a 56cm (frame size) Trek road bike on e-Bay on Nov 4, 2012, did not win it. I bid on a 54cm Trek road bike on e-Bay on **Nov 12, 2012** and won it (first ever road bike). It was delivered maybe a week later. I rode it maybe once in 2012.

• On **Jul 13, 2013**, I bought a second-hand 56cm road bike on Craigslist for 700$ (later sold the 54cm to Leila). A few days later, I did a 2-day 150mi bike ride. In **mid-August**, I did my first ever 100mi bike ride.

• During my ironman, I did my second ever 100mi bike ride (112 mi), and then had to run a marathon.
Training for swims

- Did most learning+training in CMU pool. Some training in “Jesus Greens” pool in Cambridge, UK (outdoor long pool). A CMU swimming class helped.

- All triathlon swims are open-water, but I had no practice (until the triathlons: I did seas, rivers and lakes).

- Also bought my wetsuit on the day of my first triathlon.

- SO many things to be conscious of: alternating breathing sides, blinded by sun, kicked by other swimmers, not using legs much, etc. Hard to practice most of these.
Race Day Nutrition

Iron Man

Breakfast
3-4h Before Start

Swim
(Before Start)

Run
40-60g Carbs/h

Snack
1-2h Before Start

Bike
60-90g Carbs/h

Gazelle Nutrition Labs
Nutrition

• World’s best breakfast: rolled oats, milk, banana, raisins, sliced almonds, chia seeds, flax seeds, crumbled walnuts, cocoa powder (Leila’s contribution), coconut flakes.

• Supplements: no pills including Ibuprofen (would change this if I could go back in time), electrolytes during bike rides, energy bars and gels, protein powder.

• Mostly vegetarian diet cooking at home, some meat eating out.

• Carb-loading before races (would change this if I could go back in time).
HOW TO PREVENT
COMMON RUNNING INJURIES

- BACK LEG + SIDE LEG
- ANKLE
- FOOT
- KNEE
- SHIN
1. Neck Pain
2. Hand pain
3. Forearm pain - ‘Arm Pump’
4. Low Back Pain
5. Hip Pain
6. Knee Pain
7. Ankle Pain
8. Foot Numbness
9. Saddle sore
10. AC Joint sprain
Common Injuries Associated with Swimmers & their Prevention

Knee Injuries

Elbows Injuries

Shoulder Syndrome

Thoracic Outlet
Injuries

• Impossible to avoid fully. More about listening to body and picking it up early.

• Differentiate mental block [push] or sore/tight muscles [stretch/rest], and strains/pulls/cramps [stop] or stress injuries [doc].

• ~May 18, 2013 — first ride after long winter season, time to really ramp up training after sem end (Ironman Aug 25). Had a silly fall, dislocated left elbow in rural Ohio (Leila rescue).

• Had a solid cast 24hrs/day, no swim/bike/run for 5 weeks!!!

• Jun 22, 2013 first day removing cast, very sore hands, attempted 100mi “Diabetes” ride (first ever 100 miler), was a really super-hot day. Cramped very badly @ mile 56 on an uphill (Leila rescue).
Woke up at 4:30 am. Wanted to get to swim line early (one at a time water entry). Reach swim line at 6 am. Line was insanely long (3000 entrants, I must have been in last quarter).

Entered water at 7:20 am (bad, bad, bad). Finished ~9 am. First part of bike ride was beautiful (rolling Kentucky hills, horses). Second part was brutal. 30+ Celsius the whole day, clear skies, felt like a Thanksgiving turkey being oven roasted.

Ended bike ride ~5:50 pm, completely dehydrated. Wasn't able to eat much, so also hypoglycemic. Beginnings of a cramp. Stomach full of water and gatorade.

Start run ~6 pm. Puked in first mile. Saw other runners cramping. Entered the “zone”. Reach next mile marker, repeat. Had chicken broth, coca cola, grapes or oranges. Did not bend down.
Louisville, Kentucky 16:36:45

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Less than a year later

- Bad accident (car hit me while I was on my bike).
Fightback

- I signed up for the **AIDS LifeCycle**: 900km in 7 days from San Francisco to Los Angeles.

- A whole different Quatre a Cinq (or cinq a six).

- Last summer, completed a **week-long ride through Zambia**, also to raise money for AIDS, women empowerment and other local causes.
Other life-threatening hobbies

• Scuba-diving in a dry-suit Iceland in winter in the tectonic plate gap between North America and Europe in 0 Celsius water.

• Night scuba-diving in the Great Barrier Reef (100s of km from land), when my torchlight went out underwater.

• The Gauley Fest (West Virginia): white-water rafting down many class 5 rapids, the same day a kayaker died there.

• Solo skydiving after 6hrs of training (out of which 5hrs is telling you how you could die and how to avoid it).