Scuba Diving Without Air & Other Impossible Feats

QS Annual Conference
Show & Tell
Sept. 2018
Jessica Ching
Which is “Impossible?”

Scuba: No air

Fly: No wings

Run: No food

Type 1 diabetes = All 3 Impossible
24/7 Breakthrough Tool
Balancing on the Tightrope

I count every carb, plus fat & protein. 100-180g carbs/day.

Plus: Stress, Sleep, Sickness, Daylight savings

Food

Insulin
0.5 units/hr. & 2-5 units/meal

Exercise
Exercise ~1hr 4-6x/week.
A Really Lousy Proposition

~60 carbs (240 cal.) per run

1 hour @ 70%+ max heartrate

!!! $^@*$ (&*!)

FOOD

EXERCISE
The Holy Grail

Nearly 100% exercise benefit possible?
Research says no.
My “Green Zone” Trials

My blood sugar level is the tightrope.

<table>
<thead>
<tr>
<th>Glucose Level</th>
<th>1hr</th>
<th>2hrs</th>
<th>4hrs</th>
<th>5hrs</th>
<th>6hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>70</td>
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<td>140</td>
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<tr>
<td>200</td>
<td>Amount?</td>
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<tr>
<td>300</td>
<td></td>
<td>Amount?</td>
<td>Timing?</td>
<td></td>
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</tr>
<tr>
<td>330</td>
<td></td>
<td></td>
<td></td>
<td>Effort @ 70%+ max heartrate</td>
<td></td>
</tr>
</tbody>
</table>
A Day of My Exercise

BEFORE exercise

Glucose Level

DURING exercise

AFTER exercise

Time

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</tr>
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<td>6hrs</td>
<td>8</td>
</tr>
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</table>
My Exercise Trials

- **.5 Hr lead + 40% (80%)**
  - Result: Red Zone crash. Abandon. Eat 50 carbs.

- **1.75 Hr lead + 50% (50%)**
  - Result: No red zone, but too high after

- **5 Hr lead + 60% (60%)**
  - Result: Close to Green Zone, but 60% food needed
Isolation of Variables

45 min lead
- 0% glucose
- (80%) exercise
- Result: Red Zone crash.

1.5 Hr lead
- 0% glucose
- (80%) exercise
- Result: Drop (no crash) is later.

2 Hr lead
- 0% glucose
- (80%) exercise
- Result: No drop at all, but still high after. Close!!

Glucose
2184 “Trials” of n=1

**2.25 Hr lead**

Glucose

Result: Seems perfect. Can be better?

**3 Hr lead**

Glucose

Result: Double check. No, 3 hrs is not good.
I Run
Half Marathons: Almost No Food!

12 Races
8736 Miles
873,600 Calories saved
249 Pounds **not** gained
Takeaways

KEY FACTORS are everywhere

DATA speak multiple languages

VARIABLES can vary!

CHALLENGE “what is known”
Thank you!

Questions