The Arithmetic of Life -
The Beauty and the Angst of Living by Numbers

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Intel
Part I
Living by Numbers
Ice Cream

Please inject: $27 / 4 = 7$ units
The Prick

The bloody insight
Bedtime

Correction: \((230 - 130) / 50 = 2 \text{ units}\)
The Plunge

Correction: \((130 - 80) = 50 \text{ mg/dL} \iff 25 \text{ grams}\)
The Swim

40 minutes, 1200m
Brings down 230 to 100 mg/dL
Life by the Book

That’s how we know
The “Real” Average

The HbA1c competition

<table>
<thead>
<tr>
<th>HbA1c (%)</th>
<th>eAG (estimated average glucose) (mmol/L)</th>
<th>(mg/dL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>5.4 (4.2–6.7)</td>
<td>97 (76–120)</td>
</tr>
<tr>
<td>6</td>
<td>7.0 (5.5–8.5)</td>
<td>126 (100–152)</td>
</tr>
<tr>
<td>7</td>
<td>8.6 (5.8–10.3)</td>
<td>154 (123–185)</td>
</tr>
<tr>
<td>8</td>
<td>10.2 (8.1–12.1)</td>
<td>183 (147–217)</td>
</tr>
<tr>
<td>9</td>
<td>11.8 (9.4–13.9)</td>
<td>212 (170–249)</td>
</tr>
<tr>
<td>10</td>
<td>13.4 (10.7–15.7)</td>
<td>240 (193–282)</td>
</tr>
<tr>
<td>11</td>
<td>14.9 (12.0–17.5)</td>
<td>269 (217–314)</td>
</tr>
<tr>
<td>12</td>
<td>16.5 (13.3–19.3)</td>
<td>298 (240–347)</td>
</tr>
</tbody>
</table>
It’s (Also) About Time

What’s in there already?

- Aspart, lispro, glulisine
- Regular
- NPH
- Detemir
- Giargine

Plasma Insulin Levels vs. Hours
Too Low, Too High

Between the devil and the deep blue sea
A Never Ending Game

Can’t get off this ride
Part II

What Have We Learned So Far?
It Really Works

4 units will balance 16 grams
2 units will correct 80-100 mg/dL
Little Things Count

Don’t cheat yourself
A World of Mystery

For the doctors
Blind Spots

They don’t look, we don’t tell
The Quantified Guilt

It certainly can affect you mood
Small Wins

Every morning is a fresh start
The Joy of Taking Control

Numbers can do that
A Deadly Weapon?

230
Correct with 2 units ➔ 130
Correct with 3 units ➔ 80 ➔ Hypoglycemia!
Part III
The 2015-2017 Wish List
Play for Your Life

Computer Games as a game changer
Play for Your Life: Makombaba

Computer Games as a game changer
A Pen that Writes

Will unlock a wealth of data
A Glucometer in A Watch

Always on, always connected
A TV Meal that Counts

Total carbs provided per entire meal
Artificial Metabolism

Measures glucose and trend
Applies medication
Feeds glucose
A Cure?
Thanks!

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