Landmines & Zombies

Taking on Chronic Fatigue
Bachelor of Engineering & Bachelor of Science (IT)

Honours thesis on landmine removal
2001 (final year)
Afghanistan
Medical

Blood tests OK
Thyroid check OK
Iron Levels OK

Sleep Apnea NEGATIVE

"Nothing wrong with you"

Wiki Wisdom

Get more sleep
BedOme rouOne
Eat carbs
More exercise
Don't Nap

Try anything
Gluten free
Lactose free
Dairy free

Meditation
Muscle relaxation

6 yrs
Insert pictures of liz

Insert pictures of kids
Testing

Faecal Profiling

Hair tests

Blood tests

Saliva cortisol testing

Amino acid Supplements

Ornithorne

Tyrosine

Ubiquinol

Glutamine

Other/Vitamins

Vit E

Fish Oil

Vit C

Biotin

Bile Acid

Antifungal medications

Nilstat

Ampicillin

Diffucan

ECC

Amphotocerin

Enzymes

Lumbrokinase

Probiotics

Creon

Mineral Supplements

Iron

Cal-Mag

Molybdenum

Zinc

Diets

Low starch

No starch

Low carb

Dairy free

No red meat

Sugar free
<table>
<thead>
<tr>
<th>Date</th>
<th>Wellness</th>
<th>Notes</th>
<th>Diet</th>
<th>Medications</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/09/10</td>
<td>0.35</td>
<td>start this column here: total diet: asparagus, celery,</td>
<td>starting taking: 6 parex, 4 nilstat, 4 amphotercin 10mg lozenge,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>red capsicum, spinach, almonds, meat, herbal teas,</td>
<td>probioplex, hydrozole</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>eggs for brekky. Exceptions noted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9/09/10</td>
<td>0.1</td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>10/09/10</td>
<td>0.1</td>
<td>had a glass of wine</td>
<td></td>
<td></td>
</tr>
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<td>11/09/10</td>
<td>0.65</td>
<td>had coffee and a shot of whisky at night</td>
<td></td>
<td></td>
</tr>
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<td>12/09/10</td>
<td>0.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13/09/10</td>
<td>0.4</td>
<td>glass of wine at night</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14/09/10</td>
<td>0.1</td>
<td>glass of wine at night (my bday!) also didn't have</td>
<td>removed all meat other than fish from above diet</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>lunch. No meat today, only fish (salmon) for dinner.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15/09/10</td>
<td>0.4</td>
<td>1/2 glass of wine, switched from beef/chicken to fish</td>
<td>same plus difflucan today</td>
<td></td>
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<td></td>
<td></td>
<td>as only meat. Also had first Difflucan tonight.</td>
<td></td>
<td></td>
</tr>
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<td>16/09/10</td>
<td>1</td>
<td>felt 99% normal ! 1/2 glass wine at night</td>
<td>back to same minus difflucan</td>
<td></td>
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# Minefield Clearance Time Model

\[
\ln CLEARTIME = \beta_0 + \beta_1 \ln FRAGS + \beta_2 \sqrt{AREA} \\
+ \beta_3 \cdot ivUXO + \beta_5 \ln(.AP + 1) + u_i
\]

## Effect of statistically significant variables (Transformed model)

<table>
<thead>
<tr>
<th>Effect Type</th>
<th>Constant (lnTeamHours)</th>
<th>Fragment Slope (lnTeamHours/lnFrags)</th>
<th>Area slope (lnTeamHours/sqrtArea)</th>
<th>AP (lnTeamHours/lnAP)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Base figure</strong></td>
<td>-1.71</td>
<td>0.531</td>
<td>0.00345</td>
<td>0.014</td>
</tr>
<tr>
<td><strong>Additional effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land use</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grazing, Irrigation, Road Agricultural Residential</td>
<td>0.023</td>
<td></td>
<td>0.00076</td>
<td></td>
</tr>
<tr>
<td>Significant UXO</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
<td>0.15</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hard surface</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
<td>0.014</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bushes, Grass, None Prickly bushes Trees</td>
<td>0.015</td>
<td></td>
<td>0.00112</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td>0.014</td>
</tr>
</tbody>
</table>
408 days of data

39 Variables
- 1 output variable (wellness)
- 1 weekend/holiday indicator
- 5 dietary indicators
- 32 supplements/medications
A Personal Wellness Model

\[
\text{WELLNESS} = \beta_0 + \beta_1 f_1(x_1) + \beta_2 f_2(x_2) + \beta_3 f_3(x_3) + \ldots + \beta_n f_n(x_n)
\]

Multiple Regression

Stepwise procedure to optimise variable form
Factor 1
Weekends/Holidays

Coefficient: 7.0%
P-value: 0.0000006
Optimal form: 100% on Day 0
Factor 2
Tyrosine

Coefficient: 6.9% per 1000mg
P-value: 0.0000010
Optimal form: 100% on Day 0
Factor 3
Red meat

Coefficient: -5.9%
P-value: 0.07
Optimal form: 33% from Days 0, -1 and -2
### Results Summary

<table>
<thead>
<tr>
<th>Factor</th>
<th>Effect</th>
<th>Magnitude</th>
<th>Effect timescale</th>
<th>Level of Certainty</th>
</tr>
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<tbody>
<tr>
<td>Holidays</td>
<td>Good</td>
<td>+7%</td>
<td>Same day</td>
<td>High (p=0.00)</td>
</tr>
<tr>
<td>Tyrosine</td>
<td>Good</td>
<td>+7%</td>
<td>Same day</td>
<td>High (p=0.00)</td>
</tr>
<tr>
<td>Red meat</td>
<td>Bad</td>
<td>-6%</td>
<td>Cumulative over ~3 days</td>
<td>Moderate (p=0.07)</td>
</tr>
</tbody>
</table>
I got a bit excited…

Wellness

Inputs (~80)

- Weekend/holiday
- Mouthwash, Listerine
- Stress
- Alcohol (g)
- Aspirin (mg)
- Caffeine (mg)
- Carotene, alpha (mcg)
- Copper (mg)
- Fat, Saturated (g)
- Fluoride (mcg)
- Galactose (g)
- Lactose (g)
- Maltose (g)
- Pantothenic acid (mg)
- Sodium (mg)
- Taurine (mg)
- Tocopherol, beta (mg)
- Vitamin C (mg)
- Vitamin E (alpha-tocopherol) (mg)
- Water (mL)
- Energy Level

- Activity Level
- Rhinocort, Nasal Spray
- Acetaminophen (mg)
- Ascorbyl Palmitate (mg)
- Betaine (mg)
- Calcium (mg)
- Cetirizine Hydrochloride (mg)
- Cryptoxanthin, beta (mcg)
- Fat, Trans (g)
- Folate, DFE (mcg)
- Hydroxyproline (g)
- Lutein + zeaxanthin (mcg)
- Manganese (mg)
- Potassium (mg)
- Starch (g)
- Theobromine (mg)
- Vitamin A, RAE (mcg)
- Vitamin D, IU (IU)
- Vitamin K1 (phyloquinone) (mcg)
- Xylitol (g)

- Hydrozole, Cream
- Sleep Hours (hrs)
- Alanine (g)
- Ash (g)
- Beta-sitosterol (mg)
- Carbohydrate (g)
- Cholesterol (mg)
- Energy (kJ)
- Fiber, total dietary (g)
- Fructose (g)
- Iron (mg)
- Lycopene (mcg)
- Niacin (mg)
- Riboflavin (mg)
- Sugar (g)
- Thiamin (mg)
- Vitamin B12 (mcg)
- Vitamin D2 (mcg)
- Vitamin K2 (menaquinones) (mcg)
- Zinc (mg)
What I learned

I thought I learned

The medical profession is my only hope

There are things I can do to help myself

Chronic fatigue is too complicated to analyse. That's what statistics are for!

The data is too rough. Rough and regular is enough.

It is 'only' subjective measurement.

I do know my own body.
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