The Hypochondriac's Diary: Using Self Tracking to Hack Musculoskeletal Pain

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Outline

The Hypochondriac’s Diary

1. What is it?
2. How I have used it
3. Suggestions & Future Directions
What is the Hypochondriac’s Diary?

A place to record injuries, illness pain and related **physical sensations** and the **context** in which they were felt all organized by **body region**.
Desire for more accurate patient history
Testing it on myself
• April 27\textsuperscript{th} 2012 v1.0 started as an evernote file

• June 15\textsuperscript{th} 2012 v1.1 transferred to a Numbers on ipad

• January 16\textsuperscript{th} 2015 v2.0 Google sheets. One column per region for easier tracking over time
1. See early warning signs of more serious problems
2. Unravel the causes of orthopedic issues with long latency between cause and effect.
Use of the Diary: Left Shoulder pain

19.8% of entries involve the shoulders
History of Left Shoulder Pain

2012 April 25: Felt during **handstands**. Better in 2 days.

2014 Oct 11: Felt the day after **overhead press**. Felt during **dips**. Better in 11 days.


2014 Feb 26th: Felt after **bench press**. Better in 8 days.

2015 Apr 24: Felt during **ring pushups**. Better in 7 days.

2015 Apr 28: Tender points in deltoid found. Changed pushup technique and used LAX ball before pushing. No sx since.

- Flickr image “do you even lift” by Colin Jenkins (CC BY 2.0)
- Flickr image “bench press” by Craig Nagy (CC BY 2.0)
What I learned about my shoulder

• No clear signs of a clinically recognized syndrome.
• Symptoms were delayed but were preceded by a similar motion: pressing.
• Consistent tracking will reveal the long term effectiveness of my interventions.
What I have learned from using the diary

A lot of problems have come and gone

I have seen how my memory is confabulated
Future Directions, mobile app?

- Body Chart
- Quantifiable feature (ie pain scale)
- Recommendations to seek care
- Correlation with sleep, activity, mood etc
- Ability to capture non-regional symptoms

Google image “pain chart” clock face http://www.wps.ac.nz/healthcareprofessionalsinformation/screeningtools
Thank You!
Use of the Diary: Left Shoulder pain

- Entries: timeline

- Is this the same problem?
- What are the aggravating factors?
- Corroborating with other logs: workout log. Clear that aggravating factors are relatively consistent: pushing and pressing.
- Recent solution. (not discovered because of the log, but will allow me to test the effectiveness of the solution.)
Goals & Outline

• Define the problem and goal

• Choose the data sources (devices & apps)

• Interpret the data & apply the findings
When Data Can Help

**Treating Injury**

**Finding Causes**
- Data is particularly helpful in finding the cause when the effect is **small**, has a **gradual** onset or is **delayed**.

**Testing Solutions**
- Data is particularly helpful in testing solutions that require behavior change.

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* Davis 2014- Bone Stress Injury Clinical Commentary JOSPT
* Flickr image “laurel footstrike” by tdkrun (CC BY 2.0)
Case Examples

- Ex 1: they are just curious about what is going on in their body, and would like to track what is going on.
- Ex 2: They have a specific problem and aren’t sure what is causing it.
Introducting the hypochondriac’s diary

- Live demo
- Structure allows relatively quick data capture and qualitative analysis.
- Categorized by body regions with adjacent right/left to allow comparison.
- Can create a specific injury diary for a more persistent problem.
- When to see a medical professional: pain more than a week, more than 8/10, worsening. Your efforts could be redundant.

- Define the problem
- Identify things to monitor
History of Left Shoulder Pain

2012 April 25: Insidious onset of L superior shldr pain 2 days after climbing for the first time in awhile. Felt during handstands. Better in 2 days.


2014 Feb 26th: L anterior shld pain the day after ab roller and bench press. Press motion hurt. Special test Negative. Better in 8 days.


2015 April 24: Sharp on top and dull ache inside. Noticed ring pushups were aggravating. Special test negative. Better in 7 days.

2015 April 28: Tender points in deltoid found. Changed pushup technique and used LAX ball before pushing. No sx since.