

IP1: Proposal

What question(s) do you want to answer at the end of the tracking (tracking goal)? And what is your personal source of inspiration? (Your question should lead to collect at least two items. For example, your question can be "What distractions are hindering my productivity most?" "How much exercise (or what exercise) do I need for better sleep?" or "how many hours of sleep do I need to not feel tired all-day?") (20 points)

I would like to track the factors that affect pain I have been having in my left thigh. Last spring, I got back into running to get some exercise and destress from my classes, but I believe I pulled my left adductor (a common running injury) in April. Eventually, the pain got so bad I decided I would have to take a break from running. Over the summer, I was working remotely at my childhood home, which has a pool. I wanted to be able to do cardio exercise while having something low-impact so my adductor could heal. Three times a week, I went swimming and did some exercises in the water to help my leg heal. I also found some stretches that I would do a few times a week at night.

While my efforts over the summer helped, when I returned to GT in August, my adductor was still not 100%. I have gone running a few times but at a much reduced pace of 8 sets of 60 secs running, 90 secs walking. Usually, I notice 1-2 times per day that my adductor hurts, but generally the pain is not very bad.

So, with all that context out of the way, my question is "What factors are most effective at reducing the pain in my thigh?"

What are the target behavior and contextual information that you would need to track to achieve your tracking goal? How would the behavior and contextual information help you to answer the questions? (20 points)

I believe the main factors affecting my adductor pain are:

- Whether I do the adductor-strengthening exercises I found three times per week
- Whether I do simple stretches before going out for the day
- The amount of physical activity I get during the day

To achieve my tracking goal, I will track the three items above as well as the degree and times where I feel pain in my left adductor/thigh during the day.

By tracking this information, I will be able to see the preceding context that would logically affect something like adductor pain. Since the adductor-strengthening exercise and stretches are supposed to help strengthen and loosen my adductors, I am hoping that I will see a decrease in adductor pain after doing those exercises.

How do you plan to track these data? Which tool(s) do you plan to use? What items do you plan to track? (15 points)

My goal is to make a daily log of times where I feel adductor pain and any possibly related factors from the previous day in a spreadsheet. I will also log each time I do adductor exercises or stretches.

You can see what the spreadsheet looks like at

<https://docs.google.com/spreadsheets/d/1uL3V5fYWIZJdKoUW7xyOn3aYong3sbzAv2Pmun2MAjM/edit?usp=drivesdk>.

Retrospectively, I will annotate pain notes with the time since I last did adductor stretches and the amount of physical activity I got the previous day.

For health data, I will use the Heart Points metric from Google Fit. I will record these values in their own sheet within my spreadsheet so that I can use the data in formulas.

For describing pain, I have learned through research¹ that this is not an exact science. I will describe pain as follows:

- What I was doing (e.g., sitting, walking, etc.) when I felt it
- The level of pain on a scale of 0-10, following the standard medical scale
- Whether the pain was tolerable, slightly tolerable, or not tolerable²
 - This is because we naturally have to tolerate some amounts of pain³

How often do you plan to track, for how long (at least two weeks)? Please justify your answer. (5 points)

I plan to track this data for 3 weeks. For the first 10 days, I will continue stretching as I normally do. For the second 10 days, I will do 5 minutes of additional leg stretches before the first time I leave my apartment for the day. This is to see, additionally, if the additional morning leg stretches are helpful.

¹ <https://creakyjoints.org/doctor-patient/pain-scale-not-best-way-communicate-pain/>

² <https://creakyjoints.org/doctor-patient/pain-scale-not-best-way-communicate-pain/>

³ <https://creakyjoints.org/doctor-patient/pain-scale-not-best-way-communicate-pain/>

I will make an entry in my pain log each time I feel pain in my left thigh. I will also add an entry each time I do adductor exercises or stretches. Each morning, I will update the log with the previous day's Google Fit Heart Points value.

What patterns do you expect to see from this self-tracking experience? Think about the best visual representations that can help you find patterns or insights from your data. (20 points)

I suspect that after stretching, my leg pain would be reduced. I think that I could represent this data as a calendar heatmap showing a circle for amount of exercise (e.g., Google Fit Heart Points for a given day) and coloring a circle for the amount of pain (summarizing the number of instances of leg pain and intensity of each instance). Another visualization I could make is a scatter plot of Heart Points vs. leg pain to attempt to find a negative correlation between exercise and leg pain.

What challenges did you face when designing a self-tracking experiment? (20 points)

The biggest challenge was deciding what to track. It was hard to find something that would be both meaningful but also simple enough to track. Initially, I considered doing something with diabetes, but ultimately, I decided that it would be too complicated to track and explain a meaningful self-tracking experiment with diabetes.

It was also hard to decide how to track pain. I initially thought just a pain scale from 0-10 would be enough, but after doing a little research online, I learned why a pain scale alone can be insufficient. However, this ultimately improved my tracking metrics for pain.

Finally, I also found it challenging to decide on which visualizations would work well. I think the Quantified Selfers paper we read gave me some inspiration to make a calendar heatmap and use a scatterplot to spot possible correlations.