Overall Problem

Poor posture causes many problems

- Poor self-esteem
- Depression$^{[1]}$
- Decreased energy
- Bad first impressions
- Decreased motivation
- Back/neck pain$^{[2]}$
- Digestive issues
- Poor breathing
- Increased risk of death$^{[3]}$

...but it’s very difficult to correct.
Principal Tasks

1. Becoming aware of “posture creep”

2. Adapting to changing activities
Becoming aware of daily “posture creep”
Task 2

Calibrating between different activities

Initial Paper Prototype
Testing Process and Results

Tested 3 participants in their natural work environments with the paper prototype and a fabric “wristband”

Tasks: Avoiding Posture Creep
     Adapting to Changing Activities

Difficulties
- Participants’ hyper-awareness of their posture while testing
- Simplicity of tasks
Changes Made

Feedback View of Current Posture
● Help users see what their current posture looks like
● Guides the user to correct posture

Calibration
● Starting screen informs user what correct posture should be
● While in use gives user a way to correct device if sensors get off
Information Visualization

- Added affordances to graphs to let users know what parts they can interact with
- Different visualizations for day/week/year to account for the variations in what information a user might need for each
Task 1

Becoming aware of daily “posture creep”
Task 2

Calibrating between different activities
Final Digital Mockup

[Image of a watch and a phone displaying a health monitoring app]
Task 1

Becoming aware of daily “posture creep”

Good posture (no squeeze)

OK posture (50% squeeze)

Poor posture (100% squeeze)
Task 2

Calibrating between different activities

Initial Calibration → Standing (Good) → Sitting (Good) → Sitting (OK)
Lessons Learned

● Iterative design: there is always space for improvement even we think the design is perfect

● The process of iterative design has great impact on the users and tasks we target

● It’s difficult to design a task associated with unconscious behavior

● More heuristic testing helps to reduce the consistency problem of prototype and then get useful feedback
BackTrack
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