

## BackTrack 3d - Usability Testing Review

**Usability tests:**

For each usability test, we randomly chose UW students because the target of our design is young people who use laptop and do desk work for a long time including students.

- Usability test 1:
  - The participant was a 23 year old male grad student in CSE at UW. YS and MS conducted the test in an Odegaard study room, where students are often found doing computer work. Yuqian played computer, Mike answered help questions. Once the participant realized that we were tracking posture, he became hyper-aware of the test and actively prevented bad posture. We had to ask him to simulate bad posture.
  - Revisions made
    - After this test, we added an “account photo” icon, which transitions to a logout state so that the data isn’t device specific. “Feedback reporting” is now just “event log,” and you have the option to “trash” items there and undo, which we felt made the training aspect more intuitive. A calendar and scrolling options for the graph for data viewing were also added, along with a radio setting for customizing time. We also noticed that “sensitivity” and “squeeze strength” were confused, so we separated that in the settings.
- Usability test 2:
  - The participant was a 24 senior student studying american student in UW. YS conducted the test at her apartment, Stevens Court, where the participant often study. Like first usability testing, we asked the participant to simulate to be bad posture and good posture and try the all process involving the device and application.
  - Revisions made
    - She found that she couldn’t go back to “home,” so we added a home button to menu. Color was added to the calendar view to see changes between days. When pausing the tracking, the color on the watch screen should go away, and the color should gradually transition between green, yellow and red. Some considerations she brought up were tracking neck posture, as well as back posture, and how useful the sensors would be when the clothes. We haven’t decided how exactly to address these last considerations yet while still differentiating meaningfully from existing solutions.
- Usability test 3:
  - The participant was an ischool student in UW. AL, DH, MS and YS conducted the test at Allen library. AL did overall explanation, DH did computer, MS took a note and YS took the pictures. Like first usability testing, we asked participant to simulate to be bad and try the all process involving the device and application.
  - Incidents:
    - **<insert image>**, description (positive or negative), severity + image + explanation of implemented revision as result if negative

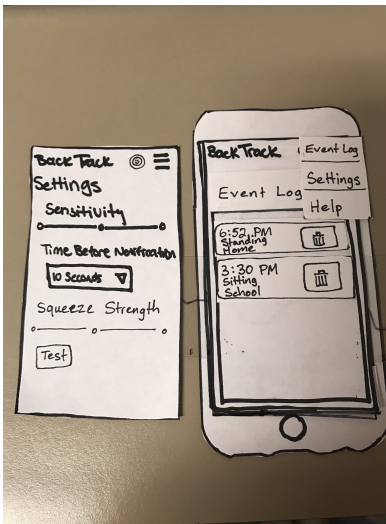
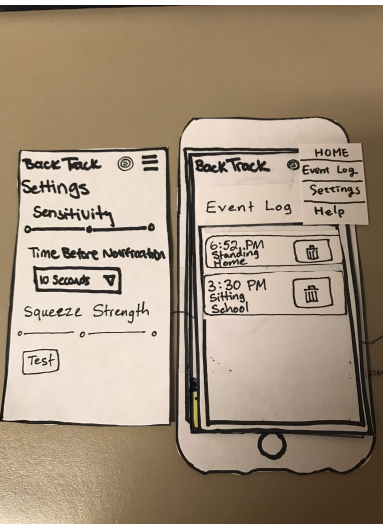
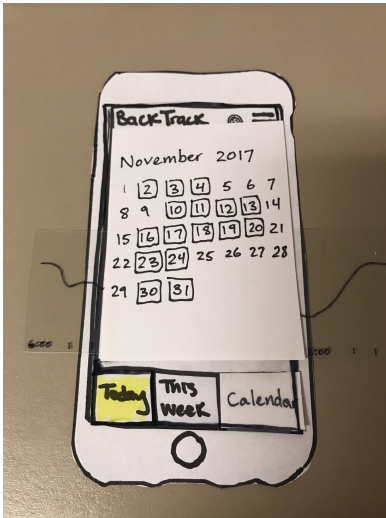
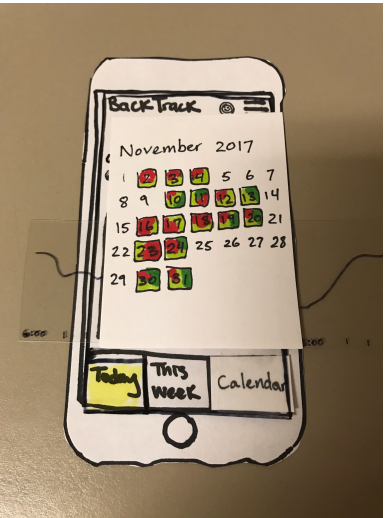
- We were unsure for whether or not to stop squeezing after they swiped “ignore” on the watch when we were giving them a notification


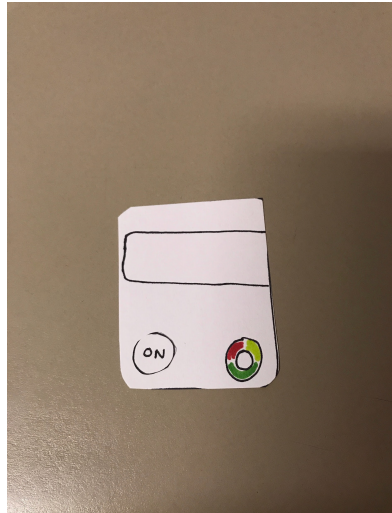
### Revisions made:

We changed the consistency of the text to be “good”, “bad”, and “poor”, and changed all the charts to be consistent and be donut charts in response to the heuristic evaluations. We also changed “ignore” on the screen to be “Stop” instead, and changed the “undo” mechanism in the app. Another thing we realized is that we didn’t actually have a physical sensor object that we were clipping onto our participants, which we added into the 3rd test. One other consideration is that the majority of the screen is unused in the current design, and we would also need at least one more device for the squeezing, so we could either go for a smaller standalone device or go for more heavy smartwatch integration with our own band or holder.

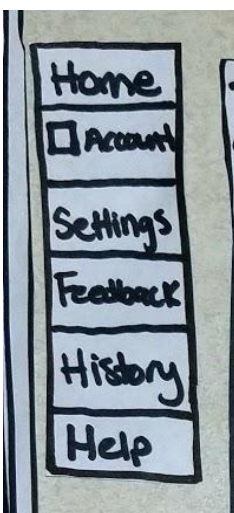
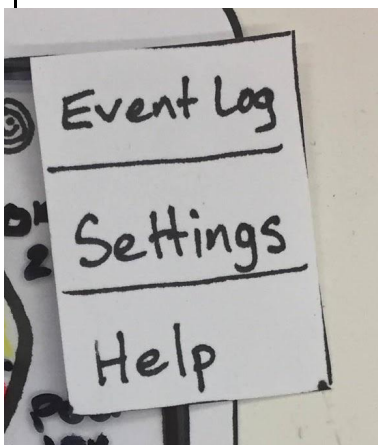

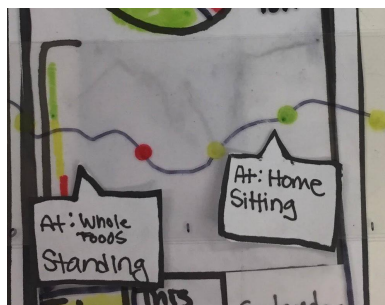
### Issues Identified from usability testing:

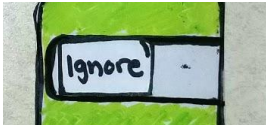
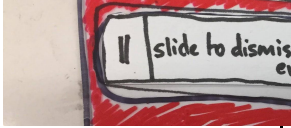
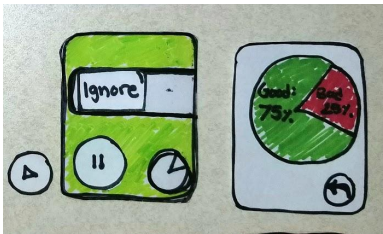

#### Usability Testing 2:

Before	After	Incidents
		<p><b>Add Home button to menu</b> At the usability testing, participants couldn't go back to home (the screen with today's record) from settings and event log. To solve this problem, we added home button to menu.</p>
		<p><b>Add color to calendar</b> This revision enables user to see the overall changes and tendency among the month from the color.</p>

		<p><b>Change the screen color when the record is stopped</b></p> <p>The color had stayed the same with the one just before stopping record. It was strange if the posture was bad and the watch still showed good posture when the record was stopped. This improvement solve this conflict.</p>
---	--	--

## Usability Testing 3:

Before	After	Incidents
		<p><b>Delete Home button in the menu and add home button icon at the top</b></p> <p>In the previous design, user need to push the menu button for many times to go back to home. This enables user to easily go back to home screen.</p>
		<p><b>Add nodes to the record graph</b></p> <p>During the observation, we found that many users didn't aware that they could see the detail by clicking the graph. These nodes can be an affordance for clicking to see detail.</p>

		<p><b>Change the design of dismiss the event on the wearable device</b></p> <p>Participant mentioned that the past design of showing stop on the screen was confusing. We changed the design to slider for dismissing the event.</p>
		<p><b>Change the graph to current pose</b></p> <p>In the previous design, the circle graph was shown at the right bottom. Participant said this made him to feel the home screen on the app was not home screen because the same graph was shown. Also, In the usability study, participant said it was better if this device can tell how the posture was bad. Therefore, we change the design to the figure of people seeing from the top.</p>



## Current Prototype

