Prolonged Sitting Alarm

Already have most of this project done.

Measurements:

- When sitting, resistance is about 500 ohms
- With no pressure, resistance is about 1.8K ohms

Open questions:

- Can an MCU switch an NPN transistor that is connected to a load with a higher source voltage? The Buzzer requires 4-8 volts
- Answer: http://www.w9xt.com/page_microdesign_pt12_hv_pnp_switching.html

Investigate:

- (Non-blocking) The output of comparator doesn't read absolute 0, but slightly above ground (0.05v).
- (Blocking) Are interrupts being triggered? Just tried and doesn't look like anything is happening

Thoughts:

- Instead of using transistor, output can directly go to Arduino pin
- For more accurate timing, we could use a 32.768 oscillator and set prescale to 1024 and, and count 1 overflow or to 255 for almost an exact 8 second time
    - https://www.easycalculation.com/engineering/electrical/avr-timer-calculator.php

Stuck:

- Got stuck on trying to figure out why timeout was taking 40 minutes instead of 30 minutes. Why was it so off? Then realized it was because I still have my blink LED which takes up 3 seconds of time by itself. Making the 8 seconds now 11 seconds.
- Couldn't figure out why PB3 would not turn off. Tried everything from adding delays thinking it was because sleep was occurring too early, checking ciruit etc. Didn't realize I was returning from function early before the command was executed