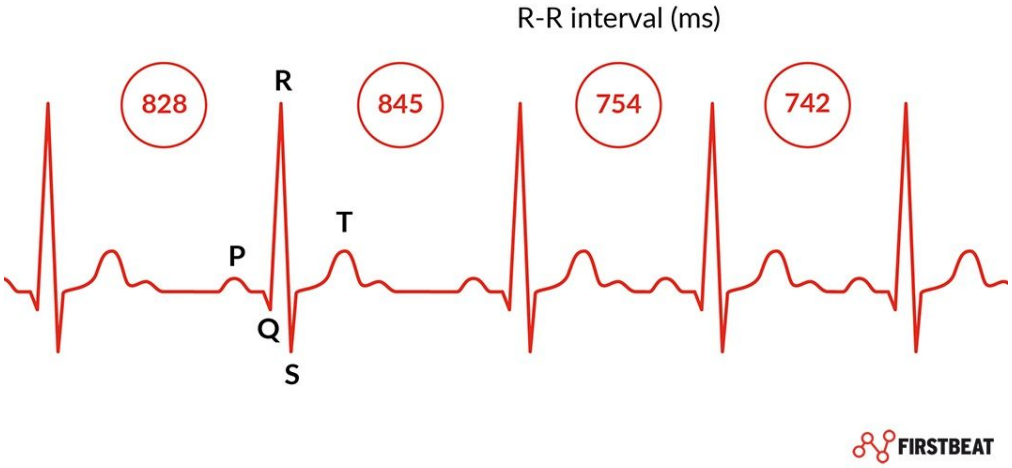
Investigations

Heart Rate Variation

- The variation in the time interval between consecutive heartbeats in milliseconds.
- Reliable HRV analysis requires accurate measurement of each heartbeat and the time between beats.
- If the intervals between your heartbeats are rather constant, your HRV is low.
- If their length variates, your HRV is high.
- The increase in HRV is associated with greater relevant emotional regulation.
- In addition to respiration, HRV is influenced acutely for example by exercise, hormonal reactions, metabolic processes, cognitive processes, stress and recovery.
- ECG-based methods detect the R wave in the QRS complex and calculate the time between R waves (R-R interval)



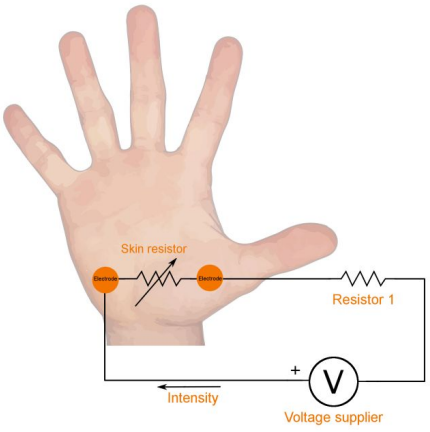
Pulse

- Pulse rate is the number of heartbeats per minute. The resting pulse rate for an average adult is between 60 and 80 beats per minute.
- There are four primary vital signs: body temperature, blood pressure, pulse (heart rate), and breathing rate (respiratory rate)
- To measure your heart rate, simply check your pulse. Place your index and third fingers on your neck to the side of your windpipe. ... When you feel your pulse, count the number of beats in 15 seconds. Multiply this number by four to calculate your beats per minute.
- The heart rate sensor measures your heart rate in Beats per Minute using an optical LED light source and an LED light sensor. The light shines through

your skin, and the sensor measures the amount of light that reflects back. The light reflections will vary as blood pulses under your skin past the light.

GSR (Galvanic Skin Response)

- The galvanic skin response (GSR) refers to changes in sweat gland activity that are reflective of the intensity of our emotional state, otherwise known as emotional arousal.
- Level of emotional arousal changes in response to the environment we're in – if something emotionally relevant (scary, threatened, happy), then the subsequent change in emotional response that we experience also increases eccrine sweat gland activity. Research has shown how this is linked to emotional arousal.
- The GSR signal is not representative of the type of emotion, but the intensity of it.
- To measure GSR, we measure how the skin resistance varies with sweat gland activity, i.e. the greater sweat gland activity, the more perspiration, and thus, less skin resistance.
- The most common method to measure a GSR signal for emotional research purposes is based on a constant voltage system. The GSR sensor applies a constant voltage to the two electrodes that are in contact with the skin. A change in current flow indicates a change in sweat gland activity



How to sideload an app onto your Android phone or tablet

- "Sideloading" an app is the common term for installing it without downloading directly from the Google Play Store.
- Settings > General > Unknown Sources
- AirDroid app: Toolbox > app > select APK file and drag and drop into widget