

Contact Information | Owners of the Smartwatches

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TFOYO.EU Research Project: Stress Monitoring with Wristband Sensors

Stress Monitoring with EmbracePlus: The world's most advanced smartwatch for continuous health monitoring { <https://www.empatica.com/embraceplus/> } The measurement data of the watch includes an EDA sensor for detecting electrical conductivity on the skin surface, an advanced optical PPG sensor for clinically validated heart rate measurements, digital skin temperature readings, and acceleration data through an accelerometer and gyroscope. EmbracePlus was developed as part of projects with the U.S. Department of Health and Human Services and the NASA Human Research Program. The watch is FDA-cleared and CE-certified.

Why Watch and Smartphone?

Each smartwatch has a serial number and a user ID. These are paired with a smartphone. To avoid installing an app on your own phone, each watch comes with an iPhone 8 that is already paired with the smartwatch (there is a unique QR code for this). An app has been installed on the iPhone 8 that connects the iPhone with the watch. Each watch comes with setup instructions, which have already been completed and should not need to be repeated. The smartwatch only displays the time using an e-Ink display to save power. Charging is necessary approximately every 36-48 hours. The iPhones are older and need to be charged daily.

User Instructions: What Do You Need to Do?

- **Charge the Smartwatch:** Use the included USB charger, ideally once a day.
- **Charge the iPhone:** Charge the iPhone once a day.
- **Wear the Smartwatch:** Wear the smartwatch as often as possible, ideally continuously, and only remove it to charge. Wear it as snugly as possible without it being uncomfortable.
- **Water Contact:** The smartwatch is suitable for showering but not for saunas (maximum 39° temperature).

Notes:

- **WLAN Connection:** The iPhone should stay near the watch and be connected to a WLAN as often as possible. Ensure the iPhone (iPhone 8) is regularly connected to a WLAN, as it can only store data for about 12 hours. The app on the iPhone should always be open in the background.
- **Documenting Playing Times:** The data will later be analyzed in relation to your musical activities. Therefore, all playing times should be documented. This information, along with personal measurement data, will remain strictly confidential. There is a Google form where you can easily enter your musical activities and any other comments. URL: tinyurl.com/tfoyosm. You can also create bookmarks on the smartphone.
- **Stress Level Measurements:** The main purpose of the measurements is to capture stress levels during practice and performance. Since everyone sweats differently, the measurements are more accurate if you wear the watch continuously.
- **WLAN in Practice Rooms:** Hopefully, there is WLAN in the practice rooms, or someone can set up a hotspot for the watches to connect to.
- **Nicknames:** Each phone has a nickname, as I do not need to know the real names of the wearers.

Transport:

Due to the batteries in the devices, watches and phones must be carried in hand luggage. If asked, you can state that the watches are medical health devices used in an EU research project.

**Document Your
Musical Activities**

tinyurl.com/tfoyosm



<https://forms.gle/PeXFeQWLtTj8n2pz7>
Form for Entering Activity

Thank you for your participation in this research project. Matthias

P.S.: I am excited to see the anonymized results; they will certainly be very interesting.