

How well do you sleep?



Information for participants

The purpose of the trial you are about to participate in, is to assess the ability of commercial sensors to monitor night sleep and the level of activity during the day.

Using the devices that you will be provided with, you will be able to find out **how do you sleep at night**, for how long, when do you go to bed, and when do you wake up among other things. You will also find out the amount of noise you hear at night, the temperature of your bedroom and the sunlight. During the day, you will also be able to see your **activity levels during the day**.

Timing

The duration of this trial is 7 days. During these you will be asked to wear several devices for sleep monitoring, heart rate monitoring, and activity monitoring. Read carefully the instructions for each of the devices.

Requisites

- ▶ You sleep alone.
- ▶ Not on meds.
- ▶ You are going to be home during the weekend.

Things to keep in mind

Call if you have any doubts. Phone +358 (0) 50 300 9206 or send me an email.

Data confidentiality

Your data is confidential, and your name will never be connected with your data.

Further information

If you have further questions, please contact Jose M. Perez-Macias, jose.perez-macias@tut.fi or by phone +358 (0) 50 300 9206, Office: TE314 Tietotalo

Check list :: Delivered items

Delivered items

You will be provided with:

- ▶ Beddit sensor
- ▶ Traxmeet (wrist band)
- ▶ Fitbit One
- ▶ Firstbeat (ECG sensor)
- ▶ Electrodes to use together with Firstbeat
- ▶ A sleep diary
- ▶ Informed consent
- ▶ This paper describing the general study.
- ▶ Instructions of use for each of the devices.
- ▶ A reminder sheet next to your bed-table.

1. Device instructions

Fitbit

- Put your device in your pocket or clip it in your trousers during the day.
- Put it in your wrist during the night.
- Set the sleep-counter (press more than 2 seconds) when you go to sleep: you will see a timer starting. When you wake up, press the button more than two seconds until the timer stops.
- If you have a computer you can synch the device with the USB stick. You can use your iPhone 4s or iPhone 5, or Samsung Galaxy 3/4 for mobile synching.



Traxmeat

- Wear it only on your dominant hand. On your right hand if you are right handed or on your left hand if you are left-handed.
- Wear it only on your wrist. Not in the forearm, not anywhere else.
- Check that the device is charged after 4 days. Contact after four days.



Firstbeat

- Wear it as the instructions says. Big end on the right top side, and the small end on under the breast in the left side.
- It should blink always. However, during night time, the light will be much slimmer.
- Change the electrodes every time you take the device off.
- To clean your skin you can use cream.



Beddit

- Once installed, you will receive an email every day about your sleep.



Questionnaires

- Check it during the night, and when you wake up.
- Put it on your bedside table.

A National Sleep Foundation Sleep Diary form. It is a grid with columns for "SLEEPER'S SURVEY" and "SLEEPER'S SLEEP-LOG". The "SLEEPER'S SURVEY" columns include: "How well did you sleep?", "How long did you sleep?", "How long did you stay in bed?", "How long did you take to fall asleep?", "How long did you stay awake at night?", "How long did you stay in bed at night?", "How long did you stay in bed at night?", "How long did you stay in bed at night?", "How long did you stay in bed at night?". The "SLEEPER'S SLEEP-LOG" columns include: "Time you went to bed", "Time you woke up", "Time you got up", "Time you went to bed", "Time you woke up", "Time you got up", "Time you went to bed", "Time you woke up", "Time you got up".

National Sleep Foundation Sleep Diary											
SLEEPER'S SURVEY											
How well did you sleep?	How long did you sleep?	How long did you stay in bed?	How long did you take to fall asleep?	How long did you stay awake at night?	How long did you stay in bed at night?	How long did you stay in bed at night?	How long did you stay in bed at night?	How long did you stay in bed at night?	How long did you stay in bed at night?	How long did you stay in bed at night?	How long did you stay in bed at night?
None	Very poor	Poor	Fair	Good	Very good	Excellent	Very good	Good	Fair	Poor	Very poor
None	Very poor	Poor	Fair	Good	Very good	Excellent	Very good	Good	Fair	Poor	Very poor
None	Very poor	Poor	Fair	Good	Very good	Excellent	Very good	Good	Fair	Poor	Very poor

3. What will you learn?

During this trial you will learn much about yourself. Things you cannot find out by yourself, such as your sleep behaviors. You will also find out about your daily activities. How many steps do you do? How physically active are you during the day? You might be stunned to find out that you sit down and do no physical activity for 7 hours! If you do not do anything for the rest... same as when you are injured, you get weaker very slowly.

Weekly summaries

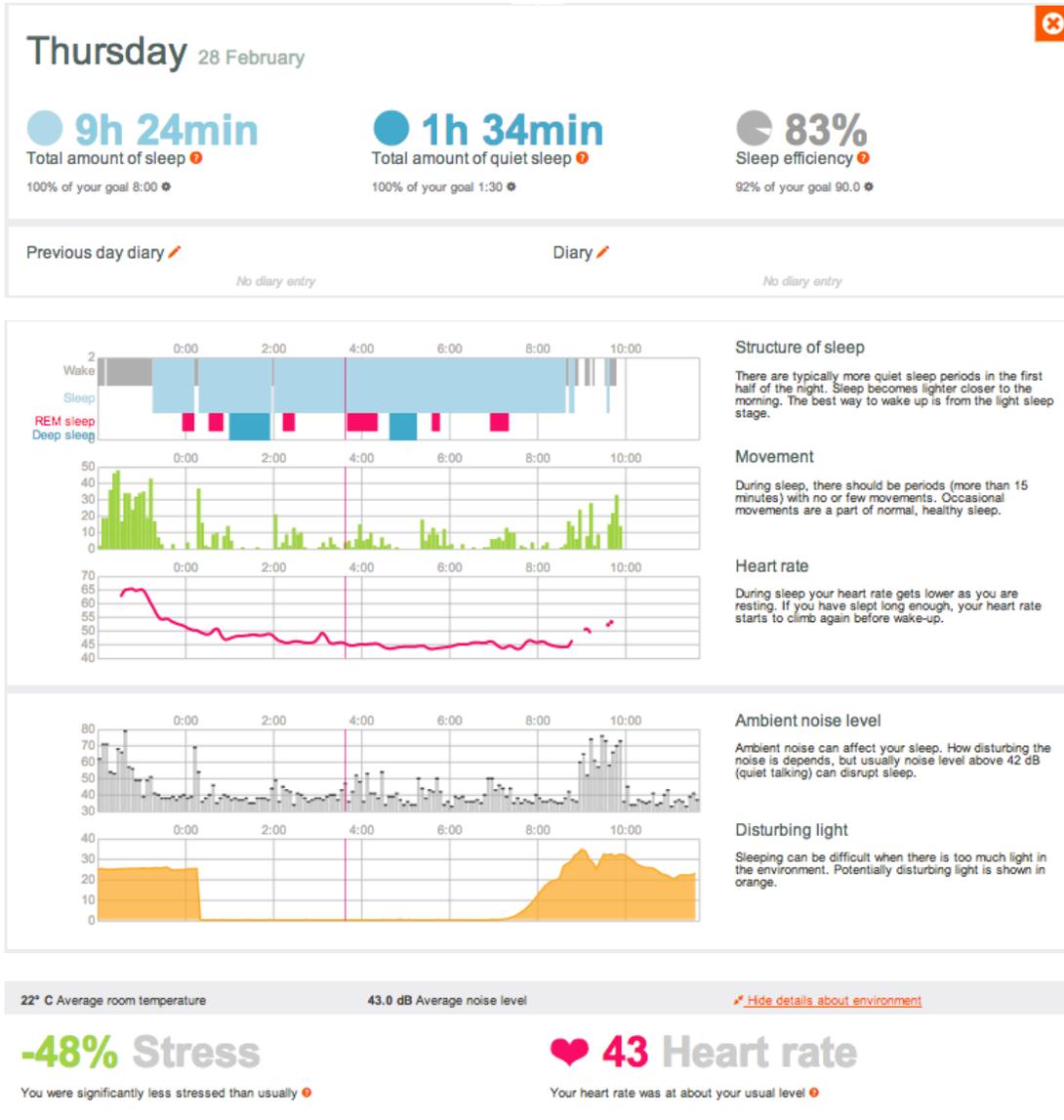
You will be able to see your weekly summaries. See at a glance your week sleep behavior! You will be amazed! (see example below).



3. (cont) What will you learn?

Daily summaries

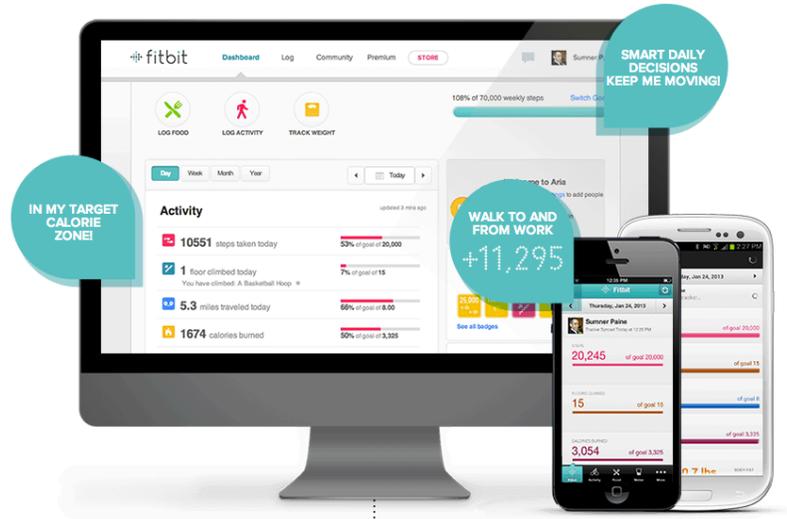
Daily information will be provided for you. There You will find out how much coffee and sports affects to your sleep quality. The more of quiet sleep and REM (restorative sleep) the better for your body. You will see how efficient you are using your bed.



How well do you sleep?

Activity meters

The activity meters will tell you about how many steps you walk during the day. You might be interested to know that your day activities shape your sleep at night. Did you ever hear, after so much exercise or playing, he will sleep as a baby. The saying is not far from the true reality.



The Fitbit One gives you information when looking at it:

- ▶ Steps
- ▶ Distance
- ▶ Calories
- ▶ Stairs
- ▶ Time
- ▶... and a growing flower, telling you how far from your daily you are.

