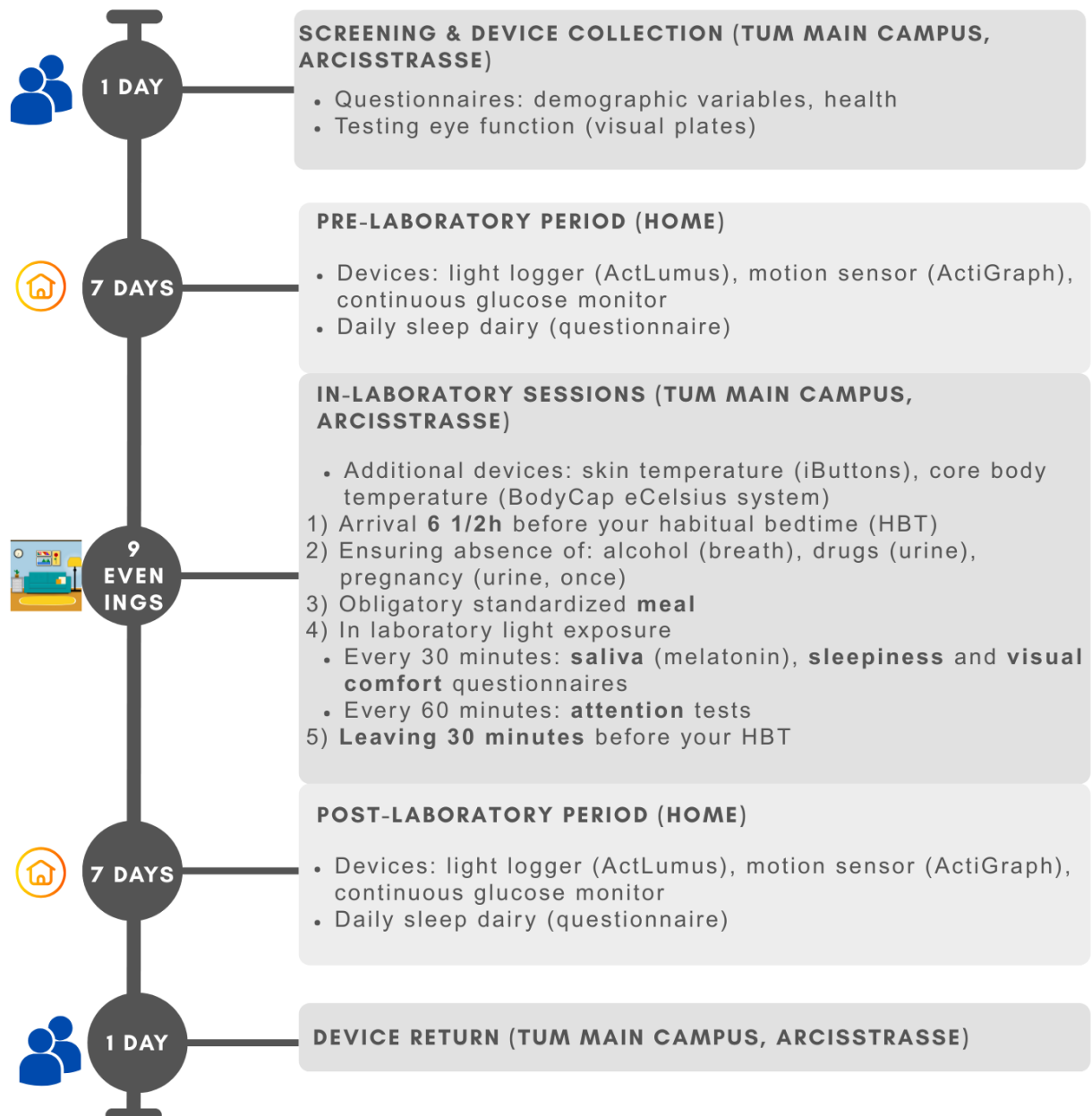


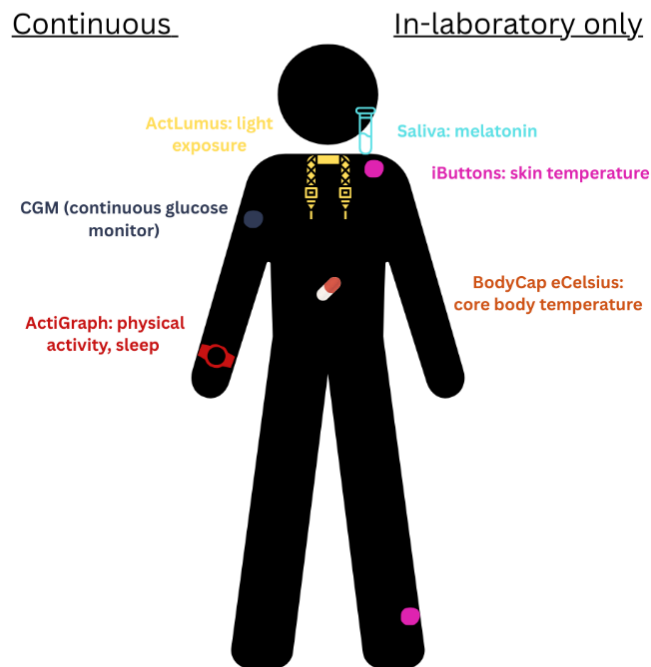
Participant Information: Carryover effects in melatonin suppression

Overview Timeline & Devices

STUDY OVERVIEW



Overview Devices



About Continuous Glucose Monitoring (CGM)

About CGM

The FreeStyle Libre 3 measures your glucose through a small sensor under the skin, not in your blood like the well-known finger-pricking method. Sensor values can be slightly delayed compared to finger-pricking, especially after eating. Still, the system is very accurate, reliable, and easy to use, and the sensor can be worn while doing sports, showering, bathing, or even swimming.



Image source: © Abbott – FreeStyle Libre 3 Brochure (accessed on 19 April 2025, available at www.freestylelibre.de).

Study Participation

During the study, you will receive two CGM sensors to cover the entire duration. You will first wear the **first sensor**, which **we** will attach during our **first meeting** when you pick up all the devices. Once this sensor expires, you will replace it with the second sensor. The date for attaching the second sensor depends on when you attach the first sensor. We will provide you with a **specific date to change the sensor**, which will be during the in-laboratory period. You can either attach the second sensor **yourself** on the agreed date **or** join a scheduled **Zoom meeting** where we will guide you through the process. If you prefer to change the sensor yourself, please follow the next steps. If you'd like to join the Zoom meeting, we will arrange a date during the in-laboratory measurements, and you can skip the next instructions.

Instructions second sensor application

First, **remove the first sensor** (gently peel it off), then choose a **new spot** for the second sensor about **2–3 cm away** from the original location on the back of your upper arm (non-dominant side). Below, you will find a four-step **guideline** on how to attach the second sensor. Once you've done that, please make sure that all app settings are still correct:

App Settings – Please check the following:

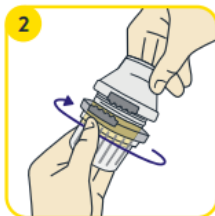
- Select **mg/dL** as your unit of measurement
- Adjust the target glucose range to **70–140 mg/dL** in the settings
- Make sure alarms for low/high blood sugar levels are turned off
- Ensure that Bluetooth is enabled at all times
- Always allow the app to run in the background

Once the second sensor expires, please keep it and bring it back to us along with the other devices at the end of your study participation, so we can dispose of it properly.

Choose an area of skin on the back of your upper arm. Prepare the application area and apply the sensor correctly.



Wash the application site with a simple soap, dry the area and then clean the area with a non-greasy alcohol wipe.
Let the area air dry before preparing the application of the sensor.



Carefully unpack the sensor applicator and twist off the cap. Place the sensor applicator over the prepared area.



Press the sensor applicator firmly onto the skin.^{25,26}

When attaching the sensor to the body, a thin, flexible, sterile filament is pushed directly under your skin.



Gently pull the sensor applicator away from the body and make sure the sensor is securely attached.

Image source: © Abbott – FreeStyle Libre 3 Brochure (accessed on 19 April 2025, available at www.freestylelibre.de).

About ActiGraph Device

Purpose

In this study, the ActiGraph device will track your physical activity and sleep.

When & Where to Wear It

Please wear the device on the **wrist** of your **non-dominant hand** throughout the **whole study** (pre-laboratory, in-laboratory, post-laboratory). It's important to keep it on your **wrist at night** so your sleep can be recorded.



Caution

Keep the device **away from water**. Remove it when showering, bathing, swimming or diving, and put it back on afterwards.

About ActLumus Device

Purpose

In this study, the ActLumus device will track your light exposure.

When & Where to Wear It

You will wear the device throughout the **entire study** (pre-laboratory, in-laboratory, post-laboratory) on a **lanyard** around your neck. At night, place it near your head facing upwards, making sure it's not covered by a pillow.



Caution

Keep the device **away from water**. Remove it when showering, bathing, swimming, or diving, and put it back on afterwards.

About Body Temperature Device

During the **in-laboratory sessions**, we will measure your core body temperature using the BodyCap e-Celsius system. This involves swallowing a small, capsule-shaped sensor shortly after eating the meal we provide. The pill is safe and commonly used in many research studies. It will naturally pass through your body within 24 to 48 hours, and there is no need to return it. For your safety, you will also receive a wristband to remind you not to enter an MRI scanner while the sensor is still inside your body.

About Skin Temperature Device

You only need to wear the device on your neck and ankle during the **in-laboratory sessions** so we can measure your skin temperature.

Clothing

To ensure consistent conditions for our skin and core body temperature measurements, please wear the following **clothing** during your **in-laboratory** sessions: **normal underwear**, **a long-sleeved top** made of **light material**, and **long trousers or a skirt** made of **light or regular fabric** (no jeans). Also, wear **regular short socks** (no tights or stockings) and **regular dress or sports shoes** (no heavy boots).

Behaviour pre-laboratory & post-laboratory

During the **pre-laboratory** and **post-laboratory** periods, please stick to your **usual habits and routines**. Do not change time zones, travel internationally, or start a new diet. If you need to begin any new medications, please let us know.

Behaviour in-laboratory period

During the nine days of the in-laboratory period, please follow these instructions carefully:

- **Caffeine and certain foods:**
Do not consume any of the following **after 4 hours past** your usual **wake-up** time:
 - **Coffee and coffee-based drinks**
 - **Energy drinks**
 - **Black, green, white, and oolong tea**
 - **Yerba mate**
 - **Soft drinks** (e.g., cola)
 - **Matcha**
 - Any workout supplements or **boosters** that contain caffeine
 - **Bananas**
 - **Pistachios**
 - **Walnuts**
 - **Pineapple**
 - **Tart cherries**
 - **Salmon**
 - **Milk**
 - **Eggs**
 - **Turkey**
- **Physical activity:**
Continue your regular exercise routine as usual. However, please **avoid** any physical activity **within 3 hours before entering the laboratory**.

Financial Compensation

In addition to receiving valuable insights into your glucose levels and sleep patterns, you will also receive financial compensation for your full participation in this study. You will be paid **10€ for each evening spent in the laboratory**, adding up to **90€ for 9 evenings**. If you complete the entire study as required, you will receive a **bonus of 450€**, bringing the **total compensation to 540€**.

Please note that the bonus will **only be paid** if you attend **all sessions** and follow the **study rules**. Unfortunately, we cannot use incomplete data, so we are **unable to pay the bonus** in cases of missed sessions—even due to illness or personal events.

By taking part in this study, you are contributing to important research on the effects of light on human chronobiology. This helps us better understand how evening light exposure influences human physiology and behaviour and may offer valuable insights for optimizing lighting environments in real-world settings.