

Subject information for participation in medical research

The effect of Indoor Environmental Quality (IEQ) on health and cognition

Official title (in Dutch): Effect van de kwaliteit van het binnenmilieu (IEQ) op cognitie en gezondheid

Introduction

Dear Sir/Madam,

With this letter, we would like to ask you to take part in a medical study. Participation is voluntary. Participation requires your written permission. You have received this subject information form as you expressed interest for more information about the study titled "The effect of Indoor Environmental Quality (IEQ) on health and cognition. You can read about the medical study in this information sheet, what it means to you and what the pros and cons are. It is a lot of information. We kindly ask you to please read the information and decide if you want to take part in the study. If you want to take part, please complete the form in Appendix D.

Ask your questions

You can take your decision based on the information in this information sheet. We also suggest that you do this:

- Put your questions to the investigator who gave you this information.
- Talk to your partner, family or friends about this study.
- Ask questions to the independent expert. For contact details, go to appendix A.
- Read the information on www.rijksoverheid.nl/mensenonderzoek.

1. General information

The researchers have set up this study on behalf of Maastricht University. Below, we always call Maastricht University the 'sponsor'. Investigators (the Researchers), conduct this study at the Department of Nutrition and Movement Sciences at Maastricht University. Participants in a medical study are often called subjects. The subjects within this study are all healthy subjects. This study needs 26 subjects. The Medical Ethics Committee of azM/UM has approved this study.

2. What is the purpose of the study?

In this study, we look at whether a hot and humid environment is more detrimental to human cognitive performance and health than a neutral environment. The aim of the study is to evaluate the effects of exposure to different room temperature and humidity combinations on health, cognition, comfort and acceptance of the environment. Previous research has already shown that a warmer and more humid environment can affect cognitive performance. That is why through this study we want to gain further insight into cognitive, perceptual, and physical effects of specific environmental conditions. We also want to investigate whether different environmental conditions have an effect on physiological function such as temperature regulation of the body. We would like to use the results of this study to improve our understanding of various environmental conditions that may benefit physiological and psychological aspects of humans while maintaining comfort.

53 **3. What is the background of the study?**

54 Humans spend the majority of their time indoors. The indoor environment can change
 55 because of renovations of the home, for example when changing the insulation. A well-
 56 insulated home loses less heat, which can reduce heating cost. A highly insulated
 57 building is usually less naturally ventilated, which also might bring along an increase of
 58 moisture and pollution of the indoor air. This again can lead to the perception of lower
 59 air quality. The more occupants are in a space, and the longer the occupation lasts,
 60 particularly in combination with activities such as cooking and showering, the more
 61 serious this problem can become. Human thermoregulation is influenced by the
 62 environmental exposure, duration, and physical activity. Previous studies have shown
 63 that being exposed to heat, particularly in combination with higher humidity, can
 64 potentially lead to detrimental effects to cognitive and physical performance.

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 66 **4. What happens during the study?**

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 68 *How long will the study take?*

69 The study consist of 5 study visits, whereof 1 screening visit and 4 testing days.
 70 Completing all study procedures may take up to 4 weeks in total. The entire study
 71 consists of a preliminary examination (screening visit) of about three hours and four
 72 testing days (about 10 hours each). All examination days are planned together with you
 73 and take place at the university. The test days should be a minimum of 2 days to a
 74 maximum of 7 days apart.

75
 76 *Step 1: are you eligible to take part?*

77 First, we want to know if you are eligible to participate. Please note: it is possible that you
 78 are not eligible for this study, even if you are healthy. The investigator will tell you more
 79 about this during email and/or phone correspondence before you are invited for a 3 hour
 80 screening visit. Before starting the study, a general screening will be conducted first.
 81 During the screening visit, the research protocol will be discussed with you again and
 82 you will have the opportunity to ask questions. Only when everything is clear and there
 83 are no more questions will you be asked to sign the consent form together with the
 84 researcher. Then, you will be asked to complete a number of additional questionnaires
 85 about your general health, and several tests will be taken (see also below at step 2).
 86 Based on the results of the tests, it will be determined whether you can participate in the
 87 study. Participation in the screening procedures does not automatically mean
 88 participation in the study itself.

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 90 *Step 2: The research and measurements*

91 The study requires you to come to Maastricht University 4 times over 4 weeks, one
 92 screening day (3 hours) and three testing days. A test day lasts 10 hours, of which you
 93 spend about 8 hours in the climate chamber/respiration chamber. This is a small room in
 94 which we can precisely control the temperature and humidity of the air and also measure
 95 your energy metabolism, i.e. inhaled oxygen and exhaled carbon dioxide.

96
 97 The following procedures will be done during the screening visit, after signing the
 98 informed consent:

- 99 • You will fill out a number of questionnaires. The questions are about your general
 100 health daily life, eating, exercise and sleeping habits (please see below).
- 101 • Fitness test
- 102 • Measurement of body composition.
- 103 • You practice the cognitive tests to become familiar with the tests and the platform

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 105 The screening questionnaires are:

- 106 • A medical questionnaire regarding general healthy state will be performed;

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- Physical activity levels will be assessed using the Core Questions on Physical Activity taken from the EPIC Baseline Questionnaires;
 - The Morningness-Eveningness Questionnaire (MEQ);
 - The State and Trait Anxiety Inventory (STAI);
 - The Pittsburgh Sleep Quality Index (PSQI).

113 After finishing the questionnaires, we will also measure height and weight, body
114 composition, your fitness level by means of a cycling test. Moreover, you will practice the
115 cognition test for familiarization. Appendix C has a list of all measurements we carry out
116 during the screening visit.

117

118 Upon successful screening and your desire to participate in the study, you will be further
119 instructed about the measurement days. We will ask you to keep a diary from the day
120 before the first test day. In the diary, you will keep information regarding diet, sleep,
121 exercise and general temperature perception. You will be asked about your typical
122 breakfast and lunch and which foods you prefer during the testing session. You will have
123 the same breakfast, lunch and snack on all four testing days. All supplies for the first test
124 day will be provided during the screening and exercise session.

125

126 *The four testing days*

127 During the four testing days, you will be randomly exposed to 4 combinations of
128 temperature and humidity for 8 hours: 25°C with 30%RH, 25°C with 70%RH, 32°C with
129 30%RH, and 32°C with 70%RH. A randomized draw will decide in which order the
130 conditions will take place. The investigator will know which environmental condition is set
131 for each visit, however, you won't be told which environmental conditions were set until
132 full completion of the study.

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134 We will collect the following parameters during each visit:

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- Saliva and urine
 - Core temperature
 - Skin temperature
 - Skin perfusion
 - Sweating
 - Heart rate
 - Cognition test
 - Subjective questionnaire
 - Perception scales

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145 You fill in the questionnaire and perceptual scales every hour. The questions are about
146 how you feel and would rate the environmental quality of the indoor environment.
147 Appendix C has a list of the measurements we carry out during each visit.

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149 *Procedures during the measurement days:*

150 Each measurement day consists of the same procedures and will take place according to
151 the same plan, which is described below. Only on the first measurement day, there is an
152 additional measurement of body composition based on drinking "heavy water" (more info
153 in Appendix C).

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155 You will be asked to have your last meal the night before no later than 10:00 pm. We will
156 give you a bottle of "heavy water" (deuterium water; 75-80 ml, tastes like normal water)
157 after the screening. In the evening before you go to sleep, we ask you to collect a urine
158 sample in the urine jar. Afterwards, you will ingest the deuterium water. After that, do not
159 eat or drink anything. Then you will go to bed to sleep (normal sleeping habits, adjusted for
160 any earlier wake-up time of 6:00 a.m.).

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The next morning you also do not eat or drink anything until the second morning urine (you do not need to collect first morning urine). This second urine sample must be collected for measurement. We assume that we can collect the second morning urine at the university as soon as you arrive there.

You are requested to be at the university by 7:00 am. Please bring the urine sample from the night before. Thus, upon your arrival, we will ask you to provide another urine sample as described above.

Upon your arrival, we will ask you once again to provide a urine sample. Then your weight will be measured and all necessary measuring instruments will be attached to your body (see Appendix C for a list of all sensors and measurements). Multiple wireless skin temperature sensors, a heart rate monitor, a sensor to measure skin blood flow, multiple exercise monitors, a blood pressure monitor and an ECG monitor will be attached.

After preparation, you will be asked to sit on a reclining chair in the respiration room. Resting measurements will then be taken for 30 minutes. After 30 minutes of resting measurements, you will be provided with breakfast in the room.

Upon entering the room, before and after each cognitive task and before leaving the room, we will ask you to complete questionnaires. A saliva sample will be taken every hour. You will perform two sets of cognition tests at 10:00 am and 2:30 pm. These are the same type of tests you have already learned about at screening. You will complete some questionnaires after the cognition tests. At 11:30am you will also perform some economic "lottery" tests.

After the cognition tests, at 11:00am and 3:45pm, you will perform a step exercise twice. Following the exercise, a measurement of your perceived fatigue (rating of perceived exertion; RPE) and comfort will be taken. Your mood profile (state of mind) will be assessed prior to each cognitive test. You are then given free time to work on your own computer, read, watch TV or the like, for example. No violent or sexual media are allowed during the testing sessions.

At the end of the testing day, all sensors and measuring equipment will be removed, you will be weighed again and given instructions for the next testing day (if applicable).

5. What agreements do we make with you?

We want the study to go well. That is why we want to make the following agreements with you:

- You do not take part in any other medical research during this study.
- Corona vaccination can occur up to 2 weeks before subject enrollement, but is not allowed during the duration of the study.
- You attend to every appointment.
- Consume a standard meal on the evening before the measuring days. This means that the same meal and quantity must be eaten before each visit. You can decide the meal yourself as long as you can consume it again before the next testing day.
- Do not eat or drink in the morning of your screening and testing days (last meal before 22:00 (10pm the evening before) with the exception of water.
- Follow a normal diet (e.g. 3 meals per day at fixed times).
- Avoid alcohol and (heavy) physical activity at least 1 day before the visits.
- Travel to the university by public transport or by car on visits.
- You must contact the investigator in these situations:

- 216 ○ You want to start taking other medication. Also, if these are homoeopathic
- 217 remedies, natural remedies, vitamins or over-the-counter medicines.
- 218 ○ You are hospitalised or get treatment in a hospital.
- 219 ○ You suddenly experience problems with your health.
- 220 ○ You no longer want to take part in the study.
- 221 ○ Your telephone number, home address or email address changes.
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223 *Is it OK for you to get pregnant during the study?*

224 Women who are pregnant or breastfeeding cannot take part in this study. Women
225 should also not get pregnant during the study.

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227 *Pregnant after all?*

228 If you do become pregnant during the study, inform the investigator immediately. In this
229 case, you should stop participating in the study as soon as possible in consultation with
230 the investigator.

231 232 **6. What side effects, adverse effects or discomforts could you experience?**

233 This study carries negligible risk and no benefits for the subjects. It is not therapeutic
234 research and carries minor risks for the subjects. The study will lead to novel insights
235 into the relation between indoor humidity levels and various cognitive and health-related
236 parameters as well as human metabolism. Minor symptoms like headache, dizziness,
237 and sleepiness could occur towards the end of the visit after prolong exposure to high
238 temperature and high humidity.

239 240 **7. What are the pros and cons if you take part in the study?**

241 Participating in the study can have advantages and disadvantages. Below we list
242 them. Think about these carefully, and talk about them with others. It is important that
243 you carefully weigh the possible advantages and disadvantages before you decide to
244 participate. The major burden of this study is time and it consist of recurrent prolong
245 visits. Subjects will stay in the respiratory research units of the MRUM and are not
246 allowed to leave the room for 8 hours. Furthermore, subjects are asked to maintain
247 their eating and exercise habits 1 day before each visit to limit external influences on
248 the measurement of energy expenditure. These are considered small social and
249 psychological burden.

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251 Disadvantages:

- 252 - You will be asked to come to the university five times, once for the screening
253 visit (3 hours) and 4 times for the visits (10 hours, excluding travel time). On
254 these days you are therefore limited in your daily activities. The entire study
255 (from screening to the end of the study, including the mandatory days between
256 the four study periods) will take place up to 1 month.
- 257 - You will be asked to swallow a core temperature pill. This pill will leave your
258 body within 24-48 hours later through its natural way (faeces), and it can be
259 flushed through the toilet. You should not notice anything from this
260 measurement. Skin sensors will also be attached to your body to which you
261 will also notice very little.
- 262 - During the study period, you will stay in a respiration chamber. You may
263 feel claustrophobic (locked up) if you are sensitive to it. We will test this
264 during the screening.
- 265 - There is a possibility of chance findings during this study. A chance finding is any
266 abnormality that is found in (medical) research, without actually searching for it.
267 In case of such a finding, the investigators will have to inform you. If you do not
268 want to be informed, you cannot participate in the present study. If we detect an
269 chance finding, we will advise you to contact your general practitioner.
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You do not wish to participate in the study?

It is up to you to decide if you wish to participate in the study. Participation is voluntary. If you do participate, you can always change your mind and decide to stop, at any time during the study. Please inform the investigator as soon as possible. You do not have to say why you are stopping. The data collected up to that moment may be used for later analysis.

8. When does the study end?

The investigator will let you know if there is any new information about the study that is important to you. The investigator will then ask you if you want to continue to take part.

In these situations, the study will stop for you:

- All checks according to the schedule are finished.
- You have become pregnant.
- You want to stop participating in the study yourself. You can stop at any time. Report this to the investigator immediately. You do not have to explain why you want to stop.
- The investigator thinks it is better for you to stop.
- One of the following authorities decides that the study should stop:
 - Maastricht University
 - The government
 - the Medical Ethics Committee
azM/UM

What happens if you stop participating in the study?

The investigators may use the data and body material that have been collected up to the moment that you decide to stop participating in the study. If you wish, we will destroy the collected body material. Please let the investigator know. The entire study ends when all the participants have finished.

9. What happens after the study has ended?

Will you get the results of the study?

After the study has ended, the investigator may inform you about the most important results of the study. Do you prefer not to know? Please tell the investigator. He/she will not tell you in that case.

10. What will be done with your data and body material?

Are you taking part in the study? Then you also give your consent to collect, use and store your data and body material.

What data do we store?

We store these data

- your gender
- your date of birth
- information about your health
- (medical) information that we collect during the study

What body material do we store?

We collect, use and store saliva and urine.

Why do we collect, use, and store your data and body material?

We collect, use and store your data and your body material to answer the questions of this study and to be able to publish the results.

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How do we protect your privacy?

To protect your privacy, we give a code to your data and your body material. We only put this code on your data and body material. We keep the key to the code in a safe place in the research centre. When we process your data and body material, we always use only that code. Even in reports and publications about the study, nobody will be able to see that it was about you.

Who can see your data?

Some people can see your code and other personal information without a code. These are people checking whether the investigators are carrying out the study properly and reliably. These persons can access your data:

- Members of the committee monitoring the safety of the research.
- A controller/monitor hired by Maastricht University, or a controller/monitor working for Maastricht University.
- National supervisory authorities.

These people will keep your information confidential. We ask you to give permission for this access. The Health and Youth Inspectorate can access your personal information without your permission.

For how long do we store your data and body material?

We store your data in the research centre for 15 years. We store your body materials the research centre. They will be stored for 3 years in order to be able to make new assessments related to this study in the course of this study. If no longer needed, we will destroy your body material.

Can we use your data and body material for other research?

Your collected data and your (remaining) body material may also be important for other research in the context of the effect of ambient temperature and humidity on cognition, physiological effects and behavior. For this purpose, your data and body material will be stored at the research centre for 15 years. Please indicate in the consent statement whether you agree with this. Do you not want to give your consent for future analyses of your data and bodily material? You can still take part in this study and indicate this in the informed consent form.

What happens if there are random findings?

It is possible that during the study we discover something that is not directly relevant to the study but is important to your health or to the health of your family members. In that case, the investigator will inform you and/or your general practitioner. With the informed consent form, you give consent to be informed.

Can you take back your consent for the use of your data?

You can take back your consent for the use of your data at any time. Please tell the investigator if you wish to do so. This applies both to the use in this study and to the use in other medical research. But please note: if you take back your consent, and the investigators have already collected data for research, they are still allowed to use this information. The investigators will destroy your body material after you take back your consent. But if assessments with your body material have been carried out, the investigator can continue to use the results.

Do you want to know more about your privacy?

- Do you want to know more about your rights when processing personal data?
Visit www.autoriteitpersoonsgegevens.nl.

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- Do you have questions about your rights? Or do you have a complaint about the processing of your personal data? Please contact the the researchers and Maastricht University who are responsible for processing your personal data. For the present study, see Appendix A for contact details, and website.
 - If you have any complaints about the processing of your personal data, we recommend that you first discuss them with the research team. You can also contact the Data Protection Officer of Maastricht University.

388 *Where can you find more information about the study?*

389 You can find more information about the study at the following website(s):

390 www.ClinicalTrials.gov

391 After the study, the website may show a summary of the results of this study. You can
392 find the study by searching [the study's registration has been requested and the
393 number will be provided as soon as possible].

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395 **11. Will you receive compensation if you participate in the study?**

396 You will get an expense allowance up to € 340 (€ 300 + up to € 40 from lottery) for
397 taking part in the entire study. You will also be paid for your travel expenses: the costs
398 for travelling to and from university will be reimbursed in the form of an OV
399 reimbursement or a kilometre reimbursement up to a maximum of € 0.19 per kilometre.
400 The compensation for taking part in this study may need to be declared to the Tax and
401 Customs Administration as 'income from other resources'. If necessary, ask the Tax
402 services.

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404 **12. Are you insured during the study?**

405 Insurance has been taken out for everyone participating in this study. The insurance
406 covers damage caused by the study. However, the insurance does not cover all
407 damage. You can find more information about the insurance in **Appendix B**. It also
408 tells you who to report damage to.

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410 **13. Do you have any questions?**

411 If you have any questions, please contact the investigators. If you would like any
412 independent advice on participating in this study, please contact the independent
413 expert. He knows about the study but is not involved in it. In case of complaints, you can
414 contact the UM complaints committee. All details can be found in Annex A.

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417 **14. How do you give consent for the study?**

418 You can first think carefully about this study. Then you tell the investigator if you
419 understand the information and if you want to take part or not. If you want to take part,
420 fill in the consent statement that you can find with this information sheet. You and the
421 investigator will both get a signed version of this consent statement.

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423 **15. How do you give consent for the study?**

424 You can take your time to think about this research first. You can then get in contact
425 with the researcher if you understand the information and whether or not you want to
426 participate. Do you want to participate? You can then contact the researcher to plan a
427 screening visit, where you will fill out the consent form and sign it together with the
428 researcher (annex D).

429 Thank you for your time.

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Annexes to this information

- A. Contact details
- B. Information about the insurance
- C. Overview of measurements
- D. Consent Statement form(s)

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Annex A: contact details for Maastricht University

Project Leader:

Cynthia Ly, MSc
Department of Nutrition and Movement Sciences
Maastricht University
Telephone: +31 06-44602337
Email: c.ly@maastrichtuniversity.nl

Principal investigators:

Dr. Guy Plasqui
Department of Nutrition and Movement Sciences
Maastricht University
E-mail: g.plasqui@maastrichtuniversity.nl

Dr. Hannah Pallubinsky
Department of Nutrition and Movement Sciences
Maastricht University
Email: h.pallubinsky@maastrichtuniversity.nl

Independent expert:

Nicole Leibold, Ph.D.
Department Pyschiatry and Neuropsychology
Maastricht University
Email : nicole.leibold@maastrichtuniversity.nl

Complaints:

Complaints about the study can best be discussed with the researchers (see above). If you prefer not to do so, you can also contact the complaints committee of the MUMC+:

Maastricht UMC+
t.a.v. de Klachtencommissie
Postbus 5800
6202 AZ Maastricht

Learn more about your rights:

<https://www.maastrichtuniversity.nl/nl/over-de-um/algemene-privacyverklaring-um>

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Appendix B: information about the insurance

Insurance has been taken out by Maastricht University for everyone participating in this study. The insurance covers damage due to participation in this study. This applies to damage manifesting during the study or within four years of the end of your participation in the study. You must notify the insurance company about the damage within those four years.

The insurance does not cover all damage. The damages that are not covered are listed briefly at the end of this appendix. These provisions are set out in the Medical Research (Human Subjects) Compulsory Insurance Decree. This decree can be found on the website of the Central Committee on Research Involving Human Subjects www.ccmo.nl (see "Library" and then "Legislation and regulations").

In the event of damage, you can contact the insurer or claims representative directly, or you can contact a contact person at UM by telephone, email, or post:

The insurance company for this study is:

Name: CNA Insurance Company Ltd.
Adress: World Trade Center, Strawinskylaan 703, 1077 XX Amsterdam
Telephone: 020-5737272

Policy Number: 10193666
Contact person: Esther van Herk, Snr Claims Examiner
E-mail: Esther.VanHerk@cnaeurope.com
Telephone: 020-5737274

The claims representative is:

Name: Anissa El-Kaddouri, relatiebeheerder Meeùs
Adress: Meeùs, Paasheuvelweg 9C, 1105 BE Amsterdam
E-mail : anissa.elkaddouri@meeus.com
Telephone: 020-3011810

The contact person of the UM is:

Name: Afdeling Treasury, Stefan Groenveld
Adress: Universiteit Maastricht, Postbus 616 6200 MD MAASTRICHT
E-mail : um-verzekeringen@maastrichtuniversity.nl
Telephone: 043-3882047

The insurance offers coverage of at least € 650,000 per subject and at least € 5,000,000 for the entire study (and at least € 7,500,000 per year for all UM research).

The insurance does **not** cover the following damage:

- damage as a result of a risk that you were informed about in this written information. This does not apply if the risk occurs in a more severe form than anticipated, or if the risk was very unlikely to occur;
- damage to your health that would also have occurred if you had not participated in the study;
- damage resulting from not or not entirely following directions or instructions;

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- damage to descendants as a result of negative effect of the study on you or your descendants;
- damage as a result of an existing treatment method for research into existing methods of treatment

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Appendix C: Overview of measurements and description of study

Procedures during the visits

Body composition using deuterium:

The amount of body water and percentage of body fat is measured using marked water. Deuterium water occurs freely in nature and also in your body, and has a slightly different composition than normal water. You will be given a bottle of deuterium water (75-80 ml, tastes like normal water) to take home. In the evening before you go to sleep, collect a urine sample. Then you take the drink, fill the bottle half with water, and drink this too (after shaking well). After that, do not eat or drink anything. The next morning you will also not eat or drink anything until the measurements are taken at the University. You do not need to collect the first urine of the morning. You should collect the second urine sample in the urine jar. You will note the times on the instruction form. You will take the two urine jars, the instruction forms, and the empty deuterium bottle with you when you come to the University. You will receive a separate form with the instructions for this measurement.

Body composition with the BodPod:

Your body composition is measured with the help of the BodPod (Figure 1). The BodPod is a cabin in which you sit in. The BodPod then measures the volume of your body for a short time (2 minutes). In combination with your weight, the body composition can then be calculated. The measurement is performed in bathing suit and a swim cap.



Figure 1. The BodPod

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Questionnaires:

During the study period, you will complete a short questionnaire hour that relates to your individual experience about the temperature. We also ask for your sense of alertness.

Saliva samples:

Example of salivary sample process (Figure 2): First open the cap of the salivette with the right time label, remove the cotton swap and put into your mouth. Keep the swap in your mouth for 2 minutes, then place back into salivette and cover. The salivette will then be placed in an iced container for processing afterwards.



Figure 2. Fotos van procedure om speekselmonster te nemen.

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Respiration chamber

The respiration room (Figure 3) is a closed space of 14m³ where the air you breathe is analyzed. With this, we can calculate your energy expenditure. In the room there is a bed, a sink, a toilet, a desk, a chair, a TV, a radio, a telephone and a computer. It is intended that you do not leave the room during two visits of the study. In the room you are allowed to work, study, read or watch TV. There is always someone in the vicinity of the respiration chamber and in case of emergency you can always go outside. Your privacy in the room is guaranteed.



Figure 3. Sample photo from the respiration chambers. *layout may differ slightly during experiments

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Aerobic Fitness (submaximal cycling test):

The seat height of the cycle ergometer (Ergonomic 894E, Monark, Sweden) will be adjusted so that participants' knees had an approximate 5° bend (with a given pedal in the down position). Participants are cycle at 70 rpm and to maintain that rate throughout the test. After a 4-min warm-up period at 100 W, the test was initiated at an initial power output of 100 W. Increments of 25 W were made every min until 200 W was reached; thereafter, 25-W increments were made every 2 min until steady-state HR at or above 70% of age-predicted maximum HR (220-age), ideally without exceeding 85% of maximum age-predicted HR.

Wearables:

In order to measure all necessary physiological parameters for this research, wearable devices will be attached to your body. In the Table 1 below all devices are listed:

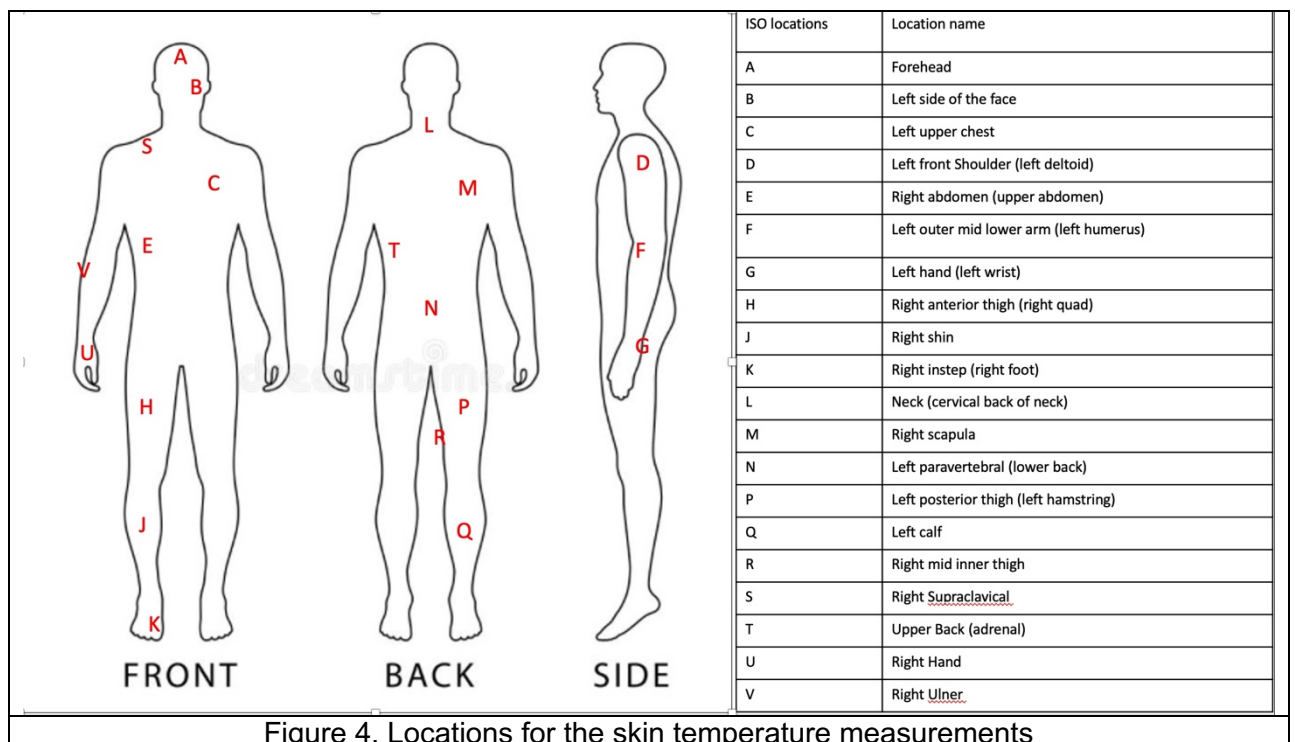
Table 1. Measurement devices

Physiological parameter	Apparatus
Core temperature	Telemetric pil (Bodycap)
Skin temperature	iButtons
Heart rate	Polar H10
ECG	MOX7
Activity level	MOX1
Blood pressure	Mobil-o-graph
Sweat rate	Q-Sweat
Skin blood perfusion	Laser Doppler Flowmeter

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Skin temperatures:

We will attach wireless skin temperature sensors to your body in 19 locations. This will be done with a special medical tape that should not cause skin irritation.



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Core temperature:

We measure your core temperature by means of a pill that you swallow (Figure 5). This is a capsule with a temperature transmitter in it. This pill will leave your body 24-48 hours later, through its natural way (faeces), and it can be flushed through the toilet



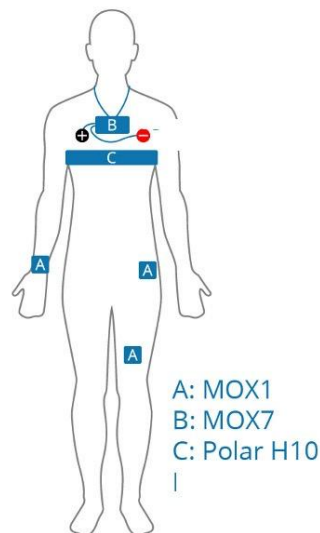
Figure 5. Photo of a core temperature pill

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Heart rate:

The heart rate is measured with the help of a chest belt (Figure 6). The belt will be placed on your chest when you come in the morning for your visits.

The following diagrams below (Figures 6 and 7) list the wearable device and placement on the body.



Figuur 6. Locaties van MOX1, MOX7 en Polar H10

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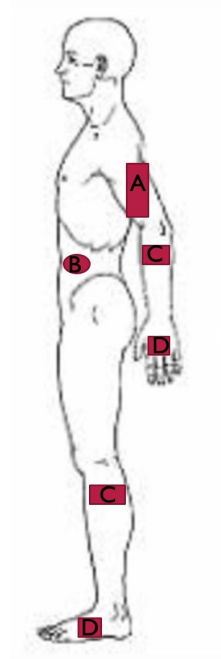


Figure 7. Locations of the blood pressure device, core temperature, sweat capsules and skin perfusion sensors.

A: blood pressure, Mobil-o-graph, left arm.

B: core temperature, telemetric pill in the stomach/intestines.

C: sweat rate, Q-sweat (2 sweat capsules on arm and leg).

D: skin perfusion, laser-doppler-flowmeter on hand and foot.

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Appendix D: Consent Statement form – subject

Belonging to

The effect of Indoor Environmental Quality (IEQ) on health and cognition

- I read the information letter. I was also able to ask questions. My questions were answered well enough. I had enough time to decide whether to participate
- I know that participating is voluntary. I also know that I can decide at any time not to participate in the study after all. Or to stop. I do not have to say why I want to stop.
- I give the researcher permission to let my doctor know that I am participating in this study.
- I give the researcher permission to give my GP or specialist information about unexpected findings from the study that are important to my health.
- I give the researchers permission to collect and use my data and body material. The researchers do this only to answer the research question of this study.
- I know that to monitor the study, some people will be able to see all of my data. Those people are listed in this information letter. I give these people permission to see my data for this audit.
- If applicable: I know that I cannot become pregnant during the study.

Please check yes or no in the table below.

I give consent to store my data to use for other research, as stated in the information sheet.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
I give consent to have my (remaining) body material stored for use in other research, as stated in the information sheet. The body material is stored for this purpose for another 3 years.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
I give consent to ask me after this study if I want to participate in a follow-up study.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
I give consent to let me know after the study results from the study.	Yes <input type="checkbox"/>	No <input type="checkbox"/>

I want to take part in this study.

My name is (participant):.....

Signature:.....

Date:...../...../.....

I declare that I have fully informed this subject about the current study.

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If any information becomes known during the study that could influence the subject's consent, I will let this subject know in due time.

Investigator name (or their representative):

Signature:.....

Date:...../...../.....