We are currently seeking motivated psychology students to join our team as interns. The successful candidates will be involved in research projects that aim to improve personalized risk prediction for women in or after menopause. The key goal of the projects is to develop a digital medical device (menoBalance) that uses artificial intelligence methods for the prediction of chronic non-communicable and infectious diseases. The device will use data collected from smart watches to produce personalized risk assessments of chronic disease development and will issue early warnings (red flags) of potential respiratory tract infections. This interdisciplinary project is conducted by experts in the fields of Gynecology, Statistics and Epidemiology of the University of Bern and University Hospital (Inselspital) Bern.

Project 1: Personalized quantification of cardio-vascular risks in pre-, transition to and post- menopausal women with mobile data and statistical machine learning
This study is funded by the Center of Artificial Intelligence in Medicine (CAIM) at the University of Bern and will focus on collecting wearable data and using it to infer the cardio-vascular risk in apparently healthy women of age 40 to 65 years. Having access to wearable biosensors data in clinical settings might allow to increase the awareness about the personal risk of cardio-vascular diseases. During this study, participating women will wear smartwatches for seven to ten days. We want to examine how well wearable data can predict cardiovascular risk computed by a validated online risk calculator based on blood testing.

Project 2: menoBalance App - Use of artificial intelligence methods to design a personalized chronic non-communicable and infectious disease management medical device
This project is funded by the Multidisciplinary Center of Infectious Disease (MCID) from the University of Bern. The study will enroll women of age 35 to 75 years. During the study period, the women will wear smartwatches for around six months. Additionally, data will be collected from biological testing and surveys covering psychological, social, and behavioral health-related aspects. The study will combine this personal data of the study participants with meteorological and epidemiological data, to predict respiratory infections ideally before participants show symptoms.

Information about the internship: The internship consists of the following tasks:
- Assisting in the conduction of the CAIM and / or MCID studies (e.g. participant recruitment, the participant’s study visits, data collection driven by a participant’s infection event)
- Assisting in the preparation of the MCID study (depending on the starting date)
- Acquiring psychological, women’s health- related and epidemiological, as well as methodological and statistical knowledge (self-directed learning under supervision)
- Searching for and working with external datasets (publicly available data from previous studies, weather data, or epidemiological data from systems like the Sentinel Reporting System)
- Statistical analyses

This part-time internship position will involve about 300 working hours and is based in Bern at the University Women’s Hospital or the Institute of Social and Preventive Medicine (some tasks can be performed remotely). Depending on the performance and interest, there may be the opportunity to pursue a Bachelors’ or Masters’ thesis related to these projects.
Qualification: Candidates must be enrolled in a Bachelors’ or Masters’ program in Psychology or a related field, have strong organizational skills and attention to detail and good written and oral communication skills in German and English. Candidates should have an interest in clinical research, medical diagnostics, data analysis, artificial intelligence, and wearables.

Supervision:
Prof. Dr. med. Petra Stute, Department of Obstetrics and Gynecology, University Women’s Hospital, Bern
Dr. Patric Wyss, Institute of Social and Preventive Medicine, University of Bern, Bern

Contact: Contact us via the email address patric.wyss@unibe.ch in case you have any questions and to send us your application (resume, cover letter, and any other relevant documents). We look forward to hearing from you!

About the Institute
The Institute of Social and Preventive Medicine (ISPM) of Bern performs research in a range of disciplines relevant to public health (www.ispm.unibe.ch). Groups cut across divisions, facilitating an interdisciplinary approach to research in the fields of clinical epidemiology, social and behavioral health, biostatistics, and international and environmental health. The ISPM is highly reputed for its expertise in health effects of environmental exposures, the spread of infectious disease, and the health of vulnerable groups including children and the elderly.