

### *New study at BIPS*

## **What is the connection between exercise and eating habits?**

*Chips are eaten on the sofa, and a banana is more likely to be eaten before exercising. So much for the cliché. But is this true at all? In a new research project, scientists at the Leibniz Institute for Prevention Research and Epidemiology - BIPS want to find out whether our exercise behavior has an influence on what we eat.*

To do this, they are collecting data from motion sensors and information on actual movement and eating behavior in order to train algorithms and identify conspicuous patterns. This knowledge will then make it easier to draw conclusions about actual behavior in real time in the future.

"Healthy eating and exercise behavior protects against many chronic diseases such as cardiovascular disease, diabetes, osteoporosis and cancer. However, the combined real-time measurement of physical activity on eating behaviors is difficult. But to identify how active or sedentary behaviors, food choices, and perhaps even the development of disease, we need more accurate data. To do this, we need to develop new measurement methods," explains Dr. Antje Hebestreit, head of the Lifestyle-Related Diseases Division at the BIPS and the leader of the new project there.

### **Activity trackers should make it easier to recognize certain behaviors**

The project is called WEALTH. It stands for "Wearable sensor assessment of physical and eating behaviors". In WEALTH, the scientists want to develop a new methodology that combines processing of data from motion sensors with real-time surveys on eating snacks or meals. In this way, it should be possible in the future to record behaviors with activity trackers in their context. Scientists could use it to see whether people are really more likely to eat chips while watching TV than after exercising, for example. To this end, activity data will be collected from up to 600 adults in four European countries. In two different ways: Once, the subjects will be asked to follow a protocol of behaviors; then again, they will be asked to behave completely normally.

"WEALTH will eventually publish the results on a website and provide an easy-to-use and open-access system for measuring physical activity and eating behaviors, which will also be of high value for future public health monitoring," says Hebestreit, explaining the project's final goal.

The consortium of the research project includes six partners from five countries (Ireland, Germany, Belgium, Czech Republic, France) and one collaborator (Netherlands). WEALTH receives a total of about €1.4 million in funding and is supported in Germany by the Federal Ministry of Education and Research. Project coordinator is Prof. Dr. Alan Donnelly (University of Limerick, Ireland), co-project leader is Dr. Antje Hebestreit.



### **BIPS - Health Research in the Service of People**

*The population is at the center of our research. As an epidemiological research institute, we see our task in identifying the causes of health disorders and developing new concepts for the prevention of diseases. Our research provides the basis for social decisions. It informs the population about health risks and contributes to a healthy living environment.*

*BIPS is a member of the Leibniz Association, to which 97 independent research institutions belong. The Leibniz Institutes' research activities range from natural sciences, engineering and environmental sciences to economics, spatial and social sciences and the humanities. Leibniz Institutes are dedicated to socially, economically and ecologically relevant issues. Due to their importance for the whole country, the federal and state governments jointly support the institutes of the Leibniz Association. The Leibniz institutes employ around 20,000 people, including 10,000 scientists and researchers. The institutes have a total budget of more than 1.9 billion euros.*

[www.leibniz-bips.de](http://www.leibniz-bips.de)

[www.leibniz-gemeinschaft.de](http://www.leibniz-gemeinschaft.de)

**Certified by**



**Member of**

