

Key data on the German Environmental Survey for Children and Adolescents, GerES 2014-2017

GerES 2014-2017 is the fifth German environmental survey carried out by the Federal Environment Agency. Like its predecessors, it takes place in close cooperation with the Robert Koch Institute's national health studies. GerES 2014-2017 is the environment and health module of Wave 2 of the German Health Interview and Examination Survey for Children and Adolescents (KiGGS).

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Aims of the study The study generates population-based data on the exposure of children and adolescents in Germany to environmental contaminants.

These up-to-date data are used to derive reference values describing the extent of the exposure of children and adolescents to environmental contaminants. These values form the basis for uniform evaluation throughout Germany and can also be used as European standards in EU-wide studies.

The study data are a prerequisite for providing early warning of health effects.

The data serve to identify trends and trend shifts. They can also be used for analyzing common and possible interventions.

The data make it possible to identify groups subject to specific exposures and shed light on exposure sources and pathways.

In addition, the data are used to determine environmentally induced burdens of disease and examine possible links between socioeconomic factors and exposure to environmental stress with regard to environmental justice.

Thematic priorities

- Human body burdens – human biomonitoring
- Indoor pollution – indoor monitoring
- Pollutant levels in domestic drinking water
- Noise exposure
- Residential environment, environmental justice
- Association between environmental influences and health problems
- Environmental burdens of disease/social and economic relations

Study population 2,500 children and adolescents 3 to 17 years of age and their parents or guardians. The participants are a subsample from the KiGGS study who were chosen at 167 representative locations of the KiGGS baseline study.

Duration 2014 to 2017

A preliminary study with 39 participants was conducted in late 2013 in Berlin.

Study programme	<p>During home visits, parents and children over the age of 11 are interviewed and samples are taken. The average duration of the home visit is two hours.</p> <p>The interview asks about aspects concerning the residential environment, home furnishings, use of products, eating habits, environmentally relevant behaviour, and health complaints.</p> <p>In the homes, a sound level measurement and a measurement of ultrafine particulate matter are performed and morning void urine and drinking water samples are taken. In selected households, house dust and additional drinking water samples are taken and samplers for measurement of indoor air pollutants installed.</p> <p>In chemical analysis of these samples, substances occurring in the environment which are known to cause or suspected of causing adverse health effects are determined, e.g. heavy metals such as lead and mercury, organic compounds like benzene or polycyclic aromatic hydrocarbons, plasticisers, solvents and pesticides.</p>
Results	<p>On request, participants are notified of their results after about four to six months, and along with this are given an environmental health evaluation of the levels detected in human biomonitoring and in the samples from their homes. In the case of abnormal test results, participants are advised to get medical advice, for example at an environmental health outpatient unit.</p> <p>The study's results are expected to be published within one and a half years of its completion. They will be presented in a way specific to each target group, i.e. the public (print media, radio, TV, internet), the public health service, environmental health specialists, policymakers and the scientific community (peer-reviewed journals). The data from the study will also be made available to environmental health researchers, epidemiologists and specialists in other disciplines.</p>
Data protection	<p>Participation in the study or individual study components is voluntary. All participants are advised that they will not face any negative consequences if they do not participate and that the collected data are evaluated anonymously. The Federal Commissioner for Data Protection has been informed about the study and has approved the project from the data protection point of view.</p>
Ethics	<p>The Ethics Commission of the Berlin Chamber of Physicians has assessed the study in regard to ethical concerns and has agreed to its performance.</p>
Assurance of scientific quality	<p>Throughout the performance and evaluation of the study, the Federal Environment Agency will be advised by an external scientific committee.</p> <p>The study follows the guidelines on "good epidemiological practice" by the German Society for Epidemiology (DGEpi).</p>
More information	<p>A website with detailed information, contact data, and descriptions and results of previous studies has been set up at www.uba.de/geres.</p>

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