

Study information leaflet

Information about the BLENCA2 study

The aim of "Human biomonitoring for lead in preschool children in the district of Goslar" (BLENCA2) is to understand how lead can get into the blood of children in the Goslar district. We also want to find out how lead can affect children's health.

All children from the Goslar district who will start school in the school year 2024/25 are invited to participate in this study. In addition to a questionnaire and a short interview, a so-called "Human Biomonitoring (HBM)" test on lead will be carried out. For this purpose, a small blood sample will be taken from the fingertip of each child. The lead content is then determined from the blood collected from the fingertip. All blood samples are destroyed after 12 months from the date of collection.

The questionnaire includes questions about the children's whereabouts and diet in order to find out where or how lead might have been absorbed, and where or how lead might have been ingested. Furthermore, we want to find out if lead exposure has any health effects on children. In order to collect this data only once, we ask for your consent to use the data from the **school entrance examination** for these evaluations.

Benefits and risks of participating in the study

There are **hardly any risks** involved in participating in the study. The health risks of taking blood from the fingertip are very low. Apart from a very brief pain when the lancet tip is inserted, there may be a slight haemorrhage with subsequent bruising. This will disappear within a few days. Since there are hardly any risks, it is not necessary to take out participation insurance.

A **potential benefit** of participation in the study relates to the information about the individual lead levels in your child's blood. The parents/guardians of each participating child with increased blood lead levels are entitled to a free environmental medical consultation by the staff of the LMU Clinic in Munich.

Information on participation

Participation in this study is **voluntary**.

If you decide to participate in the study:

1. Please sign the **data protection agreement, consent form** (signature of all parents/legal guardians) and complete the **contact form**.
2. Please complete the enclosed **questionnaire** in paper form or online for your child.
3. Please return the documents **before your appointment for the school entrance examination** so that we can schedule your participation following the school entrance examination. A self-addressed envelope is enclosed and **we will cover the postage cost**.
4. The collection of a few drops of blood from the fingertip of your child and a short interview (approx. 20 minutes) will take place **directly after the school entry examination** in a nearby building by qualified study staff.

If you fill out the questionnaire online, please also send us the consent form and contact details by post in the enclosed prepaid envelope!

Now, please turn this page over!

Optional additional examination: recording whereabouts using GPS data

You also have the option of borrowing a GPS logger for your child. You will receive this after the main examination in this study. Over the course of a week, your child's approximate whereabouts will be recorded on a memory card using GPS. This will give us an even better understanding of the places in the district where children like to spend time. In addition, we will receive information on the duration of stay. From this, conclusions can be drawn as to whether certain locations lead to increased lead exposure. This is useful to minimising such risks in the future, for example by replacing the soil.

The collected GPS data is stored directly in the GPS logger on a password-protected memory card, which does not allow any further conclusions to be drawn about the person

Participation in this optional additional examination is also voluntary.

We will explain the additional examination to you again in detail on the day of the main examination and answer your questions about it. Afterwards, you can decide whether you want to take part in the additional examination with your child.

Participation in the main examination does not oblige you to take part in the additional examination.

Contact details of the study team

If you have any questions or comments, please visit our website (www.blenca.de) and feel free to contact us!

You can reach our staff members Dr. Laura Wengenroth and Lea John at:

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