
MEASUREMENTS OF THE PRESENCE OF POLLUTANTS AMONG CHILDREN AND THEIR MOTHERS: EUROPEAN PILOT STUDY AIMING AT A HARMONISED APPROACH FOR HUMAN BIOMONITORING

The presence of pollutants among school children and their mothers is being measured in 17 European countries since September. This European pilot study 'DEMOCOPHES' is carried out simultaneously in 17 European countries.

In each country, 120 children (aged from 6 to 11) and their mothers (aged 45 and under) will provide on a voluntary basis hair and urine samples and will answer some questions about their way of life. Selected laboratories will analyse mercury from hair samples as well as cadmium, cotinine, phthalates, bisphenol A and triclosan from urine samples.

Mercury and cadmium are heavy metals present in the environment. Cotinine comes from inhaled tobacco smoke, among non smokers as well. Phthalates are plasticizers used in large amounts, for example in packaging materials, floor coverings and furniture. Bisphenol A can leach out with certain plastic materials, for example the lining of tin cans. Triclosan is a preservative in cosmetic products, textiles and plastics.

School children and their mothers in a rural as well as in an urban area in each country are invited to participate in this study. Besides the sample collection, a survey will be conducted by means of a questionnaire, in order to poll the ways of life that are likely to influence the measured contents in urine and hair samples. In total, information and hair and urine samples will be collected from about 4.000 individuals.

This European pilot study aims to explore the possible approaches of human biomonitoring in Europe. The same procedures are being applied in all participating countries in order to obtain comparable data regarding human biomonitoring. This information, combined with environmental and health data, will give some idea of the population exposure to pollutants and, for some of the pollutants, the possible impacts on health.

DEMOCOPHES works in close collaboration with COPHES, a scientific consortium that elaborates the necessary methodologies, a functional framework and policy recommendations.

The results of this pilot study are expected in November 2012.

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