Human biomonitoring aims to measure the amount of certain substances in all aspects of the environment, how much of this that reach humans and in what way, and finally how this affects our health.

In all aspects of this process lays challenges that must be overcome. When measuring substances in the environment, one must make sure that one is measuring the biomarker which gives the most precise results according to what one seeks to find. Dependent on the biomarker in question, multiple factors can potentially affect the measurements.

When the most suitable biomarker has been found, one must make sure that all possible sources are located and taken into consideration, in order to provide a sufficient exposure assessment. The next challenge is to gather accurate epidemiologic data, and link this to the exposure in question, and make a reliable risk assessment.

As the examples in this paper highlights, within each step are challenges, and possible limitations. For most substances, there are data gaps and incomplete understanding. There is now much work done globally, on how to further improve the process. Based on today's experiences and knowledge, new guidelines are put down.

In Europe there was recently launched a program, that will coordinate the cooperation between the member states.

Though it is already a valuable tool in many cases, human biomonitoring is now being developed into a utility that yields great opportunities in the prevention of disease in the future.