



# Women and lead exposure: a long history

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The toxic effects of lead have been known since ancient times. But it was from the second half of the 19<sup>th</sup> century onwards, with the widespread use of white lead, a pigment used in paint, that battles began to be waged for a ban on the metal. At this point, biological limit values for occupational exposure, based on measuring the concentration of lead in the blood, did not yet exist.

A century later, in the 1980s, these limit values gave rise to bitter controversies in the United States and Canada, as they were set too high to protect the health of people exposed to lead. Rather than lowering them to a level compatible with human health, employers adopted one of two positions: either excluding women of childbearing age from work that exposed them to lead, or requiring their "informed consent" to exposure. Feminist trade unionists argued that neither of these approaches was acceptable. The first, in effect, excluded women in general from this kind of work, given that the age of the women workers broadly coincided with the stage of life when they might bear children. The second failed to take on board that voluntary consent is skewed by the compelling need to earn a living. These "foetal protection" policies adopted by employers could have extreme consequences: in Milwaukee, Gloyce Qualls, a worker at Johnson Controls, the largest manufacturer of car batteries, actually had her Fallopian tubes tied so she would not be barred from carrying out the work she wanted to do. Once these kinds of stories came to light, they shocked American public opinion.

At around the same time, similar discussions were taking place in Europe. The European Union (at the time called the European Economic Community) was set to adopt a biological limit value for occupational exposure to lead. Some Member States were advocating different values for men and women. In the end, it was decided to apply the same value across the board — one that was in fact harmful to both sexes: 750 µg/l. Adopted in 1982, under pressure from the British and German governments, this value was supposed to be just a provisional compromise. Upon its adoption by the Council of European Ministers, it was announced that it would be revised within five years. We still have it today.

In recent times, a parallel discussion about reproductive risks at work has been going on in the European Union. On 25 March 2021, as part of the review of the Carcinogens Directive, the European Parliament approved an amendment. If this gets through, all substances toxic for reproduction will fall within the scope of the Carcinogens Directive, which requires the highest level of occupational health and safety measures.

The European Commission, however, is opposed to this amendment. As a concession, it has undertaken to review the limit value that was "provisionally" set in 1982. This procedure requires the matter to be referred to the Risk Assessment Committee of the European Chemicals Agency, which published its opinion in June 2020. It proposes setting the biological limit value at

150 µg/l, which would be subject to a warning in the Directive stating that the "exposure of fertile women to lead should be avoided or minimised in the workplace because the BLV (biological limit value) does not protect offspring of women of child-bearing age".

However, this warning does not place any legal obligation on employers. We would thus be reverting to the American dilemma of 40 years ago: women either being barred from certain types of work or having to give their "informed consent" to a risk.

Yet while the political terms have hardly changed, the clarity of scientific data has improved. They demonstrate that the limit value of 150 µg/l does not eliminate risks for either women or men. This is shown by a summary of the literature, published in the United States in 2012 by the National Toxicology Program (NTP), an official agency of the US Department of Health.<sup>1</sup> Reproductive health problems for women are found to occur at a level lower than 50 µg/l, while, upwards of 100 µg/l, reduced fertility may be seen in men. As regards the other toxic effects of lead, there are risks of hypertension at 100 µg/l. There are also some, although limited, data on decreases in cognitive abilities.

There should not have to be a choice between equality and occupational health. The path forward could be different: setting limit values that provide genuine protection to both men and women and ceasing to regard childbearing as an anomaly that warrants exclusion from work. What is needed is for workplaces to meet the same public health requirements as other locations. To achieve this objective, risks for reproduction need to be regarded as a serious cause for concern, as with cancer. They should be regulated in the same way in the workplace as they already are when it comes to consumer protection. With this holistic approach, decades would not be spent dealing with a single substance when there are hundreds of agents that are toxic for reproduction in workplaces, each requiring regulation.

<sup>1</sup> NTP monograph on health effects of low-level lead, June 2012.