

DOSE-RESPONSE RELATIONSHIPS (DRR) FOR SELECTED CHEMICAL SUBSTANCES

BACKGROUND Quantifying the risk of occupational factors such as chemical substances is essential to protect human health at workplaces. Hence the use of the best methodology for risk assessment and derivation of dose-response relationships (DRR) is a scientific challenge. There is much experience in risk assessment among OSH-professionals. Joint research by PEROSH institutes will offer a great chance to share know-how, resources and money.

OBJECTIVES The DRR project aims to collaborate on the derivation of dose-response relationships for relevant chemical substances in OSH. Knowledge transfer on risk assessment methodologies will improve the derivation of DRRs and will be applied to a series of new chemical substances chosen by the project members.

All Perosh institutions can make suggestions for specific, relevant chemical substances for DRR derivation, the collaboration for each substance is optional.

DELIVERABLES On the Perosh webpage online access will be provided for the following information: key sources for risk assessment, list of chemical substances with existing DRRs, list of European authorities working on risk assessment and regulation of chemical substances, key documents for DRR.

For each selected chemical substance the PEROSH working group will publish a report about the derived DRR.

RESEARCH METHODS A harmonized consensus paper on the methodology for derivation of DRR will be developed. For each new chemical substance chosen for DRR derivation the following steps will be done:

- Comprehensive literature searches for toxicological and epidemiological studies
- Selection of literature
- Critical appraisal of the selected studies
- Summary of the main results of the selected studies
- Scientific derivation of a dose-response relationship

All information for each substance, results and calculations relevant for DRR will be discussed and summarized in a report.

- SCIENTIFIC RELEVANCE**
- Expert knowledge exchange on DRR for Perosh partners, especially for exposure-risk relationship for chemical substances and derivation of DRR
 - Improvement of methodology for derivation of DRR
 - Clearing gaps and finding solutions for exposure and risk assessment
 - Joint risk assessment in Perosh for important substances in OSH

PRACTICAL/SOCIETAL RELEVANCE

The main benefits for project members are sharing knowledge, resources and money for risk assessment for relevant chemical substances.

The webpage will be a helpful source of information for DRR.

A PEROSH expert group for DRR will be established.

Application of DRR for other substances or other noxes in future are possible.

PROJECT LEADER

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