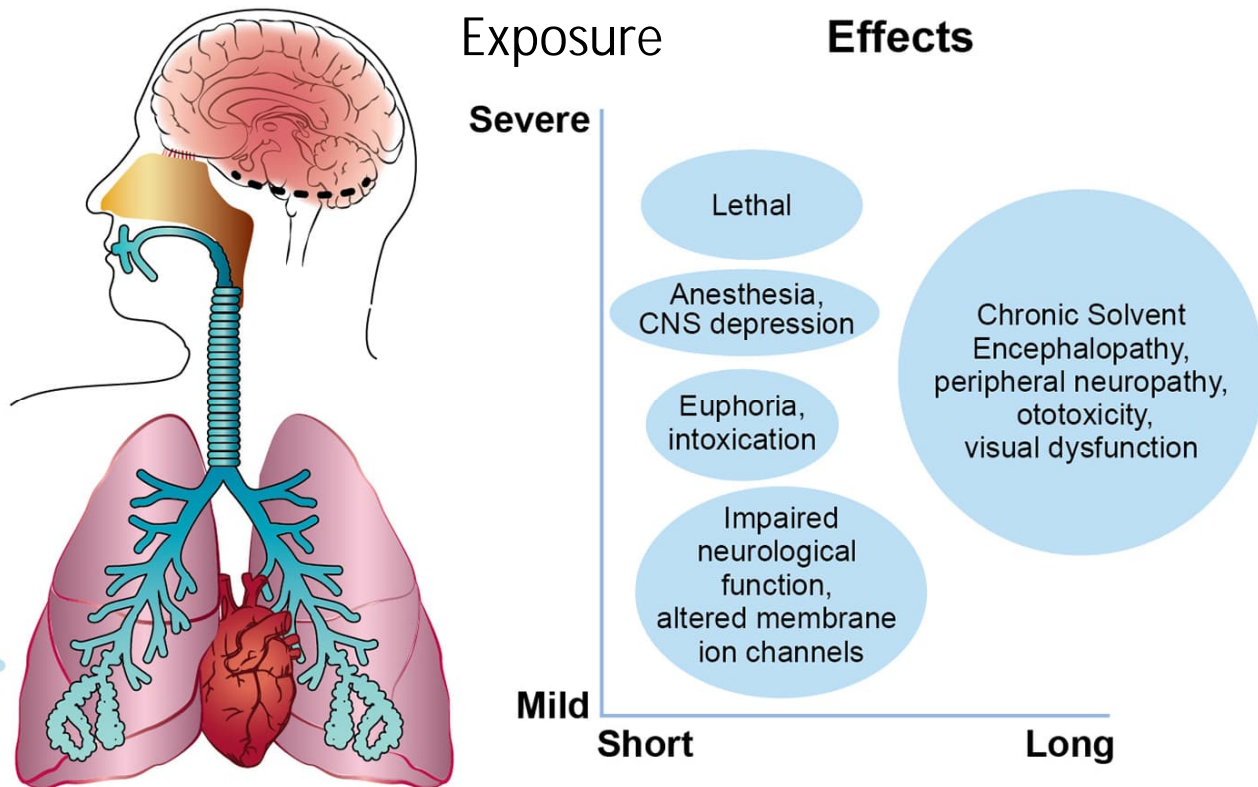


From cases to policies: How the Scandinavian disease solved the problem of solvents

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Overview

- The start: Concerns and evidence
- New evidence
- Actions and prevention
- Wake-up and spin-offs
- Lessons learned
- Relevance today



The start: Concerns and evidence

- 1950s increased use of alkyd paints (solvent-based): acute symptoms
- 1960s: Hazard labelling, PPE
 - Employer and union agreement
- 1960s-1970s: New practices (e.g. large surfaces, time pressure)
- Early 1970s:
 - Union pressure (health, safe paints)
 - Alarming case reports/surveys (DK, SE): *but*
 - Chronic CNS-effects not documented
 - No distinct neurological findings
 - Mild narcotic acute effect (vs trichloroethylene, carbon disulfide)

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New evidence 1976-80

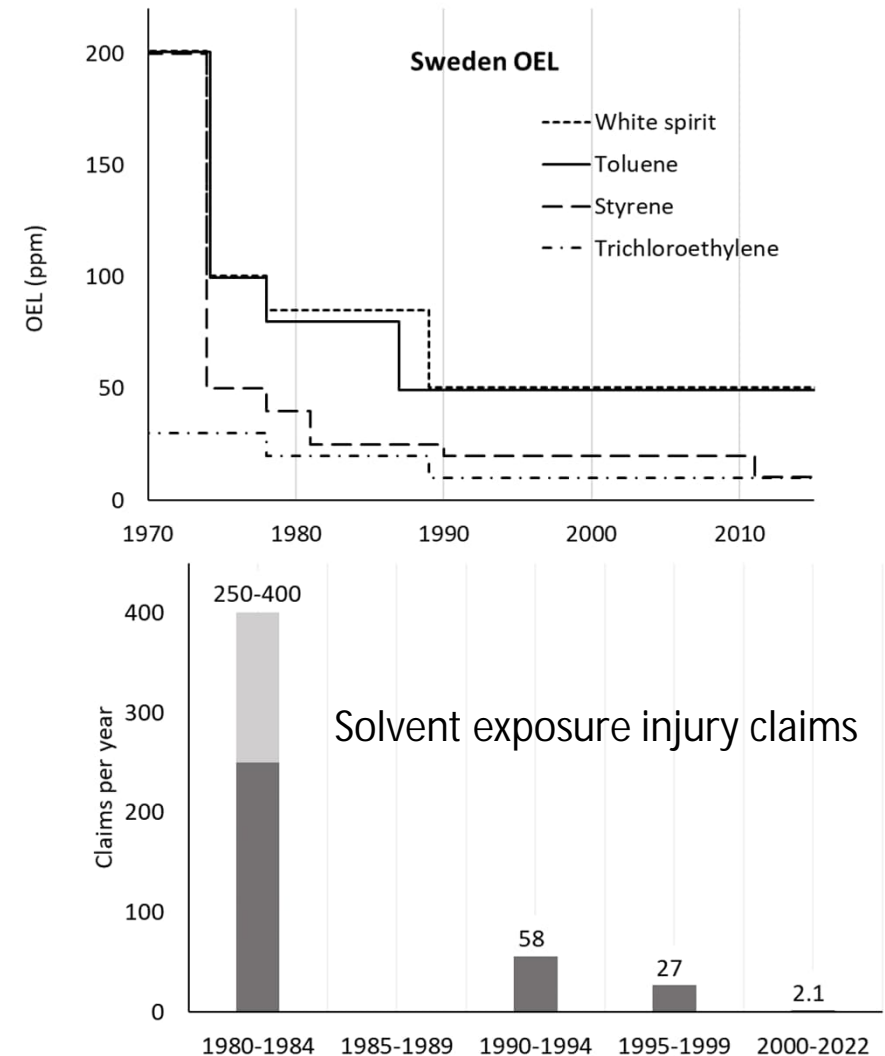
- Case series/cross-sectional studies (DK, SE, SF)
 - Neuropsychological symptoms and cognitive impairment: Psycho-organic syndrome/ chronic toxic encephalopathy
 - Construction and car painters
 - Exposures well below OELs
- Longitudinal studies (DK, SE)
 - Disability (neuropsychiatric) pension
 - House painters, cabinet makers
- Consistent AND controversial findings
 - Critical reviews connected to oil industry
- WHO clinical classification 1985
 - Dissent: not recognised outside Scandinavia



From: Umeå university "Lösningssmedelsskador ett minne blott"

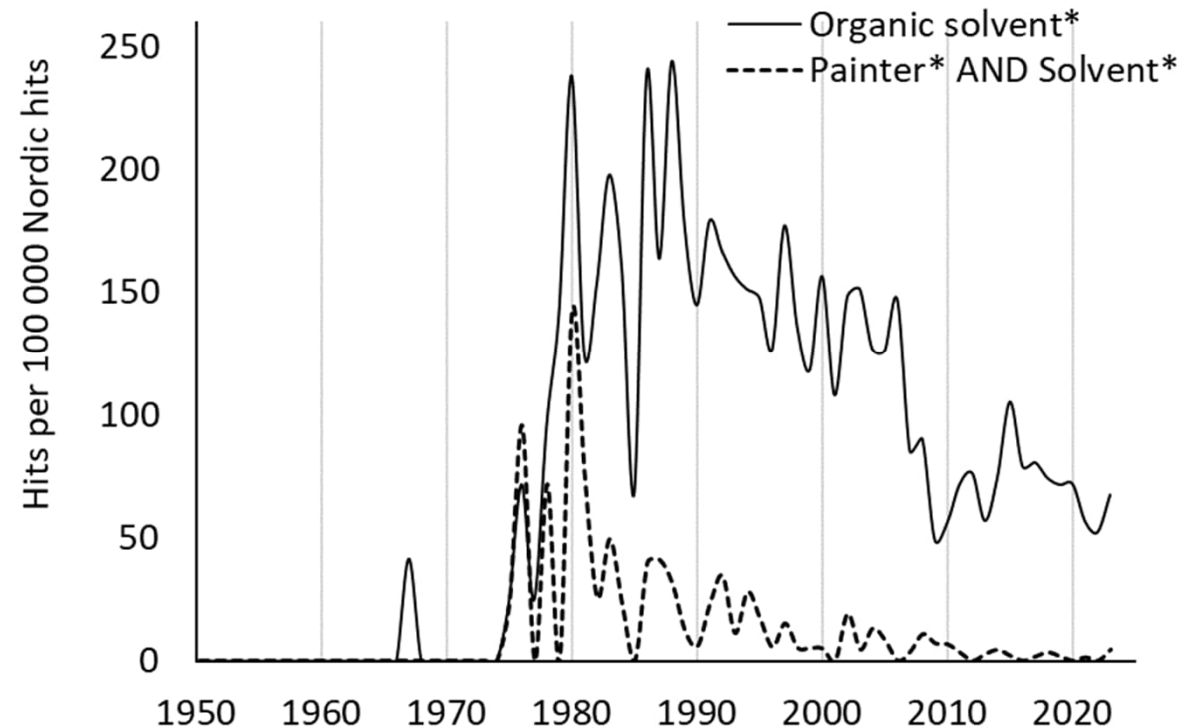
Actions & prevention 1979-87: Swedish example

- Tripartite campaign 1979
 - MRC knowledge review
 - Dissemination: Health risks, exposure reduction (hierarchy of control)
- Funding for developing water-based paints, lacquers and glues
 - Solvent-based paint* <10% in 1984
- Union-employer agreement 1986-87
 - Heavily restricted solvent-based paint
 - 16hs paid training using water-based paints for union members
 - >10 000 trained first year
- Reduced OELs
- Reduction in disease (many countries)



Wake-up call in a receptive context...

- Expanding research on solvents
 - Neurotoxicity, uptake, metabolism...
- Structures for research-based OELs
 - Nordic Expert Group 1977-
 - Nordic council of ministers
 - Swedish Criteria Group 1978-2016
- Wide-spread sensitivity to working conditions
 - Strong social partners, and union voice in governing party
 - Political upheaval, wild-cat strikes



Nordic publications (hits) in PubMed addressing organic solvents, and painters and solvents, expressed relative to the total number of Nordic hits



Lessons learned



- Huge potential transformative force in combined union struggle, social partner and state agency dialogue
 - The tripartite model at its best..
- Hierarchy of control works – not PPE
- Facilitate substitution
 - Free training (protect income/quality)
- Preventive measures were unnecessarily delayed
 - Previous knowledge not applied
 - "No data – no problem – no action" outside Scandinavia until 1990s

-There are few industrial diseases which moves one's sympathy more than does carbon disulphide poisoning. ...

As always, I found it impossible to believe that an industry which in the countries of its origin was looked on as a dangerous trade was perfectly harmless over here...

Again and again I heard that claim made in connection with some industrial poison but always it proved to be quite unfounded.

Alice Hamilton

Relevance today

- Hierarchy of control
 - Evident overconfidence in PPE
- Lack of domestic evidence still barrier to prevention
 - Ban of artificial stone (RCS>90%)
- Current context less favourable for implementation, but research is stronger
 - Tools, methods, early markers of adverse effect, assessment of evidence
- Work and its conditions on the agenda
 - Stressed by green transition and climate change
- We need to
 - Advocate infrastructure for worker safety and health matching change and challenges
 - Rapidly respond to knowledge and research needs
 - Support independent journals and expertise (e.g. SJWEH)