

Summary

This section contains reviews by Hane & Ekberg and Cherry et al on current research in behavioral toxicology. The least ambiguous evidence of long-term effects of solvent exposure is presented in a case-referent study that indicates a doubled risk for neuropsychiatric illness owing to solvent exposure. Scandinavian cross-sectional studies indicate a risk of deteriorating performance on psychometric tests after at least 10 years of exposure to solvents. Similar British studies have given no evidence of such long-term effects. In the British studies differences between the groups studied were attributed to initial differences between the groups, and the effects disappeared after careful rematching with respect to the premorbid level. The need for care and strictness in cross-sectional studies, in particular with respect to matching on relevant criteria, is emphasized.

In Scandinavia research is becoming increasingly directed away from epidemiologic investigations and towards experimental studies. Different hypotheses on the mechanisms behind the effects of solvent exposure are discussed by Hane & Ekberg. Biochemical mechanisms are suggested, but irreversible neural effects have been confirmed only for a few substances. Theories concerning the psychological effects secondary to the acute organic effect, or originating from fear of brain damage, remain to be tested.