Effects of Welding on Health III
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An up-dated (June 1979-December 1980) literature survey and evaluation of the data recorded since the publication of the first report, to understand and improve the occupational health of welding personnel.

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Preface

This literature review has been prepared for the Safety and Health Committee of the American Welding Society to provide an assessment of current knowledge of the effects of welding on health, as well as to aid in the formulation of a research program in this area, as part of an ongoing program sponsored by the Committee. Previous work has included studies of fumes and gases, radiation, and noise generated during various forms of arc welding. Conclusions based on this review and recommendations for further research are presented in Section 5 of the report. Section 1 summarizes the occupational exposures. Sections 2 and 3 contain information related to the effects of exposure to byproducts of welding operations on humans and laboratory animals. Section 4 covers in vitro studies.

Referenced materials are available from the Franklin Institute.
Introduction

The American Welding Society (AWS) has been concerned about the possible health hazards due to the exposure of welders to fumes, gases, radiation, and noise from various welding processes. Although much has already been learned about welding processes and technology, the effects of welding on human health have not been fully understood.

To help the studying and understanding of the welding environment and its effects on health, the AWS has undertaken a literature review entitled "Effects of Welding on Health" that was published in 1979, and has been updated to cover the period of January 1978 to May 1979.

Since then, interest in studying the effects of the welding environment on the various physiological systems has continued and many articles have appeared in the published literature. The present effort represents a continuation of assessing the effects of welding on health and presents an update to include information published from June 1979 to December 1980.

The reader is cautioned that the papers reviewed were examined only for consistency. No independent checks of the experiments or findings were performed. This report must be read in conjunction with "Effects of Welding on Health" by Villaume et al., and the update by Zakhari and Anderson (Vol II). References are listed at the end in alphabetical order based upon first author.