

and cooking practices in impoverished communities, which are responsible for a massive burden of respiratory ill health, contrast sharply with the concerns about possible health risks from low level exposures in western homes. Problems of air pollution in offices, industrial environments, and laboratories are also considered.

The hardback edition was first published in 1992 and it is perhaps inevitable therefore that, in a rapidly expanding field, some of the chapters are already starting to look dated. For example, important papers on the effects of nitrogen dioxide, such as the meta-analysis by Hasselblad *et al.*, is not cited, nor is the recent Swedish study of risks of lung cancer from residential exposure to radon.

From a regulatory aspect, sections of the book dealing with problems and priorities are particularly useful. It is disappointing, therefore, that not all chapters have sub-headings about these important aspects. As this is promised in the title it might have been helpful to have had an additional chapter to provide an overview of the subject that attempted to prioritise the main issues.

Finally, the chapter on environmental tobacco smoke should not pass without comment. This is a controversial subject where estimates of risks to health and regulatory policies are derived from imperfect data. These uncertainties are described in some detail and are used to cast doubt on the views of expert committees in the United Kingdom and the United States that environmental tobacco smoke is an important and avoidable source of sensory irritation, respiratory disease, and lung cancer (and perhaps cardiovascular disease) in exposed populations. In public health terms it is seen by many as a priority indoor pollutant for which action should be taken to reduce exposure. This is a view apparently not shared by the author.

Despite these criticisms, this book is a welcome addition to the publications on indoor air pollution. All of the main indoor air pollution issues are covered, making it a valuable reference for those wishing to acquaint themselves rapidly with an important and expanding subject.

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Transcultural Medicine, 2nd edition.
B QURESHI (Pp 240; price £29.95). 1994.
The Netherlands: Kluwer Academic.
ISBN 0-7923-8836-4.

I started this book with high hopes and ended with disappointment. It quickly becomes apparent that this book has been put together from a series of articles mostly written about a decade ago and that there has been little editorial input into this volume. The result is much repetition. Let me give a few examples. Ackee fruit, which is toxic if eaten unripe is mentioned in at least four places in the book. All these references to the fruit could have been collated into a single paragraph and put into the chapter dealing with diet related disease. Again there are many references to the difficulties that may result from a doctor wishing to do a vaginal examination on women from some eastern cultures. Why are these spread throughout the book instead of being located in a chapter on physical examinations? Even worse this book is littered with stereotypes. Did you know that alcoholism is said to be common among the Irish, depression

is said to be more common in Jews, British couples chat about the day's events but Eastern husbands and wives speak only about important matters and adhere to the dictum think before you speak. There are many more examples of this sort. To Greeks raising an outstretched hand is a symbol of a curse. The Greeks must be having a terrible time in the European Union.

Some of the information given is misleading—for example, a paragraph on potatoes states that; "an excess of potatoes is as harmful as bread or sugar; potato starch is converted into glucose, surplus glucose is converted into fat and the excess fat is associated with the risk of coronary heart disease". All this is nearly correct but makes no distinction between complex carbohydrates and simple sugars. In any case anything in excess is probably bad for ones health. I am sure the reader must not take seriously statements such as; "virtually all Germans have health problems and if they don't there must be something wrong with them," taken from the Xenophobe's Guide to the Germans. The context in which this statement is given, however, is very much in line with the rest of this cliché-ridden book.

Apparently this book is for inclusion in the reading list of the Royal Colleges. If so then in my opinion there is something wrong. The book deals with a serious subject. I do not object to the attempt at the use of humour as a tool to emphasise a serious point but I do object to stereotyping and the endless use of clichés. Somewhere within this pastiche a real book waits to emerge. Until that time I cannot recommend it except as light reading.

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Some Industrial Chemicals: IARC Monographs on the Evaluation of Carcinogenic Risks to Humans. Vol 60.
(Pp 560; Sw Fr 90.-/US \$81) 1994.
Geneva: IARC, WHO publications, (available in the UK from HMSO Books). ISBN 92 832 1260 6.

This is one of the latest in the well known series of IARC (International Agency for Research on Cancer) monographs. The book evaluates the carcinogenic risk to humans posed by exposure to 14 industrial chemicals—ethylene, ethylene oxide, propylene, propylene oxide, isoprene, styrene, styrene-7,8-oxide, 4-vinylcyclohexene, 4-vinylcyclohexene diepoxide, vinyl toluene, acrylamide, *N*-methyloacrylamide, methyl methacrylate, and 2-ethylhexyl acrylate. Several of these have considerable commercial importance as the building blocks of widely used polymers and copolymers, and because of this widespread use particular emphasis is placed on the risk of cancer in occupationally exposed workers, with details of available data on human exposure. Because of the wide range of uses, consumers may be exposed to lower levels of these chemicals through food and the environment, so these evaluations have a wider relevance. For example, acrylamide monomer can occur in drinking water due to the use of acrylamide polymer in water purification.

Ten of the chemicals reviewed in this volume have been evaluated previously by IARC between eight and 18 years ago. Justification for their reexamination is that a substantial amount of new data has become available. Also IARC modified its evaluation procedure in 1992, to allow more explicit consideration of the mechanisms of

the carcinogenic process, and potential human exposure, within the overall assessment of human carcinogenic risk. This has led to some reclassification of compounds previously considered. Ethylene oxide has been upgraded to classification as a human carcinogen, on the basis of evidence of small but consistent excesses of lymphatic and haematopoietic cancer found in both human and animal studies, together with extensive evidence of its *in vivo* genotoxicity from mutagenicity studies and dose-related increases in chromosomal aberrations and haemoglobin adducts in humans. 4-Vinylcyclohexene and 4-vinylcyclohexene diepoxide have both been upgraded from unclassifiable to possibly carcinogenic, due to sufficient evidence of carcinogenicity in experimental animals that has been shown since they were last evaluated, however, there is no evidence from the supporting studies that this is due to a mechanism that occurs in humans. Acrylamide has been upgraded from 2B (possibly carcinogenic) to 2A (probably carcinogenic), because there is good evidence that the carcinogenicity found in experimental animals will apply in humans as there is extensive evidence that acrylamide is an *in vivo* mutagen, its metabolism is similar in humans and rodents and it forms haemoglobin adducts in exposed humans. Propylene oxide has been downgraded from 2A (probably carcinogenic) to 2B (possibly carcinogenic). This seems to be due to a lack of strong evidence from the supporting studies that the carcinogenicity found in experimental animals (in several studies, but with inconsistent results as to organ specificity) is mediated by a mechanism that also operates in humans.

There is an extensive updated monograph on styrene, one of the most important monomers worldwide, which comes to the same overall assessment as when it was considered in 1979 and updated in 1987, that is that styrene is possibly carcinogenic to humans. This now uses the additional data on genetic and related effects, including evidence of chromosomal damage in exposed workers, which gives the assessment a firm scientific basis.

These reconsidered evaluations should be more realistic than those reached previously. Not only because of the additional data available, but because the supporting data have been fully used to come to a more sound judgement on human carcinogenic potential based on a better assessment of the potential from human effects, where there is no adequate epidemiology on human cancer.

The agents not previously considered are isoprene, vinyl toluene, *N*-methyloacrylamide, and 2-ethylhexyl acrylate. Of these isoprene was classified as possibly carcinogenic to humans, and the other two compounds had insufficient data to be classified. Long term bioassays in laboratory animals indicated a lack of carcinogenicity for vinyl toluene, but as there were no human data, and vinyl toluene is an *in vivo* mutagen in mice, it was also assessed as not classifiable as carcinogenic to humans.

Overall this monograph is up to IARC's usual high standard and the inclusion of mechanistic and other toxicological data in the overall evaluations makes the assessments more scientifically defensible and allows the reader to understand more clearly how the expert working group reached its overall conclusions.

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