employer-based health insurance scheme would increase employer interest in screening. Unfortunately, Draper does not dwell on this aspect of occupational screening. Although the Americans with Disabilities Act of 1990 may prohibit the use of genetic testing for non-job-related predispositions in hiring workers, it probably will not prevent employers from testing newly hired workers and using the results to exclude, from their health care benefits, conditions to which the workers are predisposed.

Draper emphasizes the political and scientific differences between genetic monitoring and genetic screening. In monitoring, evidence of exposure to mutagens, such as chromosome aberrations and somatic cell mutations, is sought. Monitoring serves as a warning that all workers in a given environment may be at increased risk. Draper presents evidence that employers have not been favorably disposed to monitoring, primarily because it could put pressure on them to reduce toxic exposures.

Recent advances may cause employers to take a second look at monitoring. Being able to monitor for somatic cell mutations that indicate not only exposure to a mutagen but also the presence of precancerous, treatable lesions (Sidransky et al. 1992) may provide an opportunity for employers to prevent cancer and lower their expenditures for health care. (If, however, without such monitoring the employer did not have to pay for the care of treating the cancer, because the patient was working elsewhere or retired when it was diagnosed, employers might actually incur greater costs by monitoring.)

Draper maintains that scientists often fail to recognize that workplace screening "reinforces management's claim that the workplace is safe for all but a few" (p. 178). Those who advocate screening, she says, "have become so enamored with the technologies" that they lose sight of the broader dimensions of workplace practices. She relates an interesting anecdote: "when industrial workers in a petrochemical plant in Texas discovered eighteen brain tumors within their workforce, one scientist remarked: 'Why those eighteen? You need to identify groups of workers at risk.' This scientist did not ask why there were eighteen instead of none. . . . And if you believe that only certain types of workers will have a problem, you can believe that the others are safe" (p. 47). Perhaps unintentionally, this book confronts scientists with their social responsibilities, something worth pondering.

NEIL A. HOLTZMAN
Department of Pediatrics and Department of Health Policy and Management
Johns Hopkins Medical Institutions
Baltimore

References


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This report from a loosely knit consortium of birth defect-monitoring programs from 25 different regions about the world presents data on the ostensible frequency and proportion of 21 different congenital malformations in births—variably defined from region to region—in the years 1974–88. Not all regions are represented in all years, nor are data on all defects available from all regions, and each program has used different methods. A brief description of each center, some history, a description of some ad hoc studies of member centers, and an alphabetical list of publications by members of each center for varying years are included.

Most of these programs were established in an effort to detect quickly the introduction of some new teratogen. The collected data may, perhaps, incidentally provide useful reference data on the frequency of defects in various populations and intervals.

The clearinghouse was established as a sort of information-exchange group among programs, which would also facilitate collaborative efforts by those participating. Initially funded by the March of Dimes Birth Defects Foundation, that support gradually diminished in the 1980s, and the clearinghouse is now supported and apparently administered by a separate organization, the International Centre
for Birth Defects (ICBD) located in Bergen and is funded by the Norwegian Government. I find it mysterious that the report gives neither the address of the ICBD, nor the apparent home of the clearinghouse, nor the names of the authors. I presume that a member or members of the ICBD, in fact, wrote the report.

But whoever did write it used both intelligence and tact, judging by the way the author(s) clearly faced the difficulty that they must signal to the careful reader that the raw data they summarize are of varying quality and often are uninterpretable as reference data (see below), without being, at the same time, critical of the participating centers. They do this by stating on page 37 that differences in ascertainment are probably the major source of variation in malformation rates between centers and that, moreover, for any particular center, changes in ascertainment as well as prenatal diagnosis may result in changes or differences in rates. Therefore, they say that "great care must be taken in the interpretation of temporal changes within a program as well as in comparison of the rates between programs" (p. 37). They also give some valuable comments in a discussion of specific defects, attempting to indicate what trends in the data may be readily explained by known artifactual sources. A reader may, perhaps, infer that trends not so qualified may be real. I wonder, however, to what extent such trends may be the result of unrecognized and/or artifactual variation in reporting.

To evaluate apparently high or low rates reported from any particular center for which an explanation is not readily apparent, one needs a critical assessment of the actual methods employed for case ascertainment by the center involved. Such assessments are not provided in this volume. Thus, one must simply take on faith the rates reported. (Certainly, some of the participating centers have separately published critical analyses and reviews of their results, but not all have.)

In addition, since malformations in live births and stillbirths are ascertained often in qualitatively different ways (Hook 1982) and since rates of most malformations are higher in fetal deaths than in conceptuses that survive to term (Leck 1983; Kline et al. 1989, pp. 43–68) results should be presented separately on live births and fetal deaths (induced or spontaneous). Moreover, some way of appropriate comparison of malformations in stillbirths should be devised, adjusting for differences in definitions or usage of the term among centers and for induced terminations as well. One suggestion would be to limit comparisons of fetal deaths to those of gestational age 28 wk or older (with appropriate adjustment for selected termination) and/or to present data stratified by gestational age. While this complicates reports of data, such an approach enables more appropriate analytic comparison and interpretation (Hook 1982). These are some of the kinds of issues raised by summary reports on malformation that present data unstratified by live-birth/fetal death status and by type of fetal death.

Ernest B. Hook
School of Public Health, University of California, Berkeley, and Department of Pediatrics, University of California, San Francisco

References

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Generation Games by Pat Spallone covers a great deal of material. The book discusses multiple aspects of biotechnology and genetic manipulation or genetic engineering. The topics are broad, and the information is fairly accurate. Many questions are delineated about modern technology, and questions are raised about the appropriate use of the technology. She has drawn her sources all the way from human in vitro fertilization to the human genome mapping program. For readers who want to keep up to date in the many aspects of reproductive technologies and the genetic manipulation of living products, her book is excellent.

I enjoyed reading about the background of many of the technologies that I did not know about, such as DNA fingerprinting. However, I know much of this history and many of the individuals in the area of assisted reproductive technologies, and she has condensed the history considerably. Since this is the case in the areas in which I was an active participant, I assume that the facts and history in the areas with which I am unfamiliar are similarly condensed. In the area of assisted reproductive technologies (variations on in