

under the following circumstances: One; If the patient is handicapped by serious visual loss or other physically incapacitating disorders; and two, if the patient refuses to use insulin.

The drug companies should be required to include the above facts on the package inserts of medication, despite the fact that physicians infrequently read them. Some method of identifying these medications as hazardous must be developed for patient protection.

Two: Long-term educational effort. Medical school educators, clinicians who care for patients in university and community hospitals must emphasize the facts known about these drugs to medical students, house officers, and physicians in practice. Efforts should be made to reach the last mentioned through post-graduate courses and through the development of self-educational units in an attempt to provide more reliable and scientifically based information to counteract the biased and often inaccurate statements issued by pharmaceutical companies and the throw away pseudomedical periodicals.

A vital step in the educational process is the need to encourage and support the young investigator. Greater availability of research and training grants through the National Institutes of Health or other Government agencies should be encouraged. For, it is through the development of such investigators and teachers that the many problems related to diabetes may be resolved.

Three: Adequate long-term trials before drugs are released for use. Most drugs, and this applies to the oral hypoglycemic agents, were initially tested for their ability to lower levels of blood sugar in animals. Search for toxicity was made as well. These studies were short in duration. After short-term trials in man were made by able investigators and clinicians, the drugs were released. Subsequent long-term studies of these drugs were retrospective and dealt only with their ability to alter levels of blood sugar and lipids. The UGDP study was the first well-controlled prospective study and was designed to determine the role of these drugs in the development of vascular disease. Thus, many years elapsed before medications, which were commonly used, were found to be hazardous to health and to possess very limited effectiveness. Standards for long-term studies must be developed by the FDA to insure adequate clinical trials of drugs before their release.

The steps indicated above are likely to be met with severe outcry and resistance by pharmaceutical companies and scientists and clinicians who do not accept the conclusions of the UGDP study. Continued support of the medical societies, particularly the American Diabetes Association, would be essential.

Restriction in the use of the oral hypoglycemic agents would significantly alter modes of care for the patient with diabetes. To begin, it would needfully provide a great emphasis on the importance of dietary management. In many instances with adherence to diet, adequate reduction of blood sugar and removal of symptoms would follow. Physicians or their assistants would have to instruct patients in the use of insulin when diet alone did not suffice. Thus, more teaching would be needed for each patient. Perhaps more teaching related to mechanisms involved in the production of the disease, the need for preventing infection, manifestations of hypoglycemia, and