

# **Intrauterine Devices and Their Complications**

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# Intrauterine Devices and Their Complications

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*This book is dedicated to: Nora, Barbara  
and Gail*

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# Foreword



Ever since Hippocrates observed that foreign bodies placed in the uterus would help to prevent pregnancy, periodic interest in this information and its use has resulted in attempts to control unwanted fertility. Prior to the 1900s, this interest was somewhat episodic. Because of anxiety about infection, early attempts flourished only briefly and then were no more. In the twentieth century, however, as a result of renewed interest in intrauterine contraception, particularly in the developing countries, a number of individuals throughout the world began experimenting with a variety of new intrauterine devices. Since then, a great number of these devices have been studied; a few have survived careful scrutiny, and IUDs now represent the second most commonly used form of medical contraception. It is estimated that approximately 15 million devices are in use at the present time, 3 to 4 million of them in the United States.

For a considerable time it was believed that the IUD represented an ideal contraceptive, one defined as totally safe, totally effective, easy to administer, completely reversible, inexpensive and unrelated in its use to the time of sexual intercourse. Unfortunately, the increased use of IUDs and careful study of their effects have proved this original hope to be unfounded.

While still an excellent form of conception control, the IUD does indeed have a number of compli-

cations. Over the last decade or two, as innumerable devices have come and gone, their complication rates have varied over a wide range, sparking considerable disagreement concerning the nature, pathogenesis, frequency and treatment of these complications. Much of this confusion was due to the many early studies that were performed using protocols that did not have statistical validity. Data on multiple variables were collected and described in different ways, making it impossible to compare data from one study with another. Moreover, these data were not initially analyzed using the more sophisticated statistical methods, such as the life table technique. Only with the initiation of the Cooperative Statistical Program in 1962 did valid comparative data become available.

The medical literature about intrauterine contraception has grown almost as rapidly as the use of the IUD itself. There now exist innumerable articles on individual devices, chapters in textbooks on contraception and books devoted entirely to the subject. Official documents from the U.S. Food and Drug Administration and a number of health care agencies have also contributed information to the field. Given the current and somewhat confused state of the art and given the increasing relative importance of IUDs as concerns mount about the side effects of oral contraceptives, it is time to publish an analysis of most of the relevant literature to date and to attempt to assess the nature, frequency and treatment of IUD complications.

The authors, drawing on their wide combined experience, have combed the existing literature and drawn together careful evaluations of each of the major complications, pointing out the relevance of the various studies to each issue. Where there are discrepancies in the data and differences of opinion, these are clearly stated. This format allows the reader to draw conclusions, and to realize that in many

instances, the final answers remain to be determined.

Intrauterine contraception continues to be of major importance in both developed and developing countries. It is essential to have a book where the various complications are systematically examined, where the issues are defined and where the relevant literature is cited so that further reading on any particular subject is facilitated.

This volume is sufficiently clinical to be of value to those using intrauterine devices in their practice of medicine. It is also sufficiently detailed, well-documented and well-researched to be of value to investigators in the field of intrauterine contraception.

The authors, each an authority in a particular field, are to be congratulated on having taken on a monumental task and having reduced a very complicated segment of the medical literature to such a useful and readable form.

Elizabeth B. Connell, M.D.  
May 1979

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The IUD, as one of the most effective methods of contraception, has been subject to more highs and lows of professional and public acceptance than has any other method of contraception. The first high was related to initially unrealistic expectations for its performance by health professionals, while the

lows have resulted from often inaccurate publicity concerning potential risks and complications associated with its use. Now that significant data have shown most of the potential adverse effects, including even rare events that may occur with its use, it is important that these be placed in correct perspective so that clinicians and users alike may know and understand the risk-benefit ratio associated with IUD use. This book presents the balanced view that all persons involved in the field of contraception need to know. Dissemination of this knowledge will assist health professionals in providing their clients with the information they must have so that the individual woman in consultation with her clinician can make an informed decision as to whether or not the IUD is for her.

*Louise B. Tyrer, M.D., FACOG*  
*May 1979*

## In Memoriam



*Charles A. Fields, M.D.*

Charlie Fields was a beloved friend, a skilled physician and a man of great compassion and commitment. Long before it was fashionable, he dedicated his career to improving the reproductive health of women. A major portion of his professional life was focused on increasing the awareness and availability of safe and effective methods of contraception and abortion, and advancing nurse-midwifery as a profession.

Charlie's commitment to these issues was the result of deep, personal convictions strengthened by understandings gained from his patients and through observation of their lives. Charlie's service at Cook County Hospital and at Mount Sinai Medical Center represented a large and varied patient population which included people from every walk of life and many ethnic backgrounds. As busy and involved as Charlie was, he never limited his practice or compromised the high level of concern and care he felt every patient deserved.

The study of parturition and the forces which came into play at its initiation were the chief focus

of Charlie's academic career. He was particularly concerned with the development of the lower uterine segment prior to or at the onset of labor. He often disagreed with his colleagues regarding this and other physiological concepts that remain unclear to this day. Those who heard him present his arguments were always impressed by his vast knowledge and experience.

His academic career reached a peak when he accepted the chair of the Department of Obstetrics and Gynecology at the Chicago Medical School. In this new role he was not only a leader, but also a teacher, a confidant and an advisor. As always, he was sincerely concerned for the welfare of the many people—students, residents and others—who turned to him for help or guidance. Charlie was able to make everyone feel respected and at ease in his presence and he never considered any problem unimportant or any question foolish. He gained the respect and admiration of all who knew him.

Shortly after his death in January 1976, the Charles A. Fields Foundation, Ltd. was established to actively perpetuate the ideals which meant so much to Charlie. The Foundation's philosophy is expressed as follows:

The Officers and Directors of the Fields Foundation, Ltd. believe that medical facilities can be more helpful in communities when the public has been educated regarding the maintenance of good health. They believe that such education can significantly reduce the need for acute or crisis medical care.

The Charles A. Fields Foundation, Ltd. hopes to perpetuate the ideals of an outstanding physician for the betterment of women's health, and its officers are proud to have been associated with the production of this book. There is still much that is unknown or misunderstood about contraceptive methods in general and about the intrauterine device in par-

ticular. The Foundation hopes that the information presented in this volume will provide health professionals with a better understanding of the medical complications associated with a contraceptive method which has been used by millions of women internationally for two decades.

*Jeffrey E Grossman*

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# Preface



This collaboration has been a rewarding one for the authors because it has afforded each of us the opportunity to use our individual resources, experiences and perspectives to respond to the need for an objective evaluation of intrauterine devices and their complications. We first identified the need for a review such as this one in 1976 during a series of conversations which focused on the known complications associated with the use of IUDs. A thorough review of the pertinent literature revealed many conflicting results and opinions. This convinced us of the need for an objective overview of the research to date, and ultimately led to our commitment to respond to that need.

*Intrauterine Devices and Their Complications* is the first comprehensive review of IUDs and their complications to be published and is the result of our evaluation, analysis and synthesis of the reported literature. We think it will provide the reader with a useful overview of significant information which, until now, has not been available in a single document.

We have made a conscious effort to recognize the differences among reported studies and to identify their methodologic limitations so that we might present an accurate and objective appraisal of the complications related to IUD use. Along with our own interpretations, evaluations and assessments, we have provided the reader with summaries of per-