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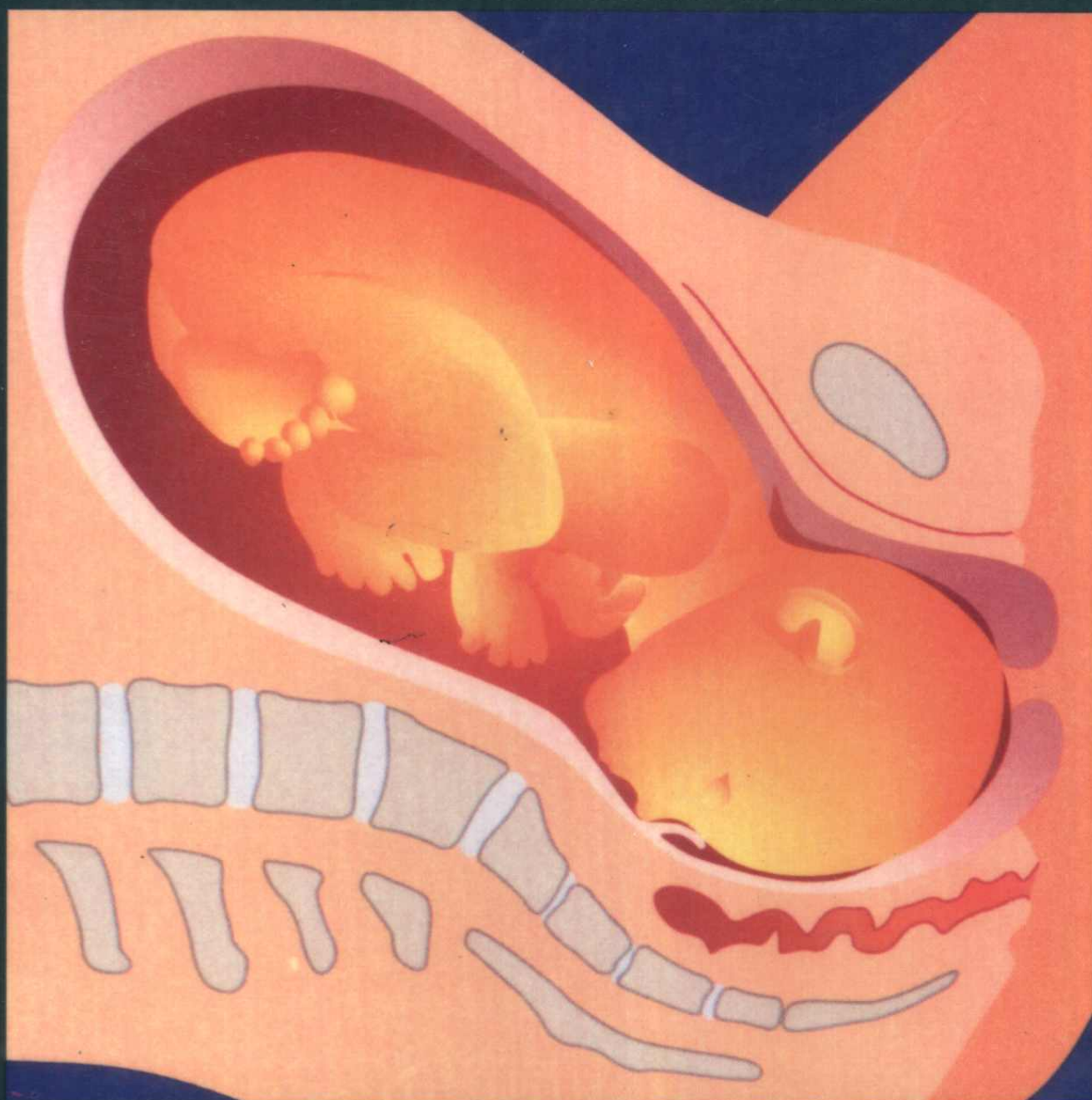
# Manual of Obstetrics

Sixth Edition

配英汉索引

# 产科学手册

Edited by  
Arthur T. Evans  
Kenneth R. Niswander



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**邮政编码:** 300192

**电 话:** 022-87893561

**传 真:** 022-87892476

**E - mail:** tsttbc@public.tpt.tj.cn

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# Manual of Obstetrics

## SIXTH EDITION

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**Edited by**

**Arthur T. Evans, M.D.**

*Professor of Obstetrics and Gynecology  
Director, Division of Maternal-Fetal Medicine  
University of Kentucky School of Medicine  
Lexington, Kentucky*

**Kenneth R. Niswander, M.D.**

*Professor Emeritus of Obstetrics and Gynecology  
University of California, Davis  
School of Medicine  
Sacramento, California*



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The authors, editors, and publisher have exerted every effort to ensure that drug selection and dosage set forth in this text are in accordance with current recommendations and practice at the time of publication. However, in view of ongoing research, changes in government regulations, and the constant flow of information relating to drug therapy and drug reactions, the reader is urged to check the package insert for each drug for any change in indications and dosage and for added warnings and precautions. This is particularly important when the recommended agent is a new or infrequently employed drug.

Some drugs and medical devices presented in this publication have Food and Drug Administration (FDA) clearance for limited use in restricted research settings. It is the responsibility of the health care provider to ascertain the FDA status of each drug or device planned for use in their clinical practice.

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## CONTRIBUTING AUTHORS

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**Alfred Z. Abuhamad, M.D.**

*Department of Obstetrics and Gynecology, Eastern Virginia Medical School,  
Hofheimer Hall, Suite 310, 825 Fairfax Avenue, Norfolk, Virginia 23507*

**Kathleen Berkowitz, M.D.**

*Long Beach Memorial Medical Center, Perinatal Center,  
2801 Atlantic Avenue, Long Beach, California 90803*

**Radek Bukowski, M.D.**

*Division of Maternal-Fetal Medicine, Department of Obstetrics and Gynecology,  
University of Texas Medical Branch at Galveston, 301 University Blvd.,  
Galveston, Texas 77555-0587*

**Eric J. Carlson, D.O.**

*Department of Obstetrics and Gynecology, Eastern Virginia Medical School,  
Hofheimer Hall, Suite 310, 825 Fairfax Avenue, Norfolk, Virginia 23507*

**Christian A. Chisholm, M.D.**

*Department of Obstetrics and Gynecology, The Johns Hopkins Hospital,  
600 N. Wolfe Street, Phipps 228, Baltimore, Maryland 21287*

**James T. Christmas, M.D.**

*Director, Maternal Fetal Medicine, Commonwealth Perinatal Associates,  
Henrico Doctors Hospital, 7601 Forest Avenue, Suite 336, Richmond, Virginia 23229*

**Charles C. Coddington, M.D.**

*Director, Obstetrics and Gynecology, Denver Health Medical Center, Vice Chairman,  
Obstetrics and Gynecology, University of Colorado Health Sciences Center,  
777 Bannock Street, Mail Code 0660, Denver, Colorado 80204*

**Jeanne A. Conry, M.D., PH.D.**

*Department of Women's Health, Kaiser Permanente Medical Group,  
1600 Eureka Road, Roseville, California 95661*

**Bonnie J. Dattel, M.D.**

*Department of Obstetrics and Gynecology, Eastern Virginia Medical School,  
Hofheimer Hall, Suite 310, 825 Fairfax Avenue, Norfolk, Virginia 23507*

**Margarita de Veciana, M.D.**

*Department of Obstetrics and Gynecology, Eastern Virginia Medical School,  
825 Fairfax Avenue, Hofheimer Hall, Suite 310, Norfolk, Virginia 23507*

**Arthur T. Evans, M.D.**

*Department of Obstetrics and Gynecology, University of Kentucky School of  
Medicine, 800 Rose Street, Room C-375, Lexington, Kentucky 40536*

**James E. Ferguson, II, M.D.**

*Department of Obstetrics and Gynecology, University of Virginia School of Medicine,  
P.O. Box 10016, Charlottesville, Virginia 22908*

**Katherine M. Gillogley, M.D.**

*Clinical Assistant Professor of Obstetrics and Gynecology, University of California,  
Davis, Medical Center, Sacramento, California*

**Glen A. Green, M.D.**

*Department of Pediatrics, Eastern Virginia Medical School / Children's Hospital of the King's Daughters, 601 Children's Lane, Norfolk, Virginia 23507*

**Peter S. Heyl, M.D.**

*Department of Obstetrics and Gynecology, Eastern Virginia Medical School, Hofheimer Hall, Suite 310, 825 Fairfax Avenue, Norfolk, Virginia 23507*

**Debra A. Horney, M.D.**

*Department of Dermatology, University of California, Davis, 1207 Fairchild Ct., Woodland, California 95695*

**Arthur C. Huntley, M.D.**

*Department of Medical Dermatology, University of California, Davis, 1605 Alhambra Boulevard, Sacramento, California 95816*

**Nelson B. Isada, M.D.**

*Alaska Perinatology Associates, 3260 Providence Dr., Suite 431, Anchorage, Alaska 99508*

**Ketan Jobanputra, M.D.**

*Department of Obstetrics and Gynecology, Denver Health Medical Center, University of Colorado Health Sciences Center, 777 Bannock Street, Denver, Colorado 80204*

**Donna D. Johnson, M.D.**

*Department of Obstetrics and Gynecology, Medical University of South Carolina, 171 Ashley Avenue, Charleston, South Carolina 29425*

**Jamil H. Kahn, M.D.**

*Department of Neonatology, Children's Hospital of the King's Daughters, 601 Children's Lane, Norfolk, Virginia 23507*

**M. Gary Karlowicz, M.D.**

*Department of Neonatology, Children's Hospital of the King's Daughters, 601 Children's Lane, Norfolk, Virginia 23507*

**Edward Karotkin, M.D.**

*Department of Neonatology, Children's Hospital of the King's Daughters, 601 Children's Lane, Norfolk, Virginia 23507*

**H. Willette Le Hew, M.D.**

*Group for Women, 880 Kempsville Road, #2200, Norfolk, Virginia 23502*

**Gary Scott Leiserowitz, M.D.**

*Department of Obstetrics and Gynecology, University of California, Davis, 1621 Alhambra Boulevard, #32500, Sacramento, California 95816-7051*

**Julie A. Lemieux, M.D.**

*Department of Obstetrics and Gynecology, Kaiser Permanente Medical Group, 1650 Response Road, Sacramento, California 95815*

**H. Trent MacKay, M.D.**

*Centers for Disease Control, Mail Stop E02, 1600 Clifton Road, Atlanta, Georgia 30333*

**M. Elizabeth Mason, M.D.**

*Department of Internal Medicine, Eastern Virginia Medical School, 855 W. Brambleton Avenue, Norfolk, Virginia 23510*

**Kathleen McIntyre-Seltman, M.D.**

*Department of Obstetrics and Gynecology, University of Pittsburgh,  
Magee Women's Hospital, 300 Halket Street, Pittsburgh, Pennsylvania 15213*

**Mark A. Morgan, M.D.**

*Director of Maternal-Fetal Medicine, University of Pennsylvania Medical Center,  
3400 Spruce Street, 2000 Courtyard Building, Philadelphia, Pennsylvania 19104-4283*

**Michael P. Nageotte, M.D.**

*Department of Obstetrics and Gynecology, University of California,  
Women's Hospital, Long Beach Memorial Medical Center,  
2801 Atlantic Avenue, Long Beach, California 90801*

**Errol R. Norwitz, M.D., PH.D.**

*Division of Maternal-Fetal Medicine, Harvard Medical School;  
Department of Obstetrics and Gynecology, Brigham & Women's Hospital,  
75 Francis St., Boston, Massachusetts 02115*

**Richard H. Oi, M.D.**

*Department of Obstetrics and Gynecology, University of California, Davis,  
4860 Y Street, #2500, Sacramento, California 95817*

**David M. Pariser, M.D.**

*Division of Dermatology, Eastern Virginia Medical School, 601 Medical Tower,  
Norfolk, Virginia 23507*

**Samuel Parry, M.D.**

*Department of Obstetrics and Gynecology, University of Pennsylvania,  
3400 Spruce Street, 415 Curie Blvd., Philadelphia, Pennsylvania 19104*

**Thomas R. Pellegrino, M.D.**

*Department of Neurology, Eastern Virginia Medical School, 825 Fairfax Avenue,  
Norfolk, Virginia 23507*

**Susan Powell, M.D.**

*Providence Alaska Medical Center, Anchorage, Alaska*

**Ruth Anne Queenan, M.D.**

*Department of Obstetrics and Gynecology, Medical University of South Carolina,  
96 Jonathan Lucas Street, Suite 634, Charleston, South Carolina 29401*

**Julian N. Robinson, M.B.B.S., M.D.**

*Division of Maternal Fetal Medicine, Department of Obstetrics and Gynecology,  
Brigham & Women's Hospital, 75 Francis Street, Boston, Massachusetts 02115*

**Rebecca M. Ryder, M.D.**

*112 Gainsborough Square, Suite 101, Chesapeake, Virginia 23320*

**Helayne Silver, M.D.**

*Division of Maternal-Fetal Medicine, Women's and Infant's Hospital,  
101 Dudley Street, Providence, Rhode Island 02905*

**Robert Nathan Slotnick, M.D., PH.D.**

*Department of Obstetrics and Gynecology, Eastern Virginia Medical School,  
Hofheimer Hall, Suite 310, 825 Fairfax Avenue, Norfolk, Virginia 23507*

**Mary Stewart**

*Oncology Associates, Anchorage, Alaska 99501*



**Peter VanDorsten, M.D.**

*Department of Obstetrics and Gynecology, Medical University of South Carolina,  
171 Ashley Avenue, Charleston, South Carolina 29425*

**Mary C. Vaughan, M.D.**

*Department of Obstetrics and Gynecology, Eastern Virginia Medical School,  
Hofheimer Hall, Suite 310, 825 Fairfax Avenue, Norfolk, Virginia 23501*

**Mark Carl Williams, M.D.**

*Department of Obstetrics and Gynecology, University of South Florida, College of  
Medicine, Harbor Side Medical Tower, Suite 529, 4 Columbia Drive, Tampa,  
Florida 33606*

**Hugh Dixon Wolcott, M.D., M.S.E.**

*Department of Obstetrics and Gynecology, Eastern Virginia Medical School,  
825 Fairfax Avenue, Norfolk, Virginia, 23507*

**John D. Yeast, M.D.**

*Department of Obstetrics and Gynecology, University of Missouri-Kansas City,  
OPC2, 4401 Wornall Road, Kansas City, Missouri 64111*

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## PREFACE

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Obstetric practice in the United States is changing at an increasingly rapid pace as American healthcare evolves. In this environment, obstetric practitioners frequently need a pragmatic and concise source of information in the course of their demanding daily clinical work. The 6th Edition of the *Manual of Obstetrics* has been significantly revised and updated to reflect these changes and needs.

As in previous editions of the Manual, the chapter authors of the 6th Edition are physicians who are actively practicing obstetrics and understand what the busy practitioner needs to know. The intended audience continues to be medical students, residents (particularly in obstetrics and gynecology, family practice, and emergency medicine), and physicians providing obstetric care who want a concise reference on obstetric management issues. Other healthcare professionals working in obstetrics—nurse midwives, obstetric and emergency room nurses, sonographers and others—have also used previous editions and we hope this will continue.

All of the chapters in the 6th Edition have been edited to bring them up-to-date with current practice. The tradition of bringing on new authors with respected clinical experience continues with this edition of the Manual, with nearly half of the chapters having new authors. As with previous editions, specific attention has been given to providing pragmatic recommendations on clinical management and drug doses. The chapters on Endocrine Disorders, Infectious Disease Complications, Neurologic Complications, and Dermatologic Complications have been extensively rewritten. A new chapter on Multiple Gestation has been added in response to the impact of reproductive technologies and the increased incidence of multiple birth. Bibliographic references have been updated in all chapters.

The 6th Edition of the *Manual of Obstetrics* is truly the result of a team effort. My co-editor, Dr. Arthur T. Evans, should receive credit for managing the majority of the organizational and editing work for the 6th Edition. Special recognition goes to Colleen Sliffe for her secretarial assistance and detailed attention to organization of the manuscript. Most importantly, we thank the chapter authors of the 6th Edition of the Manual, to whom the credit is owed. Without their efforts in the midst of their busy clinical schedules, the 6th Edition could not have been completed. Finally we thank our families and our clinical partners for supporting us through this effort.

It is with great sadness that we note the passing of one of our authors, Dr. Mark Morgan. Dr. Morgan was a highly respected colleague and a valued friend. He will be sincerely missed, but he remains with us through the quality of his work and the spirit of his friendship.

K. R. N.  
A. T. E.

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# I. PREGNANCY

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# 1. CONTRACEPTION, ABORTION, AND STERILIZATION

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H. Trent MacKay

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Fertility control should be considered an integral part of health care. Although no perfect contraceptive exists, a wide range of methods are available, and almost every couple should be able to find a method that suits their needs. However, to choose a contraception method intelligently, couples need information and advice from their medical care provider. They will want to know the effectiveness, the shortcomings, the dangers, and the expense of the devices or drugs from which they can choose.

**I. Contraceptive failure.** A study by Trussel and Kost (1,2) provided a comprehensive review of the literature. Unfortunately, there is much conflicting information, and many of the studies of contraceptive efficacy or failure have serious methodologic flaws. However, the authors have used the existing information to develop Table 1-1. The perfect use rate represents the authors' "best guess" of the failure rate during the first 12 months of use among couples who use the method perfectly. The typical rate is the rate of failure among average users who experience an accidental pregnancy in the first year of use. The lowest reported rates are those reported in the literature. Unfortunately, most of the lowest reported rates for periodic abstinence methods are probably too low because they include data for more than one year of use. In counseling patients about contraceptive choice, it is important to recognize one's own biases about the methods. It is fairly common for counselors to quote lowest expected or lowest reported failure rates for methods that they favor while quoting typical rates for those they disfavor.

## II. Available agents

**A. Oral contraceptives.** Oral contraceptives are potent steroid medications that prevent pregnancy primarily by inhibiting ovulation. Either an estrogen or a progestin alone in a sufficiently large dose will prevent ovulation, but they are usually combined because the dose of either medication alone that is necessary to prevent ovulation causes an unacceptably high rate of breakthrough bleeding or other undesirable side effects.

With combination therapy, a tablet containing both agents is taken for 21 days, beginning between the first and fifth days of the initial menstrual cycle or on the first Sunday after the menses begin. The primary antifertility effect is mediated by the progestin, which prevents ovulation and effects changes in the endometrium and the cervical mucus. The estrogen is added principally to decrease the number of days of vaginal bleeding experienced by the patient. Triphasic pills contain different doses of progestin, and in some cases estrogen, in each 7-day segment of the cycle and allow a reduction in hormone dose from the levels found in the monophasic pills. Preparations containing only a progestin are also available. The antifertility effect of this drug is somewhat lower than that of the combination pills, and the incidence of breakthrough bleeding is substantially higher. The major advantage of these pills is the lack of side effects caused by estrogen.

**1. Effect on various organ systems.** In addition to their infertility activity, oral contraceptives exert effects on many other organ systems. These effects are important for a number of reasons. Certain organ function tests are altered substantially by oral contraceptives, thus complicating the diagnosis of disease in these organs during oral contraceptive use. Contraindications to the use of pills frequently are based on the pills' effects on a particular organ system. The side effects of the pills may result from an undesirable action of the drug on certain organs.

**a. Effect on reproductive organs.** Ovulation is prevented, thus decreasing the number of patients with functional ovarian cysts,

Table 1-1. Contraceptive failure rates

Method	Percentage of women experiencing an accidental pregnancy in the first year of use	
	Perfect use	Typical use
Chance	85.00	85.00
Spermicides	6.00	26.00
Periodic abstinence		25.00
Ovulation method	3.00	
Symptothermal	2.00	
Calendar	9.00	
Withdrawal	4.00	19.00
Cervical cap		
Parous women	26.00	40.00
Nulliparous women	9.00	20.00
Diaphragm	6.00	20.00
Condom		
Female	5.00	21.00
Male	3.00	14.00
IUD		
Progestasert	1.50	2.00
T-Cu 380A	0.60	0.80
Pill		5.00
Combined	0.10	
Progestin only	0.50	
Depo-Provera	0.30	0.30
Norplant	0.05	0.05
Female sterilization	0.50	0.50
Male sterilization	0.10	0.15

Adapted from Trussell J, et al. Contraceptive failure in the United States: An update. *Stud Fam Plan* 1990;21(1):51, and from Hatcher et al. (1).

although there is less suppression of ovarian cysts with the low-dose monophasic and triphasic pills. Combined therapy usually produces a secretory effect on the endometrium, and this may produce marked glandular suppression and amenorrhea. Although the earlier, high-dose combination pills frequently produced enlargement of leiomyomas, the low-dose pills with less than 50 mg estrogen do not have this effect. There is some controversy about the relationship of pill use and the development of cervical dysplasia and carcinoma (3). Breast tenderness is a well-recognized side effect of oral contraceptives, caused primarily by the estrogen. Oral contraceptives decrease the incidence of benign breast disease. Although there is no evidence of an overall increase in the risk of breast cancer with pill use, the pill may accelerate the development of preexisting breast cancers in young women. If given during the postpartum period, combination, but not progestin-only, pills may decrease milk production as well as the milk's protein and fat content. Pill use apparently decreases a woman's risk of experiencing serious pelvic infection by approximately 50% (4).

- b. **Effect on other endocrine organs.** Estrogen increases the amount of circulating binding globulins, thus increasing the total amount of bound circulating hydrocortisone and thyroxine. Because these increases are in the bound fraction of the hormone, no recognized change occurs in either adrenal or thyroid function. Although low-