

# Textbook of Human Sexuality for Nurses

Robert C. Kolodny, William H. Masters, Virginia E. Johnson,  
Mae A. Biggs



# **Textbook of Human Sexuality for Nurses**

# Preface

Although clinical knowledge about human sexuality has been increasing over the last decade, it has not been systematically incorporated into contemporary nursing practice in an effective manner. We undertook the writing of this book in response to the enthusiastic interest that nursing students and nurses in practice showed in a series of seminars and workshops on human sexuality conducted by the Masters & Johnson Institute. Questions asked during those programs and candid responses to program assessment instruments have helped us to identify many topics with a high degree of clinical relevance; wherever possible, we have attempted to synthesize new research data and clinical problems to suggest appropriate lines of patient management that might be explored.

Although it is increasingly apparent that some nurses will develop a specialized interest in sex counseling and sex education, this book is designed for use by the nonspecialist as well. Ideally, this material will be introduced and integrated into the nursing curriculum at an early stage of training so that the many aspects of sexual health encountered by the nurse in clinical practice will be familiar territory. In that way, nurses can provide a better conceptual and practical understanding of the impact that illness, surgery, drug use, aging, and other events may have on their patients.

We gratefully acknowledge the expert assistance of Sarah Weems, Mark Schwartz, Nancy Kolodny, and Ira Kodner, whose critical comments on portions of the manuscript were of considerable value. The Washington University School of Medicine Department of Medical Illustration, directed by Kramer Lewis, provided proficient technical support. The willingness of thousands of people to participate, in illness and in health, in our research programs is acknowledged—they are in many ways the persons most responsible for the work on which this book is based. Finally, thanks must also go to the many nurses who have contributed by asking questions, expressing their interest, and offering encouragement for our work.

R. C. K.  
W. H. M.  
V. E. J.  
M. A. B.

St. Louis

# **Textbook of Human Sexuality for Nurses**

# Contents

Preface	v
1 Sexuality as a Clinical Science for Nurses	1
2 Sexual Anatomy and Physiology	9
3 Developmental Sexuality	31
4 Geriatric Sexuality	79
5 Endocrine Disorders and Sex	93
6 Sex and Cardiovascular Disease	137
7 Sex and Gynecologic Illness	151
8 Sex and Urologic Illness	179
9 Sex and Chronic Illness	201
10 Drugs and Sex	221
11 Sex and the Handicapped	247
12 Sex and Family Planning	279
13 Rape	323
14 Homosexuality and Transsexualism	341
15 Concepts of Sex Therapy	359
16 Male Sexual Dysfunction	375
17 Female Sexual Dysfunction	399
18 Questions and Answers	421
Index	433

# Sexuality as a Clinical Science for Nurses

Nurses are presently caught in a series of paradoxes related to the place of sexuality in the health-care model. Nurses are encouraged to approach clinical matters from an integrative perspective—the frequently cited “holistic approach” that systematically encompasses all facets of a patient’s existence—but their professional education has omitted a fundamental store of factual information pertaining to human sexuality, leaving a blind spot perilously close to the core of human nature. Nurses are encouraged to function as educators, both in patient care and in preventive medicine, but many nurses have been prevented from receiving or giving effective sex education. Nurses are urged to undertake a team approach to health care, but this concept typically relegates the nurse to custodial roles as the least important team member who has little or no voice in the processes of analysis and decision-making, which are usually dictated by physicians. Finally, women in nursing who show a professional interest in sexuality—as it is affected by illness, drugs, surgery, trauma, or life events—are frequently accused by colleagues or by male physicians of being either seductive or aggressive.

These paradoxes partially reflect the enduring strength of the sex-role stereotypes that still surround nursing as a profession and nurses as people. Nurses—whether female or male—are perceived as nurturing, empathic, intuitive, patient, loyal, and passive. According to these stereotypes, nurses carry out physicians’ orders, protect physicians from unnecessary interruptions, and clean up after physicians; they *do not* disagree with the physician, make autonomous decisions of any moment, or receive any credit for the results of modern medical care. Despite the blatant inequities of such stereotyped perceptions, these traditional views are reinforced and perpetuated to a large degree by their wide prevalence. Only recently, in tandem with an awakening of feminist concern on the part of some women and men who wish to break away from these restrictive models, have leaders of nursing begun to suggest sweeping changes in the roles of contemporary nurses.

That fellow nurses or physicians would regard nurses who are interested in sexuality with suspicion goes beyond the influence of sex-role stereotypes. Traditionally, the health-care professions have avoided rather studiously the inclusion of information relating to sexuality in their educational curricula. This omission undoubtedly stems from a number of reasons, including a general lack of systematic data in regard to sexual function and sexual behavior, the shroud of privacy with which most cultures have surrounded sexuality, and the fear of impropriety implicit in dealing directly with a sphere of human existence that touches on values, morals, and legal sanctions. It is indeed a

curious educational system that focuses attention on obstetrics and contraception while seeking to isolate the physiology of reproduction from the emotions, behavior, and biology of sexuality. Nevertheless, physicians or nurses whose background knowledge of sexuality is sketchy or is even based on cultural myth and misconception may feel threatened and embarrassed—both professionally and personally—by the nurse whose knowledge of sexual matters is more advanced. The physician is revealed to be less than all-knowing; the source of this revelation is a nurse, who is perceived to be the educational inferior of a physician; perhaps most devastatingly, the source of this revelation may be a woman!

Although medical schools began to include material related to human sexuality during the 1960s, a widely divergent situation currently exists among individual schools regarding the amount of time in the curriculum devoted to sexual topics, the competence of teachers, the orientation of education, and the actual curricular content. There is an even greater degree of difference involving education about human sexuality as taught in nursing schools. First, a far greater percentage of nursing schools have no formal course work devoted to sexuality. This fact reflects both misunderstandings (confusing science with morals, for example, or denying the frequency of sexual problems involved in problems of health) and the tendency to inertia that is characteristic of some academic institutions. Second, few nurse educators are widely knowledgeable in sexual medicine; the shortage of qualified faculty in this sphere of nursing precludes effective professional instruction even when time is allocated for the subject. Third, there is resistance on the part of many nursing school administrators and senior faculty to developing course content pertaining to sexuality; this resistance may stem from personal discomfort, lack of professional exposure, or the paucity of available teaching materials such as textbooks that meet academic standards.

Consideration of human sexuality as a science has been slowly evolving within the health-care professions, in graduate and undergraduate education, and in the eyes of the general public. In fact, one of the most powerful catalysts for the growing awareness on the part of health practitioners of the importance of sexuality as a science has been the greatly increasing public demand for sexual information, counseling, and therapy. It is not difficult to understand this new demand when certain background factors are kept in mind. The public has become reasonably sophisticated in regard to most aspects of health care, as a result of both extensive media coverage and the dramatic impact of procedures such as hemodialysis, brain surgery,

and organ transplantation. The public has been inundated with books, magazine articles, movies, and television shows about sex, creating a new openness in regard to sexuality. Matters of social policy, including contraception and abortion, clearly relate to sexual behavior. But perhaps most important, the public is now aware of the fact that sex therapy offers a highly effective treatment for problems that may have existed for many years. Public focus is unquestionably “cure”-oriented, although much of nursing and medical practice relates to health “care,” with amelioration or rehabilitation being the primary goal when cure is clearly not possible.

The growth of sexuality as a science has been neither easy nor rapid. At present there is little support for research in this field in comparison to the need, and there are relatively few qualified researchers devoting much of their professional time to studies of sexuality. Biomedical research in sexuality has been devoted primarily to studies of male sexual function; one can contrast this with the direction of contraceptive research over the past two decades, which has focused almost entirely on the female reproductive system. The implication seems to be: Help men function; do something to women. There are major gaps in knowledge about sexuality—for example, practically nothing is known of the neurophysiology of sexual functioning—and in general, the study of sexuality is far less advanced than immunologic, respiratory, or cardiac research.

Why study sexuality? What is its relevance to nursing? The answers to these questions are perhaps best approached by examining the concepts of health and illness that help to mold the primary objectives of nursing as a profession. Illness and disease are not synonymous terms; although the word *disease* actually implies “removed from ease,” general usage of this word refers to structural pathology or biochemical alteration within the body [1]. Illness implies a disturbance of feeling, a limitation on the ability to function freely; people with certain diseases may not feel ill, whereas other people with no definable disease are quite aware of their illness. Although the concept of health is central to nursing, defining health simply as the absence of disease or illness may be too limited in scope. Lambertson has summarized one perspective on modern nursing goals: “The central focus of nursing is care, comfort, guidance, and assisting individuals to cope with problems that lie along the health-illness continuum. It is the concept of the degree and nature of the deviation from a normal life process, or the degree and nature of deviation from a predictable psychologic or physiologic response to illness or disability, that distinguishes nursing practice from medical practice” [2].



If the emphasis is truly to be on health-care delivery, concepts of health or well-being cannot be restricted arbitrarily to physiologic or psychological functioning excluding sex. Picture, for a moment, the consequences of banning the study or care of digestive function from nursing. Would this foster good health for either the individual, the family, or the community? Sexual feelings, sexual functioning, and sexual behavior are inextricably interwoven into the entire fabric of human life. Life begins by a combination of sexual behavior and physiologic function of sex organs; sexual feelings are important determinants of childhood development and subsequent maturation; sexual behavior commonly comprises a significant segment of adult existence, which may become more evident when normal sexual functioning is impaired as a result of injury or disease.

Advances in medical and scientific technology, including the development of new and potent pharmacologic agents, refined or revolutionary procedures in surgery, immunology, nuclear medicine, and sophisticated laboratory technology, have made it possible to reduce the fatality rates of many diseases. There has been a major focus of attention both in basic and clinical sciences on diseases that kill, such as cancer or heart disease. Although improved survival statistics have brought pleas from humanists, health-care professionals, and the public to address issues pertaining to the quality of life, this phrase has often been used more as a cliché than as a practical concern.

The study of sexuality and the provision of health-care services related to sexuality are important steps in assuring that the quality of life is not confused with survival statistics. Sexual health care—both in relation to disease and in relation to normal life-cycle events—cannot be left to physicians alone. Clinical nurses and nurse educators have a responsibility to develop knowledge, personal comfort, and clinical skills in this endeavor.

At this point it may be useful to consider briefly the types of sexual problems that nurses may encounter in clinical settings. These problems range from very obvious situations, such as that confronting an emergency room nurse dealing with a rape victim or a nurse working with a woman who has just undergone a mastectomy, to problems that might be less apparent: What does the nurse on a hemodialysis unit say to the male patients who ask about impotence? What are the implications of antihypertensive therapy for sexual functioning, and what is the role of the nurse in this regard? How should a nurse on a coronary care unit deal with anxieties about sex raised by patients? The remainder of this volume is intended to provide a useful framework for ap-

proaching the analysis, treatment, rehabilitation, or prevention of such situations.

Some physicians and some nurses feel that the nurse should refer all such questions or problems to a physician. This approach is inadequate for a number of reasons, as outlined below:

1. Many physicians do not know the answers any better than nurses do.
2. Physicians often have limited time to spend with patients—whether in the hospital, clinic, or office setting—whereas the nurse can frequently plan to spend more time with them, which may be therapeutic in the simple process of allowing the patient to verbalize his or her anxieties and is apt to uncover more information that will be of assistance in formulating plans of management for all members of the health-care team.
3. Some patients may feel more comfortable talking to a nurse than to their physician; this increases the likelihood of gaining accurate information, making correct diagnoses, and arriving at useful therapeutic decisions.
4. Nursing fails in its efforts to treat the whole person, including disruptions of health that affect families, by narrowing the scope of nursing care to exclude sexuality.
5. Economies of both time and money are aided by full participation of nurses in total health care; every member of the health-care team is assisted in his or her work by the broadest *competent* participation of other team personnel in all facets of work.

This is not to say that all nurses in all specialties must become experts on human sexuality. All nurses are not expert in psychiatric diagnosis or treatment, but familiarity with the principles of human behavior encompassing normal behavior, behavior and stress, and pathologic behavior states is a necessary component of responsible nursing care. This is just as true for nursing personnel in the operating room, in the obstetric ward, and in an allergy clinic as it is for nurses in mental health clinics or psychiatric inpatient services. Likewise, knowledge about sexuality in a clinical context allows for a better understanding of the impact of illness or disability on everyday life—an understanding that frequently serves to optimize patient care.

A nurse who understands the sexual worries of a patient who is recuperating from a colostomy is frequently able to provide both reassurance and practical counseling that may be of benefit. Such benefit

may affect the entire period of postoperative care, since lowering the patient's anxiety generally can be expected to permit more attention to be paid to the matter of ostomy care by the patient and his or her family and to foster motivation for recovery. Repeatedly, in clinical situations in which illness or disability threatens or impairs sexual functioning, patients express relief, appreciation, and a more positive emotional outlook when an effort is made to discuss sexual health consequences in an open and straightforward fashion.

Not all people have positive regard for their sexuality, and some patients will be embarrassed or worried by discussions of sexuality. Although further aspects of this subject will be discussed in later chapters, it is helpful to recognize several pertinent facts in this context. First, the approach to each patient, although generally conceived by professional guidelines, must always be individualized. Second, queries can be framed in a manner that allows the patient to make the choice of whether or not to pursue the topic of sexuality beyond a short series of perfunctory, descriptive questions. Third, sometimes denial, repression, reaction formation, or rationalization are mechanisms responsible for professed negative sexual attitudes and may simply be masking major concerns about sexuality, particularly as it relates to the stress of illness. Fourth, eliciting historical information, presenting educational concepts, and providing patient care must be approached in a nonproselytizing manner. There can be no excuse for confusing scientific fact with moral postures. Finally, active participation in sex cannot be considered as a necessary requirement of good health.

Nurses can actively participate in the evolution of sexuality as a science in a number of different roles. For some, familiarity with the basic principles of sexual function and dysfunction will serve as an asset in the provision of clinical nursing service in a general sense. Other nurses will utilize such knowledge in its applicability to specialized populations to provide well-formulated, holistic treatment plans; this group might include those who work with spinal cord-injured patients, the mentally retarded, diabetics, cardiac patients, alcoholics, and other groups at high risk for the development of sexual problems. Some nurses will assume active responsibility in counseling patients and families with sexual concerns—including nurses in family planning programs, abortion centers, and physical rehabilitation facilities—while nursing personnel with a strong interest in this field may choose to receive training and specialize in sex therapy. There is also a major need for nurse educators who are knowledgeable in the area of sexuality, both to teach nursing students and to provide education for patients, families of patients, and communities. Finally, and

probably most frequently overlooked, is the potential role of nurses as researchers—as contributing members of multidisciplinary research teams *and* as independent investigators selecting a study topic, planning a project, collecting and analyzing data, and presenting their findings to other health-care professionals. The field of sexuality as a clinical science can only benefit if nurses assume these challenges.

## References

1. Cassell, E. J. Illness and disease. *Hastings Center Report* 6:27, 1976.
2. Lambertson, E. The changing role of nursing and its regulation. *Nursing Clinics of North America* 9:395–402, 1974.



Throughout the health-care sciences, it is recognized that a detailed understanding of anatomy and physiology is a prerequisite to considerations of pathology or treatment. This recognition is based on the premise that effective therapy of any disordered body system hinges on an attempt to restore the equilibrium of normal function, although this goal may not always be attainable. Sexual behavior and sexual function are not, of course, only biologic in nature. The interaction of *psyche* and *soma* is nowhere more plainly illustrated than in the area of sexuality, where factors such as ego strength, social learning, personality, and values clearly combine with fundamental mechanisms of physiologic function in a highly complex system. In this chapter, discussion focuses on the biologic components of sexual response, with only a brief commentary on pertinent psychological aspects.

### Female Sexual Anatomy

#### The External Genitals

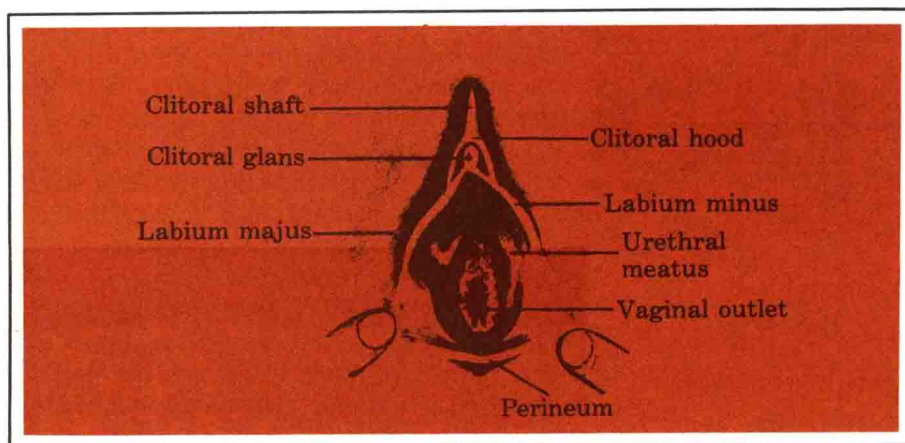
The external genitals of the female consist of the labia majora, the labia minora, the clitoris, and the perineum. Bartholin's glands, which open on the inner surfaces of the labia minora, may be considered functionally within the context of the external genitals, although their anatomic position is not in fact external.

Figure 2-1 presents a schematic depiction of the external genitals of the adult female. The appearance of the genitals varies considerably from one woman to another, including: (1) marked variation in the amount and pattern of distribution of pubic hair; (2) variation in size, pigmentation, and shape of the labia; (3) variation in size and visibility of the clitoris; and (4) variation in the location of the urethral meatus and the vaginal outlet. In the sexually unstimulated state, the labia majora usually meet in the midline, providing mechanical protection for the opening of the urethra and the vagina.

Histologically, the labia majora are folds of skin composed of a large amount of fat tissue and a thin layer of smooth muscle (similar to the muscle fibers present in the male scrotum). Pubic hair grows on the lateral surfaces; both the medial and lateral surfaces have many sweat and sebaceous glands. The labia minora have a core of vascular, spongy connective tissue without fat cells; their surfaces are composed of stratified squamous epithelium with large sebaceous glands.

The clitoris, which is located at the point where the labia majora meet anteriorly, is made up of two small erectile cavernous bodies enclosed in a fibrous membrane surface and ending in a glans or head. Histologically, the tissue of the clitoris is very similar to that of the penis. The clitoris is richly endowed with free nerve endings, which are extremely

Figure 2-1. The human female external genitalia. (From Masters and Johnson [1].)



sparse within the vagina [1], and is not known to have any function other than serving as a receptor and transducer for erotic sensation in the female.

## The Internal Genitals

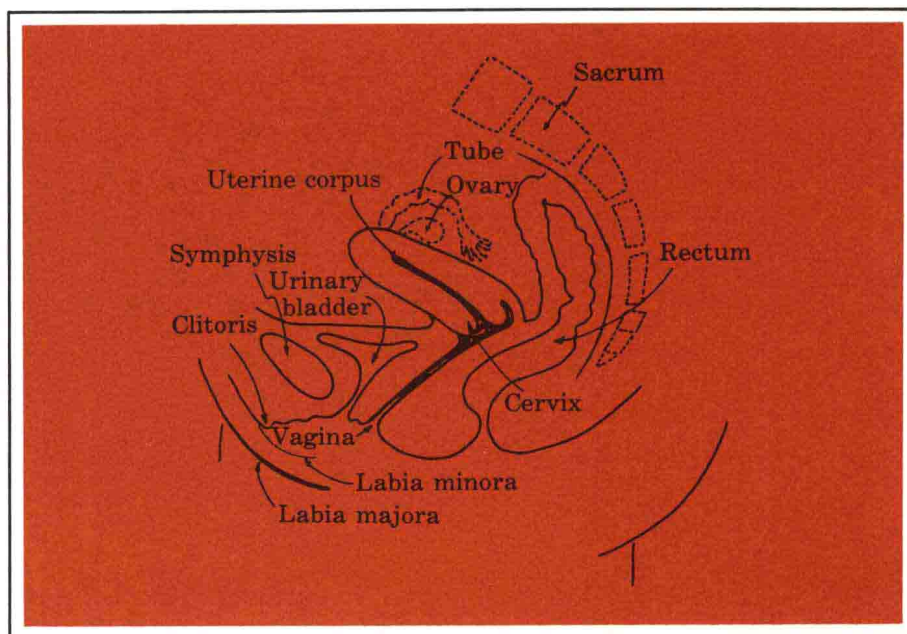
The internal genitals of the female include the vagina, cervix, uterus, fallopian tubes, and ovaries (Fig. 2-2). These structures may show considerable variation in size, spatial relationship, and appearance as a result of individual differences as well as reproductive history, age, and presence or absence of disease.

The vagina exists functionally more as a potential space than as a balloonlike opening. In the sexually unstimulated state, the walls of the vagina are collapsed together. The opening of the vagina (vaginal introitus) is covered by a thin membrane of tissue called the hymen, which has no known function; rather than being a solid band of tissue blocking the vaginal orifice, the hymen typically has perforations in it that allow menstrual flow to be eliminated from the body at the time of puberty. The walls of the vagina are completely lined with a mucosal surface that is now known to be the major source of vaginal lubrication; there are no secretory glands within the vaginal walls, although there is a rich vascular bed. The vagina is actually a muscular organ, capable of contraction and expansion; it can accommodate to the passage of a baby or can adjust in size to accept a much smaller object.

The cervix is a part of the uterus that protrudes into the vagina. The mouth of the cervix (cervical os) provides a point of entry for spermatozoa into the upper female genital tract and also serves as an



Figure 2-2. Female pelvis: normal anatomy (lateral view). (From Masters and Johnson [1].)

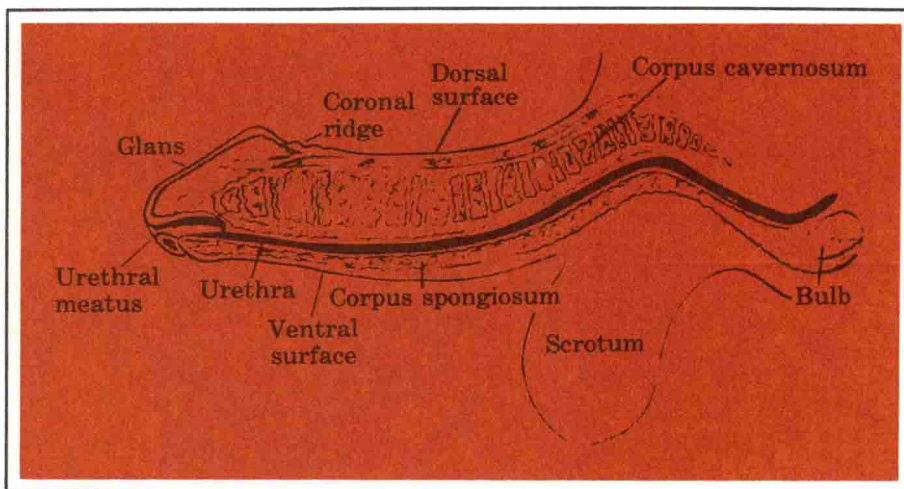


exiting point for menstrual flow. The endocervical canal (a tubelike communication between the mouth of the cervix and the uterine cavity) contains numerous secretory crypts (“glands”) that produce mucus. The consistency of cervical secretions varies during various phases of hormonal stimulation throughout the menstrual cycle: Just prior to or at the time of ovulation, cervical secretions become thin and watery; at other times of the cycle, these secretions are thick and viscous, forming a mucus plug that blocks the cervical os.

The uterus is a muscular organ that is situated in close proximity to the vagina. The lining of the uterus (the endometrium) and the muscular component of the uterus (the myometrium) function quite separately. The myometrium is important in the onset and completion of labor and delivery, with hormonal factors thought to be the primary regulatory mechanism. The endometrium changes in structure and function depending on the hormonal environment. Under the stimulus of increasing estrogenic activity, the endometrium thickens and becomes more vascular in preparation for the possible implantation of a fertilized egg. If the fertilized ovum implants, the endometrium participates in the formation of the placenta. When fertilization and implanta-



Figure 2-3. The penis: normal anatomy (lateral view). (From Masters and Johnson [1].)



tion do not occur, the greatly thickened endometrium begins to break down, resulting in menstrual flow as a means of shedding the previously proliferated endometrial tissue, which will regenerate under appropriate hormonal stimulus in the next menstrual cycle. Endometrial biopsy may be undertaken as part of an infertility evaluation to determine if ovulation has occurred and to observe whether appropriate progesterone secretion has been present.

The fallopian tubes or oviducts originate at the uterus and open near the ovaries, terminating in fingerlike extensions called fimbriae. The fallopian tube is the usual site of fertilization; the motion of cilia within the tube combined with peristalsis in the muscular wall results in transport of the fertilized ovum to the uterine cavity.

The ovaries are paired abdominal structures that periodically release eggs during the reproductive years and also produce a variety of steroid hormones. Discussion of ovarian structure and function is beyond the scope of this volume; interested readers are referred to the reference list at the end of this chapter [2, 3].

### Male Sexual Anatomy

The penis consists of three cylindrical bodies of erectile tissue (Figs. 2-3 and 2-4): The paired corpora cavernosa lie parallel to each other and just above the corpus spongiosum, which contains the urethra. The erectile tissues consist of irregular spongelike networks of vascular spaces interspersed between arteries and veins. The distal portion of the corpus spongiosum expands to form the glans penis. Each cylindri-