Human sexuality in physical and mental illnesses and disabilities

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Chapter Four

Disorders of the Nervous System

Neurologic Disorders / Spinal-Cord Injury / Brain Injury / Epilepsy / Parkinson’s Disease / Cerebral Palsy / Multiple Sclerosis
Neurologic Disorders


Neurological disease may adversely affect sexual functioning and behavior directly by altering physiology, or indirectly by creating psychological side-effects. The effect of neurological disease on sexual activity is discussed in this article. Specific conditions covered include cerebral disease, spinal-cord injury, and peripheral nerve lesions such as those associated with diabetes, uremia, or malnutrition. Some aspects of treatment, sex education, and rehabilitation are also presented.


This discussion of neurologic diseases causing hypersexuality includes the following disorders: temporal lobe epilepsy, encephalitis, and head injury. Also discussed is the impact of cerebral arteriosclerosis on sexual behavior of elderly men.


Three detailed clinical case reports of intrinsic neurologic diseases are discussed to demonstrate that impotence may be a prominent symptom in neurologic conditions, as well as one of the early or presenting complaints of patients. One of the cases reported reveals that the medical treatment of the underlying neurologic condition, pernicious anemia, resulted in a recovery of potency in the patient. A variable impotence is reported in association with multiple sclerosis discussed in another clinical case report.

This is a report of a case history of a patient who had periodic release of aggressive and hypersexual behavior that seemed to be attributed to lesions in the patient's limbic system. The results of various clinical observations with postmortem examination of the lesions are discussed in light of earlier clinical research findings.


The physiological relationships between the cerebral cortex and various aspects of sexual behavior and functioning are discussed. Also presented are sexual disorders associated with temporal lobe dysfunction.


The authors suggest, based on clinical evidence, that the sexual and aggressive components of the Gilles de la Tourette's syndrome may result from neurophysiological, not psychological, causes. This syndrome is characterized by involuntary movement and utterances and the use of foul language. This article discusses the psychosexual aspects of this syndrome.


Silver discusses patients who are likely to be affected by sexual problems, the anatomy and physiology of intercourse and its impairment in men and women with chronic diseases of the nervous system, and the practical aspects of intercourse, marriage, pregnancy, and labor.


In counseling spinal-cord-injured patients with impaired sexual function, the doctor must not only be aware of the sexual problems in disorders of the nervous system, but must also know how to advise the patient. The authors discuss how to approach the subject, and consider...
role expectations and other psychological reactions that should be explored. Kinds of questions that may be investigated in interviews are listed and various therapeutic procedures are presented.


Some association between transvestism and cerebral disorder is suggested in this report. The author reviews pertinent literature and reports on twenty-six cases of transvestism who were examined electroencephalographically. Twelve patients showed abnormal records, and six patients had “probably normal” readings. In eight of the eighteen records which were not completely normal, the abnormality was present in one or both temporal lobes.


The aphasic person is subjected to complex and conflicting experiences, including those connected with sexuality and sexual identity. The intimate relationship between sexual and social readjustment may prevent total rehabilitation, if proper attention is not directed at sexual problems. The author presents observations and problems encountered in counseling 100 ambulatory adults with various degrees of chronic aphasia, 85 of whom exhibited nonfluent aphasia, while 15 were fluent aphasics. Results show that sexual identity and role changes which occurred varied in severity depending on age, marital status, degree of motor impairment, and type of aphasia. Sexual inadequacy, loss of masculinity or femininity, impotency, and frigidity were frequent. Feelings of rejection were often at the basis of these feelings. The author asserts that the attitude of the unimpaired spouse is very important to the total rehabilitation of the patient.

**Spinal-Cord Injury**

This is a summary of a paper presenting the author's findings relating to the sexual functioning of one hundred paraplegic patients examined by him. He indicates that, in general, erections are more frequent than ejaculations in this population. While in complete spastic lesions the reflex erections are common, ejaculations are more rare, occurring in approximately one-third of the cases. Sexual intercourse is difficult because of motor difficulties; however, if they can be solved, successful intercourse can be enjoyed. Results of an examination of twenty patients showed that if the spasticity is above level T10, ejaculation is possible. In cases where spasticity was below T10, five succeeded with good sperm and seven trials showed success with average sperm quality. As a rule, the value of the obtained ejaculations in these cases is average or mediocre as far as the number of sperm and their motility are concerned. In patients with incomplete spastic lesions the erections achieved were more reflexogenic than psychogenic, and they were very often accompanied by ejaculation. In the complete, flaccid lesion, however, neither erections nor ejaculations were possible.


The authors note that the purpose of this comprehensive publication is to provide a complete, up-to-date, indexed bibliography of references dealing with the psychosocial, vocational, and sexual aspects of spinal-cord injury. Author index and a list of sources of information consulted are also provided.

Baum, W. Neurogenic vesical and sexual dysfunction attendant on trauma to the spinal cord. Michigan Medicine, 1962, 61, 574–584.

Sexual functioning in paraplegic and quadriplegic patients is discussed in light of the author's clinical experience and of data obtained from the research literature. The author indicates that about two-thirds of paraplegics and quadriplegics are capable of erections, and some two-thirds of these are capable of sexual intercourse.


The purpose of this study was to examine the role of sexual impotence in the concept of self of paraplegic males (n = 30). The sample
in this study was divided into two groups, one with subjects who were sexually impotent and the other with patients who were sexually potent. The subjects were 18 to 45 years of age. Rorschach tests, Thematic Apperception tests, Sentence Completion tests, and Draw-a-Person tests were administered. It was found that impotent subjects have, superimposed upon the difficulties inherent in their paraplegia, problems of sexual self-concept. Their concept of physical self includes marked feelings of body degeneration and distortion. Also, their concept of sexual self includes preoccupation with their own genitalia, which many of them regarded as a mutilated or castrated organ. The impotent patient's concept of emotional self included strong feelings of depression and anxiety and little drive or vitality. They also showed marked difficulties in establishing warm and satisfying interpersonal relationships, and manifested feelings of hostility and aggression.


This article presents and discusses detailed information about setting up a program for the sexual rehabilitation of spinal-cord-injured patients. The author recognizes the importance of sexual adjustment for the disabled person, and the significant role of the nurse in facilitating this process. The author suggests that for the nurse to be effective in assisting patients in their sexual rehabilitation, she must learn about her own sexuality and be comfortable with the subject.


Sexual functioning was examined in a group of 84 quadriplegic patients as part of an extensive and comprehensive study conducted by the author. Results relating to the patients' ability to obtain erections, ejaculate, and have intercourse are presented and discussed.


This was an oral presentation of the same material covered by this author and A. E. Comarr on the neurological disturbances of sexual function with special reference to 529 patients with spinal-cord injury (published in 1960 in the Urological Survey, Vol. 10, pp. 191–222).

Sexual functioning following spinal-cord injury is one of the aspects studied and presented in this comprehensive report. One study reported shows that 86.6 percent of a group of 157 discharged patients with 90 incomplete and 67 complete lesions at various levels were capable of having erections. In another study it was found that of 200 patients, 63.5 percent had had erections while the remainder were unable to have erections; among the patients with erections, 42.5 percent responded to local reflex stimulation, intercourse was possible in 23 percent, and 12 percent had ejaculations. Yet another study showed that sexual dreams were reported by 60 percent of 157 spinal-cord patients. In this group, almost equal distributions of “complete wet,” “complete dry,” and “incomplete” dreams were reported by patients. The first two categories refer to a sexual dream with orgasmic feelings, with or without emission; in the last category, climax was not reached by the dreaming patients. The author also presents a physiological explanation for sexual functioning in spinal-cord-injured patients.


The authors present the results of an extensive study aimed at the examination of sexual functioning in patients with spinal-cord injury (n=529). It was found that erections were maintained in 63.5 to 94 percent of the patients, and intercourse was possible in 23 to 33 percent. Ejaculation was found less likely to occur than erection. Other specific results are discussed and conclusions are presented.


This paper presents an analysis of reactions to trauma in males. The authors identify four phases in the sexual reaction: (1) the most regressive phase, which is revealed by the patient's conviction that any sexual activity would harm the already injured body; (2) projected hostility and rage against the sexual partner, as if she was intent on harming the husband; (3) premature ejaculation or impotence occurs in this phase, which is characterized by the conviction that the genital organs have been affected by the trauma; and (4) acceptance of passive genital stimulation by manipulation and oral-genital practice. The authors conclude that the study of sexual response to injury provides an opportunity to examine the avenues by which sexual instinct is ex-
pressed. A patient’s sexual response also “provides clinical landmarks to follow the effect of therapeutic intervention.”


This booklet reports the findings of a study examining sexuality in spinal-cord-injured women (n=31). Subjects were interviewed on a wide range of topics related to their sex life. The study material was organized and presented in five sections: (1) the importance of clear communication of feelings and needs between sexual partners, and various steps that can be used in setting the atmosphere for sexual intimacy; (2) suggestions made by subjects which relate to various sexual techniques and sexual stimulation practices; (3) orgasms experienced by subjects and the realization that an orgasm is a highly individual experience; (4) methods used in dealing with bowel and bladder problems faced by subjects; and (5) social techniques and skills that are essential for the initiation and development of sexual relationships. It is the author’s hope that the information provided by her subjects will be helpful in assisting other disabled women in their rehabilitation process.


This project compiled data describing ways in which spinal-cord-injured women (n=31) cope with the effects of their disabilities as they relate to sexual and social adjustment. Subjects’ ages ranged from 18 to 51 years, and each woman had had at least one sexual experience after injury. The correlation between sexual adjustment scores and time since injury was near zero (.053), suggesting that time alone is not enough for sexual adjustment after injury. Participants reporting good sexual adjustment were able to compensate for lack of sensation or mobility. If a woman had a very high injury, and could not move or feel below her shoulders, she frequently enjoyed sexual stimulation to her ears, mouth, or any other part of her body where she had partial feeling. Women provided descriptions of orgasms ranging from psychological sensations to physical experiences. Information related to bowel and bladder programs affecting sexual adjustment was provided. Two major conclusions were drawn: (1) despite the severity of some disabilities, the women were still able to live extremely fulfilling lives; and (2) many aspects of sexuality and social relationships are
the same for spinal-cord-injured women as they are for able-bodied women.


This study examines ways in which spinal-cord-injured women cope with the effects of their disability on feminine attractiveness and sexual adjustment. Responses to semistructured interviews with 31 patients yielded sexual adjustment scores and material concerning sexual compensation, orgasm, bowel and bladder programs, and methods of enhancing attractiveness.


In this Answers to Questions section of the journal, Cole discusses the question: "Can a female paraplegic experience an orgasm, and can she conceive and then maintain a normal pregnancy?" He limits the discussion to the subjective sensation of orgasm, not its muscular-vascular responses.


The importance of sexual adjustment for the physically disabled person, myths and misconceptions surrounding the disabled person's sexuality, the impact of spinal-cord injury on the sexuality of both male and female patients, and considerations for counseling with this population are thoroughly discussed in view of research and clinical data. Also presented are the male and female sexual response cycles for both the spinal-cord-injured and the able-bodied. Various inadequate approaches of rehabilitation workers in dealing with the sexuality of the disabled person are systematically analyzed, the reasons and possible undesirable effects of these approaches are outlined, and alternate approaches are suggested. The author concludes that given adequate counseling, "almost all physically disabled adults can expect to enjoy an active sex life."

Sexual function in both male and female spinal-cord-injured patients is the main topic discussed in this presentation. Also presented are some specific suggestions concerning effective approaches to counseling the disabled person about his or her sexuality.


Psychosexual adjustment difficulties in rehabilitation clients are problems with which counselors must deal. Recognizing the counselor's need for special sex education, the Michigan Rehabilitation Association and the Program in Human Sexuality of the University of Minnesota Medical School collaborated to conduct and evaluate a one-day seminar on sexuality in spinal-cord-injured persons. The seminar consisted of a combination of audio-visual presentations, lectures, and small group discussions of sexual topics such as nudity, masturbation, and sexual function in the disabled. Evaluation was made by a questionnaire developed specifically for the study. Results of the evaluation show that this program was beneficial for most of the participants and harmful for only a few. Most participants indicate that such a program should be a part of the formal training for rehabilitation counselors.


The authors describe an experimental two-day intensive sex education program for adult paraplegics and quadriplegics and for health professionals who counsel physically disabled persons. The program was developed by the University of Minnesota Medical School. Adapted from a training program in human sexuality that has recently been added to the medical school curriculum, the desensitization-resensitization program emphasized exposure to a variety of explicit slides and films of sexual activity, with periodic small group discussions under trained group leaders. It is suggested that the inadequate sex counseling given by many health professionals may contribute to a sense of disability on the part of the spinal-cord-injured adult.

The statistical data presented in this paper are based on a study of 858 spinal-cord-injured patients. The purpose of the study was to examine marriage and divorce rates in these subjects, who were chosen for the study randomly over a six-year period. Data show that 26 percent of this population remained bachelors before and after injury, 48 percent were married before injury, and 26 percent had never been married before injury but married for the first time after injury. Other aspects discussed are marriage, divorce, and widowhood among patients who married before injury and in those who married after injury. The author concludes that the divorce rate of any of the groups in his study was far less than that in California and Los Angeles County. It was also confirmed that the divorce rate was greater among patients who were married at the time of injury than among those who married after the injury, 31 percent and 21 percent respectively. The ability of the patient to perform sexual coitus did not play as great a role as one might anticipate.


This paper presents statistical data examining marriage and divorce rates of patients with service-connected spinal-cord injuries compared to patients whose injuries were not service-connected. In this study, 858 patients were interviewed, 54 percent of whom were veterans with service-connected (SC) injuries (injuries incurred during military duty), and 46 percent were veterans with non-service-connected (NSC) injuries. In both study groups, the percentage of patients who remained bachelors before and after injury was essentially similar. Thirty-five percent of the SC patients and 63 percent of the NSC patients were married before injury. Other data show statistics of marriage, divorce, and widowers among patients married before and those married after injury in both study groups. The author concludes that "sexual disability is undoubtedly not the sole reason for divorce" among the spinal-cord-injured patients studied.

This is a presentation of detailed statistical data of the marriage and divorce rates of paraplegic patients (n=623) and quadriplegic patients (n=235). The similar divorce rates in both groups after injury, 31 percent of the paraplegic patients and 34 percent of the quadriplegic patients, show that the level of the spinal-cord injury does not play a significant role in the marital adjustment of patients. It was also found that 46 percent of the paraplegic patients and 43 percent of the quadriplegic patients could have sexual coitus. The author concludes, however, that the data showed that potentially more quadriplegics can perform the act of coitus than paraplegics, since 26 percent of the quadriplegics and 11 percent of the paraplegics had made no attempt at sexual intercourse. These findings “can be further substantiated when one realizes that all quadriplegics have upper motor neuron lesions in regard to their spinal erection centers, whereas many paraplegic patients have lower motor neuron lesions in this respect.”


This study examined the marriage and divorce rates of spinal-cord-injured patients with complete neurological lesions (n=593) compared to those with incomplete neurological lesions (n=265). Results show that of those who were married before injury, 68 percent of the patients with complete lesions and 66 percent of those with incomplete lesions were still married after injury. The divorce rate after the onset of injury was also very similar in both groups. This suggests that the extent of the injury does not play a major role in the divorce rate of patients. However, other data suggest that for subjects who were married for the first time only after the onset of injury, those with complete lesions had a lower rate of divorce. While 56 percent of those with incomplete lesions could perform sexual coitus, only 39 percent of patients with complete lesions could do so. Finally, of those patients who were divorced at the final stages of this study, 41 percent with complete lesions and 53 percent with incomplete lesions could have sexual intercourse. The author suggests therefore “that the sexual disability is undoubtedly not the sole reason for divorce” among these patients.


This is a summary of statistical data presented in the four preceding papers by the same author regarding the rates of marriage and divorce among 858 patients with spinal-cord injuries. Statistics discussed relate to overall marriage and divorce rates before and after the onset of injury, percent of married patients who had children before injury, adoptions after injury, artificial insemination by a donor, coitus ability after injury, and relationship of coitus ability to marriage and divorce.


The author asserts that "sufficient statistical data have been accumulated to aid the physician in attempting to prognosticate what sexual potentials a patient will have who has sustained injury to the spinal cord and/or cauda equina." In this article, the author examines sexual functioning in patients following spinal-cord injury in light of clinical and research findings. Also discussed are some practical suggestions for counseling patients regarding their sexuality. Some discussion is devoted to the female paraplegic and her sexuality.


The level and extent of spinal-cord injury are most significant when evaluating the patient's sexual potential and functioning. The author examines the differences in sexual functioning among patients with spinal-cord injuries resulting from complete or incomplete upper and lower motor neuron lesions. It was found that the majority of patients with a complete upper motor neuron lesion are able to achieve reflexogenic erections. About 75 percent of them can have sexual coitus. Most patients with incomplete upper motor neuron lesions have erections, and 85 percent are successful at coitus. Other results are discussed.


This article presents and discusses the results of a study aimed at the examination of sexual functioning in patients following spinal-cord injury. Spinal cord injury patients (n=150) were interviewed concerning erections, sexual intercourse, ejaculation, and orgasm. Results show that 82 percent were able to attain erections. In general, patients with
complete upper motor neuron lesions have a higher percentage (96.4) of erections than do patients with complete lower motor neuron lesions (24.2), but they experience fewer ejaculations. As expected, patients with incomplete upper or lower motor neuron lesions have a better chance of erection, ejaculation, and orgasm than have patients with complete lesions. Many other findings and the neurologic aspects of sexual functioning are presented and discussed.


The authors assert that “determining the extent of the patient’s spinal lesion is the all important first step in helping both patient and partner gradually achieve a satisfactory sexual adjustment.” In this paper, the authors discuss the sexual aspects of spinal-cord injuries and the role of the health-care practitioner in assisting the patient to achieve some level of sexual adjustment. Nine case studies are presented for illustration.

Comarr, A. E., Hohman, G. W., and Tempio, C. The sexual function of the spinal cord injured patient. In a source book: Reha-

Among the first things a newly injured spinal-cord-injury patient will wonder about is his future sexual functioning. In this chapter, the authors discuss sexuality following a spinal-cord injury in male patients. Specific topics covered include classification and examination of sexual functioning, erections, coitus, ejaculations, and orgasms in these patients.


The authors report at length on two patients with spinal-cord injuries who had gynecomastia and testicular atrophy. In addition to traumatic injury of the spinal cord, it seems that other lesions of the spinal cord of males may result in a tendency toward “demasculinization.” The authors consider the occurrence of gynecomastia and tes-
paticular atrophy in males with degenerative lesions of the spinal cord significant for various reasons which they discuss.


In this brief guide to office counseling aimed at physicians, the author discusses psychosocial and sexual aspects and difficulties in paraplegics. Suggestions for sex counseling with this population are also presented.


This article discusses the sexual concerns of the spinal-cord-injured patient and the effects of injury on the self-concept. Information is given to show how medical personnel can be more sensitive in assisting the patient in restoring his self-image, beginning by dealing with the patient’s sexual concerns.

Dahart, A. Assisting the patient with a spinal cord injury to maintain his or her sensual sexual identity. In Nursing management of spinal cord injuries. National Paraplegia Foundation, 1974, 118–120.

The author discusses sexual concerns and difficulties associated with spinal-cord injuries and makes suggestions for assisting patients in achieving an acceptable level of sexual adjustment.


The purpose of this study was to examine the motivation of women marrying paraplegic patients (n = 20). A questionnaire was developed which included questions on sexual development and sex education of the spouse. Also included were questions relating to what the wife expected from marriage and the extent to which she succeeded in achieving her goals.


Although there have been numerous reports on education, vocations, and physical functional skills of the long-term spinal-cord injured, little has been described about the marriage and family patterns of this group. The purpose of this study was to offer a description of
marriage and family patterns based on a study that involved 219 male subjects with long-term spinal-cord injury who had completed a rehabilitation program and had been living outside of the hospital for periods of 2 to 30 years. The subjects were from 21 to 75 years of age. An interview was held with each subject in which marital status, environment, and home situation were discussed. It was found that at the time of the interview, 72 percent of the "paras" and 55 percent of the "quads" were married. The results also indicated that the divorce rate among spinal-cord-injury persons was lower than that among the general population. In fact, combining both groups, the paraplegics and the quadriplegics, one finds a ratio of 1 in 6.7 marriages being terminated—well below the national ratio. The author concludes that, given the proper rehabilitation program, the spinal-cord-injured person can maintain a successful marriage and family life.


The purpose of this study was to examine the level of knowledge held by physical therapists (n=30) concerning sexual functioning in spinal-cord-injured persons. Results and conclusions are presented.

Eisenberg, M. G., and Rustad, L. C. Sex and the spinal cord injured: Some questions and answers. Veterans’ Administration Hospital, Cleveland, Ohio, 1974.

Previously published to supply information of interest to the spinal-cord-injured person, this booklet in the second edition has been expanded to include information on the sexual potential of the spinal-cord-injured woman. Different topics discussed are male and female sexual anatomy (illustrated), the sexual responses, and problems concerning marriage, divorce, contraception, and the adoption of children. A glossary and lists of recommended readings and references are included.


The authors describe a program for sex education and counseling developed at the Spinal-Cord-Injury Service of the Veterans’ Administration Hospital in Cleveland, Ohio. The program consists of a series of eight weekly meetings of 90 minutes each. Although materials were
a valuable part of the sessions, active sharing of experiences and feelings of the participants was considered of central importance. The authors further discuss the content of eight meetings of this program.


The importance of sexual adjustment in facilitating the rehabilitation process and the role of the rehabilitationist in assisting the disabled person in achieving sexual adjustment are the main issues discussed in this paper. Also presented is a multidisciplinary approach to spinal-cord-injured patient care developed at the University of Alabama Spain Rehabilitation Center. Results of a survey conducted at this center indicate that all professional staff members who interact with patients must be prepared and willing to discuss with patients the sexual issues and concerns that they might have.


The need for sex education of spinal-cord-injured patients is recognized and discussed, along with an interdisciplinary approach to evaluating and treating sexual dysfunction in this population. The program provides information to spinal-cord-injured patients and their families about sexual disorders, and offers counseling services to patients experiencing difficulties in their altered sex relations. Physiological and psychological aspects of sexuality as they are integrated into this multidisciplinary sex education and treatment program are identified and discussed. Specific recommendations for content which should be included in the information-giving sex counseling process are presented.


The results of a study aimed at the examination of sexual functioning in paraplegic patients (n=14) are discussed and conclusions are presented. Some forms of therapy are recommended and the importance of supportive counseling by the physician is stressed.

The paralysis that results from spinal-cord injury causes medical complications beyond the mere loss of motion. This guide discusses the various physical and psychological aspects of paraplegia, with particular emphasis on the sexual adjustment of the paraplegic. The ability to perform coitus, the ability to procreate, and the continued ability of the paralyzed male to maintain a positive self-image are treated in theory. The role of the rehabilitation counselor is seen as important in sexual, family, and marital adjustment for the paraplegic. Research in these sexual areas is summarized and projections concerning the future role of the rehabilitation counselor are made.


This review of the literature was conducted to gather and evaluate information relating to sexual functioning in women following spinal-cord injury. While studies on males were related to sexual functioning, i.e., erection, ejaculation, and orgasm, the studies conducted with female patients deal primarily with the factors of hormonal function, fertility, and delivery. Information is limited concerning issues which are relevant to the total sexual functioning of these women. Sociocultural restrictions on women's sexual responsivity, responsibility, and willingness to discuss sexual issues are considered, along with areas for future research. The authors emphasize the need to consider sexuality in its totality in future research, and the need for women to join research teams on this topic.


In this review of the medical literature pertaining to sexual function in spinal-cord-injured patients, some deficiencies in the literature are identified. In clinical surveys, such variables as sex, age, marital status, hospital status, time or duration of study in relation to onset of injury, types and degree of neurological lesion, medications, ablative procedures, and genitourinary complications are not always clearly defined or controlled. Highlights of nine surveys of male patients are presented in terms of frequencies of erection, coitus, fertility, and libido.

The relationship of these functions to degree of completeness and site of cord lesion is noted. Human sexuality is considered in terms of psychic, hormonal, biologic, and neuromuscular components. Informa-
tion on female subjects is primarily restricted to clinical observations of menstruation, pregnancy, and labor.

Areas requiring further study are suggested; these include attitudes of both sexual partners toward their relationship and its physical expressions, mechanical aspects of sexual activities, accurate endocrinological information, measures of counseling effectiveness, and systems of analyzing methods of evaluation and treatment.


This paper presents a comprehensive survey on the marital status of 1,505 paraplegics and tetraplegics of marriageable age treated at Stoke Mandevill Hospital in England. It has been proven that the subjects studied make very satisfactory partners in marriage. This applies to marriages both before and after the onset of the disability. The divorce rate among these patients was not significantly higher than the rate found in the general population.


The author is a nurse addressing nurses on various aspects of psychosexual adjustment to spinal-cord injury. She questions the feasibility of nurses facing honest acceptance of the sexuality of spinal-cord patients. Discussed in this paper are the nurses' anxieties in dealing with this human need and their lack of understanding of human sexual response in the para- or quadriplegic person. The nurse's moral judgments and the repressed sexuality of the patient are reviewed as being obstacles to attaining sexual rehabilitation. Steps in providing sex counseling for the spinal-cord-injured patient are also given. Also presented is a review of the anatomy and physiology of normal human sexual response, including in-depth explanations of the spinal cord and of the modified sexual response of the paralyzed patient.


The major purpose of this study was to examine the relative importance of sexual loss in spinal-cord-injured patients as compared to other functional losses, i.e., legs, arms, and bowel and bladder. Subjects were 54 paraplegics 18 to 58 years of age and 74 quadriplegics ranging in age from 18 to 67 years. Subjects were asked to rank-order these func-
tional losses to indicate the relative importance they attached to each. In addition, staff members of the rehabilitation team working with these patients were asked to predict the relative importance of these functional losses to the patients studied. Results showed that compared to subjects' ranking, staff predictions tended to overemphasize the relative importance of sexual functioning. Both paraplegics and quadriplegics ranked sexual functioning to be the least important of the functional losses. More than 80 percent of the paraplegics ranked their legs' function higher than sex, and more than 70 percent ranked control of bowel and bladder as being more important than sex. These findings were consistent regardless of the age of the patient, time since onset of disability, and marital status.


The authors describe a program in human sexuality for spinal-cord-injured patients offered at the University of Minnesota Medical School. The objectives of this program are to help the disabled person to be more self-sufficient, and to assist health-care professionals to become more effective in dealing with the sexuality of the patient. Evaluation data show that 96 percent of the participants reported that the program is important and that they benefited from it.


The purpose of this study was to examine various aspects of the sexual attitudes, functioning, and behavior of persons with functionally complete transection of the spinal cord. Two hypotheses were examined: 1) sex role identification is negatively related to the degree of physical disability; and 2) sex role identification of disabled males is weaker than that of disabled females with respect to their non-disabled peers. Subjects were 35 male and 8 female spinal-cord-injured patients in a rehabilitation center, and their spouses. Various psychological tests and questionnaires were used to examine study variables. Results revealed that sexual role identification appeared to be uninfluenced by the consequences of the injury. In spite of physical limitations in sexual functioning, the psychosexuality of subjects was quite active. Sexual concerns of subjects showed a shift from behavioral to intellec-
tual and interpersonal activities, possibly as an adjustment to the sexual difficulties and limitations they experience as a result of the injury. Sexuality seems to be a vital aspect of the disabled person’s rehabilitation process.


The physiological and psychosocial aspects of sexual function of men with spinal-cord injury are discussed. Guidelines are provided as to who should provide sex counseling for patients and their spouses, what should be told to them, what techniques are available to those who lack normal genital functioning, and some of the emotional and sexual rewards which the cord-injured person can achieve from his sexual functioning. A list of precautions for persons engaging in sex counseling with such men is presented.


The author discusses various phases in the adjustment process following a spinal-cord injury. The phases identified include: denial, withdrawal, internalized hostility, externalized hostility, and reaction against dependence. Preexisting psychopathology and its impact on the rehabilitation process of the spinal-cord-injured person is also discussed. One of the most threatening implications of this disabling condition is the patient’s anxiety about his sexual functioning. The rehabilitation worker should be knowledgeable regarding the effects of the injury on sexuality. There is need for an organized program in sexuality as part of the rehabilitation process. Considerable information should be gathered before any attempt to undertake the sex re-education and counseling of the disabled.


The information presented in this comprehensive paper has been the result of the author’s extensive clinical experience in working with thousands of spinal-cord-injured persons and their spouses. The article is aimed primarily at rehabilitationists working with spinal-cord-injured populations. Topics discussed include information to be given to patients, the sexual activities that are open to the spinal-cord injured, sexual gratifications reported by patients, statistical data on the sexual
functioning of patients, and some precautions in the process of sex counseling with the disabled. Some of these precautions are: not to interfere with the person's moral and religious convictions about sexuality; not to impose one's own morality on the patient; not to force the patient to discuss his or her sexuality; not to threaten the patient with one's own sexuality; and not to make sex an all-or-none experience. Sexuality must be a topic continually open to counseling.


The author discusses the importance of sexuality in the rehabilitation of spinal-cord-injured males. The rehabilitation counselor has a responsibility to develop and maintain an effective and comfortable relationship with clients so that sexual matters can be discussed adequately. The author also presents alternative viewpoints in defining sexual relationships for spinal-cord-injured patients and their partners, their sexual capabilities and the meaning of sexual gratification, and some important precautions to be kept in mind by counselors in dealing with the client's sexuality.


In an effort to understand the specific problems and needs of the spinal-cord-injured patient, the authors of this article conducted a series of structured interviews with a sample of 30 outpatients at Rancho Los Amigos Hospital, a regional rehabilitation center for spinal-cord injuries on the West Coast. The major focus of the research interview included the following factors: areas of principal concern to the patient after injury; attitudes about the importance of sex to the individual; sources and kinds of sexual help received after injury; sexual adjustment; sexual problems after injury; nature and extent of need for sex education and a counseling program; and suggestions for sex education and counseling programs. Results indicate the need for a program of lectures, films, individual and group counseling sessions, and inclusion of the partners.

Many articles have been written on the altered physiology of sexual function after cord injury, but very little has been written on the practical aspects of sex. The purpose of this paper was to review and summarize the pertinent literature on sexual rehabilitation after cord injury. In addition, the author surveyed a small sample of tetraplegic and paraplegic athletes. The sample consisted of twenty male athletes surveyed by questionnaire and interviewed during the Canadian National Wheelchair Games. Results of this survey are discussed, along with topics such as erections, positions of intercourse, urinary considerations, frequency of intercourse, sexual satisfaction, female paraplegics, and artificial insemination.


The purpose of this study was to examine the sexual function of males with complete irreversible lesions of the spinal cord (n=56). All subjects exhibited complete paralysis of motor sensory functions as well as loss of bladder control, bowel control, and sexual function. Extensive personal interviews were conducted, the wives being interviewed when possible. Of the 35 men with spastic paralysis who had just completed rehabilitation, 26 could achieve erection, 2 had libido, none could ejaculate or achieve orgasm. Of the 21 men with flaccid paralysis, 1 achieved erection, none had libido or achieved ejaculation or orgasm. Of 29 men with spastic paralysis who were in later stages of rehabilitation, 22 achieved erection, 6 had libido, 2 could ejaculate, 1 achieved orgasm. Of 19 men with flaccid paralysis who had just completed rehabilitation, 6 achieved erection, 1 had libido, 2 could ejaculate, none achieved orgasm. The authors concluded that their study only confirms past data collected and they draw no conclusions of their own.


The physiology of sexual function in the male and in the female is discussed in detail. Psychic, gonadal, and neuromuscular involvement in sexual functioning are investigated in particular. The importance of, and guidelines for, sex counseling are discussed. Also presented is a review of studies dealing with sexuality following spinal-cord injury. Sexual function does present a very real problem and concern in those who have suffered a transection of the spinal cord. In all cases sexual
function is impaired, but much depends upon the level of the spinal-cord injury and whether or not the lesion is complete.


The psychosocial aspects of spinal-cord injury are common to many other disabling conditions. However, the relative youth of many patients, the severity and limitations imposed by the disability, the duration of rehabilitation, and the physical complications make the spinal-cord-injured person one for special care and consideration. Among the psychosocial manifestations of spinal-cord injuries discussed in this paper, the sexual aspects seem to be of great importance. Following the loss of sexual function, the patient experiences high anxiety concerning his loss of "manliness." "Rather than leaving the patient confused and with unrealistic expectations," a frank and open discussion concerning the sexuality of the patient and his future functioning is suggested and can be very helpful. The authors stress that the quality of sexual adjustment made by the disabled person depends on his level of maturity and a cooperative relationship with his sexual partner.


This study was conducted in an attempt to estimate the functional capacity of the isolated cord in spinal-cord-injured patients. Reflex patterns elicitable below the level of cord transection were examined in 29 patients with total transection of the cord. This extensive report presents the results of this comprehensive study. Of special interest in this report is a section discussing the results of the examination of penile erection and ejaculation achieved by subjects. Examinations show that there was a sharply circumscribed reflexogenous area for the elicitation of penile erection which included the corona of the glans and the penile frenulum. Ejaculation was not observed in the subjects, and, with two exceptions, none had noted its occurrence since time of injury.


This bibliography is presented to promote increased understanding of the sexual problems of the spinal-cord-injured person. There are 134 entries, dating as far back as 1917.

In this article the author discusses several guidelines that can aid rehabilitation personnel in working with spinal-cord-injury patients regarding sexuality. It is noted that rehabilitation personnel need to consider a person's sexual functioning within the overall context of the personality. It is important to know how the patient views his sexual functioning. Persons who view sex as a biological release instead of as a part of a total relationship may have difficulties adjusting psychologically and socially. The author also points out that rehabilitation of sexual functioning should be integrated within the total treatment program and not treated as an end in itself. The most successful psychosexual adjustment is usually made only after major physical problems are under control.


Paraplegics and tetraplegics need much understanding from others like themselves with the same problems, and also from a professional staff so that they can adjust to their disability and learn to cope with their new problems, especially sexual problems. Many more doctors are becoming interested in sex and the paraplegic and the author feels that it is the doctor who should take personal responsibility for the sexual adjustment of the paraplegic. Some of the issues involved in this area are presented and discussed. The author asserts that both partners in a marriage involving a paraplegic must become totally involved. Women paraplegics are usually found to have better sexual adjustment than men paraplegics. When a male paraplegic loses both erection and ejaculation he must remain relatively passive, and this causes psychological problems. Many paraplegics and tetraplegics marry, and some have children. For those unable to have children, adoption is usually an adequate answer.


This article is written specifically for the education of social workers, but can be helpful to all involved in the rehabilitation process. Various aspects of sexuality and sex counseling with the spinal-cord-injured person are discussed. The author suggests that it is important that the person doing sex counseling be aware of his own sexual attitudes and
values and not let these interfere with the therapeutic process. An adequate knowledge of the sexual problems facing one's client is essential.


The purpose of this study was to assemble verbatim data on cognitional eroticism of paraplegic patients in both imagery and dreams. Subjects were 14 males and 7 females, all with complete spinal interruption. Patients were thoroughly interviewed about their sexual functioning and erotic imagery and dreams. The article presents two detailed case reports for illustration, one taken from a male subject and the other from a female. Also included is a table summarizing the data collected, including age of subject, duration of disability, spinal site of injury, sexual functioning before and after injury, sexual eroticism, and daydreams and sleep dreams. The study data show that although there were individual variations, patients in general "did not have the subjective feelings of sexual urge and gratification they formerly could experience." Despite complete lack of somesthetic sensation from the genitopelvic area in patients, they still had the capacity for vivid orgasm imagery to occur in dreams. The author concludes that "the imagery of orgasms in [a] paraplegic's dreams may be regarded as a special example of the phantom phenomenon."


This article presents the results of a study aimed at the examination of cognitional eroticism in both waking imagery and sleeping dreams of paraplegic patients. The subjects were 14 men and 7 women suffering complete spinal cord interruption who were interviewed extensively regarding their sexual functioning and erotic imagery and dreams. Results showed a wide range of individual differences and variations. However, a general finding was noted. Patients had lost their pre-injury subjective feelings of sexual urge and gratification. Subjects had the ability for vivid orgasm imagery to occur in their dreams.


The authors have explicitly and graphically described and illustrated means by which the disabled person can give and receive sexual pleasure. They discuss attitudes toward sexuality and explore preparatory measures, arousal techniques, intercourse, and oral-genital or manual stimulation for the spinal-cord-injured person and his or her
partner. Sixty-five full-page photographs and a detailed glossary augment the discussions.


A comprehensive review of the psychological and social aspects in the rehabilitation process of paraplegic patients is presented. Sexual functioning and adjustment in these patients is one of the topics included in this report. The author indicates that “in the light of present knowledge optimism regarding the sex function of paraplegic patients has increased.” He added that study results seem to indicate that the paraplegic patient can have a successful and happy marriage.


The authors conducted an extensive examination of sexual potency in 84 spinal-cord-injured patients. Results of this study are presented and discussed.


The purpose of this study was to examine the effect of testosterone on the personality of male paraplegics (n=21). To control the effects of such factors as suggestion and attention, a placebo was used half of the time. Subjects were given daily intramuscular injections of one cubic centimeter of testosterone propionate for a period of fourteen days, followed by daily injections of a placebo for fourteen days. Subjects were interviewed and given a battery of psychological tests prior to all injections, following the testosterone injections, and following the injections of placebo. The psychopersonality variables measured were mental efficiency, fatigue, sense of bodily well-being, basic personality structure, anxiety, depression, assertiveness, and drive. Data showed that none of the results following testosterone treatment were significantly higher than those obtained following the placebo or the initial tests. Subjects were classified as sexually impotent, potent on a reflex basis, or potent on a psychic basis. Subjects who were potent on a reflex basis showed statistically significant improvement in muscular efficiency scores as a result of testosterone treatment.

This publication includes numerous presentations made in a workshop titled Sex: Rehabilitation’s Stepchild, organized by the Allied Health Profession Advisory Committee of the National Paraplegia Foundation. Among the topics discussed are the role of the rehabilitation professional in sexual counseling and adjustment of the spinal-cord-injured person, the sexual alternatives open to the patient, the role of rehabilitation facilities in promoting sexual adjustment, and religion and sex.


The main purpose of this conference was to provide for an exchange of pertinent information regarding total care and development of the spinal-cord-injured person. In response to growing demand for information on sexuality and spinal-cord injuries, a special feature of the conference included a session that was devoted to this topic. A panel of three married couples of whom the husbands were spinal-cord-injured discussed their sexual experiences. Couples also described sexual techniques they enjoy, including penile-vaginal intercourse and oral-genital sex. A direct and frank approach to the discussion of sexuality between rehabilitationists and their spinal-cord-injured patients is recommended.


This article presents and discusses the results of a study aimed at the assessment of genital and sexual functioning in paraplegic and tetraplegic male patients (n=100). Subjects were grouped according to four types of lesion: complete spastic, complete flaccid, incomplete spastic, and incomplete flaccid. Information was gathered through personal interviews and medical examination. Results show that, generally, erections were more frequent than ejaculations in all groups. Of the 52 patients with complete spastic lesions, 49 had erections, 22 were able to ejaculate, and 21 were able to have intercourse. Among the 15 patients with complete flaccid lesions, no erection, ejaculation, or coitus
ability was recorded. Among the 20 patients with incomplete spastic lesions, 19 had erections, 13 were able to ejaculate, and 12 were able to have coitus. Finally, among the 13 patients with incomplete flaccid lesions, 11 had erections, 9 were able to ejaculate, and 6 were able to have sexual intercourse.

The author concludes that the prognosis for genital and sexual function in paraplegic patients is closely tied to the neurological characteristics of the lesion in the lumbosacral spinal cord, which contains the ejaculation and erection centers. It was found that generally the prognosis was not as good for patients suffering a complete lesion as it was for those with incomplete lesions. In complete spastic lesions, erection is possible but only as a mechanical reflex. The quality of spermatozoa was found to vary, but was, on the average, mediocre. In patients with complete flaccid lesions, neither erection nor ejaculation was possible. In incomplete lesions, however, erection and ejaculation were often possible. The author suggests that the physician not establish a sexual prognosis too soon following injury. There is need to wait for neurological stabilization of the spinal lesion, a satisfactory trophic state, and complete bladder control.

Purdy, S. Assisting the patient with a spinal cord injury to maintain his or her sensual sexual identity. In Nursing management of spinal cord injuries. National Paraplegia Foundation, 1974, 115–117.

The author places great emphasis on the importance of the nurse becoming an adequate sex counselor, which is a gradual accomplishment. Having an adequate background of knowledge and knowing her own comfort level in discussing the topic with the patient are essential. To become even more effective she must remember not to project her value system on the patient. The nurse can also use herself as a therapeutic tool in interrelationships with the patient. Personal greetings, casual conversation about his positive qualities, and touching are ways to communicate. Because the nurse has a one-to-one relationship with the patient, she can be sensitive to his readiness to be counseled in sexual matters. His readiness might be indicated by his checking the genital area for feeling, by erections, by jokes (sexual), and by masturbation.

A follow-up of discharged spinal-cord-injured patients revealed a high incidence of marital and sex-related conflicts and difficulties in patients and their spouses. To improve this situation, the authors developed a sex education program for these patients. The program was developed at the Department of Physical Medicine and Rehabilitation of the University of Michigan Medical School. This article describes the program and presents evaluation observations made by the authors.


This paper presents a case history of a tetraplegic patient with complete cord transection at C7–C8 who ejaculated after intrathecal injections of neostigmine. A close relationship was found between ejaculations, blood pressure, cardiac rate, and cardiac rhythm. Results of other examinations are presented.


Injury to the spinal cord may cause a disturbance in sexual function, depending upon the nature, extent, and site of the lesion. The various difficulties in sexual function that may arise are presented, as well as the associated problems of sphincter control and spermatogenesis. The implications in terms of patient-staff, male-female, and patient-family relationships are discussed.


Moderated by Howard A. Rusk, a panel of experts discussed sexuality in spinal-cord-injury patients. Some of the topics raised and discussed by panel members were marriage, neurophysiology of coitus, effects of therapeutic nerve destruction, methods of stimulating an erection in patients, and fertility in paraplegics.


A series of 29 dreams was studied in an attempt to examine and demonstrate the underlying psychodynamic conflicts in paraplegic patients. Several sexual wish-fulfillment dreams are presented, showing the patient's anxieties, feelings of inadequacy, and sexual frustration. The content of dreams revealed that the patients are reluctant to give up their former body image, and that they deny their present incapac-
ity and inadequacies. The patient's low level of self-esteem is also revealed in dreams. The reduction in self-concept seems to alter the patient's awareness of himself, as well as of his surroundings. He perceives the world as hostile and threatening, and himself as powerless and inadequate. It has been observed that these symptoms can interfere with the rehabilitation process of the paraplegic patient.


The author discusses various aspects of sexuality and sexual functioning in male and female paraplegics. She indicates that "in the process of rehabilitating the paraplegic, it is important that the area of sexuality not be overlooked." The paraplegic must be assisted by rehabilitation personnel to achieve sexual adjustment. The author also discusses specific sexual techniques and surgical procedures aimed at helping the paraplegic toward a satisfying sex life. A recent surgical procedure enables patients to "have an erection that is 85 percent of a normal erection." Suggestions for nongenital sexual activities for patients who are unable to achieve an erection or sexual intercourse are presented. Also discussed are the ability of paraplegic patients to ejaculate, fertility and sterility in this population, the sensation of orgasm, pregnancy in paraplegic women, and the need for birth control information and counseling.


A program aimed at reassessing sexual attitudes in both rehabilitation and medical personnel as well as in physically disabled persons is presented and discussed. This is a three-day program involving a combination of lectures, films on sexual material, and small group discussions. Through these presentations an attempt is made to desensitize and desensitize sexuality, and to allow participants to express freely their thoughts, feelings, and attitudes regarding their sexuality.

Sexual interviewing with the spinal cord injured and their sexual partners. Proceedings of a special seminar, Indiana University Medical School, Indianapolis, May 8–9, 1976.

This publication presents the proceedings of a seminar aimed at training participants in the techniques of sexual interviewing with spinal-cord-injured persons and their sexual partners. Papers presented were: male and female sexual response; sexual myths and fallacies; anatomy and neurophysiology of spinal-cord injury and sexual functioning; and sexual interview procedures.

The authors argue that the aim of sexual rehabilitation of paraplegics is not necessarily to achieve full conventionally accepted sexual function, "but to enable the patients to compensate for their disability by using their remaining faculties to satisfy their partners and thus, secondarily, themselves." In this paper, the authors present and discuss sexual concerns and difficulties faced by the paraplegic person, psychological reactions to the disability, counseling and treatment procedures, and some practical advice to facilitate sexual adjustment.


Injuries to the spinal cord frequently cause partial or complete loss of sensory and motor function below the lesion. The impact of these injuries on the sexual functioning of patients is the main subject discussed in this paper. Presented are statistics on the level of sexual functioning in accordance with the location and completeness of the lesion, psychosocial aspects of the disability—emphasizing the self-concept—and findings of various research studies dealing with sexuality in spinal-cord injuries.


Sexual function of the spinal-cord-injury patient has been a topic that in the past has been either totally ignored and avoided or inadequately dealt with by the medical profession. In this article, the author discusses the psychosexual aspects of spinal-cord injury. He asserts that sexuality can no longer be dealt with as solely a physiological function. Sexuality may be expressed in a variety of forms and behavior patterns and needs to be incorporated into the total rehabilitation program. Rehabilitation should focus on that potential for sexual expression that remains after injury and develop its utmost utilization. The author concludes that research on sexual function must continue if total rehabilitation of spinal-cord-injury patients is to be achieved.


The main purpose of this study was to examine the sexual responsiveness of paraplegics with complete and incomplete cord lesions, at
various levels, and to relate this to psychogenic and reflexive erections and ejaculations. The sample included 200 male paraplegic patients, all with spinal-cord lesions of more than four months' duration. Three distinct groups were recognized: those experiencing no erections since the onset of lesion (n = 73), those having reflex erections only (n = 85), and those who were able to experience psychogenic erections (n = 42). All subjects showed dysfunction of bladder and bowel. Each subject was interviewed in order to assess various dimensions of his sexual functioning. Results show that psychogenic erection and ejaculation are possible only when lesion of the spinal cord is incomplete. When lesion is complete, erection and ejaculation are still possible by reflex in response to direct local stimulation. In these cases 75 percent of those with lesions at or above the dorsal 11 level retained the erectile reflex. Lesions at lower levels are more likely to interrupt the reflex arc involved in erection. If nerve roots of sacral 2 level are intact, a mechanism for reflexive erection may remain. Sexual function appears to return following recovery from spinal shock. This shock period varies from individual to individual. Ejaculation was more prevalent in those with incomplete lesions; however, it was also observed, with less frequency, among those with only reflex erection capabilities. A sense of sexual gratification was experienced both by those who ejaculated and by those who did not.


This paper presents the results of a study that examined sexual function and behavior in a group of 200 paraplegic males. Results show that 46 patients were able to have intercourse with intromission, 20 had ejaculations, and 12 patients reported gratification without ejaculation. The author notes that in regard to sexual function one can anticipate certain types of alterations after spinal-cord injury: a) destruction of either reflex or cortical centers and their fibers, resulting in absence of their mediated responses; b) complete transection of the cord above the centers, with remaining reflex activity but no cortical control; c) incomplete transection of the cord, with persistent reflex function and different levels of cortical control.


It is probable that the psychical and gonadal activities involved in sexual functioning are not significantly altered as a result of spinal-
cord injury. The present study examined sexual functioning in 408 paraplegic and quadriplegic patients. Results showed that of these patients, 46 percent had erections in response to local stimulation, and 20 percent in response to psychical, as well as local, stimulation; 34 percent of the patients had no erections at all. One third of the patients who had erections were able to have sexual intercourse, and 7 percent of these were fertile. The recovery of sexual functioning in this population usually occurred within six months after injury. The author concludes that the common belief that all spinal-cord-injury patients are sexually impotent is unjustified, and that restoring in patients a satisfying level of sexual readjustment contributes significantly to their rehabilitation.


This investigation is an extension of an earlier study on sexual function in paraplegics conducted by the author in 1954. In addition to the 200 patients studied in the original study, 208 patients provided data for this paper. Data were collected by questionnaires. Results show that the psychic aspect of sexuality in the spinal-cord-injury patient remains unchanged. There is inadequate data to support the previously accepted theory that testicular atrophy is directly related to a neurogenic cause. In some studies, testicular changes, as revealed through histological examination, have been found to be reversible, while in other studies they have been found to be irreversible. The varying degrees of change in sperm productivity which have been commonly found may be the result of a hormonal imbalance or a generalized systemic debilitation. The author thus concludes that the endocrine aspect may also remain unchanged if general good health is maintained, with satisfactory adjustment to the patient's altered way of life. Results also show that approximately two-thirds of the patients in the study were able to have erections. Of those men who had erections, about one-third had intercourse, with more than half of them reporting gratification. Only about 5 percent of the group were reported to be fertile. The author concludes that the significance of developing the sexual potential in the spinal-cord-injury patient cannot be overemphasized.


The physiological aspects of sexual function and responsivity both in paraplegics and in able-bodied persons are presented and discussed.
The author notes that in the spinal-cord-injury person, the ability to have an erection and ejaculation is determined by the level and extent of the lesion. Erection is possible for 77 percent of paraplegics, while only 10 percent are able to ejaculate.


There have been numerous studies of both physiological and psychological aspects of sexual functioning, but only the physiological part of this literature has been organized in a systematic fashion. This paper reviews 33 articles that deal mainly or exclusively with psychosocial aspects of sexuality. It is observed that the psychosocial literature in this area is relatively diffuse, dealing with concepts that are inadequately specified and validated.


An exploratory study has been carried out over the past five years in Sweden with regard to the sexual rehabilitation of males with spinal-cord injuries. Erotic films were used to establish whether they could be useful as a diagnostic instrument when testing physiological and psychological sexual status in males with spinal-cord injuries. Also studied was whether erotic psychological stimulation could have an effect and could be useful in sex therapy. Results of this study were presented and discussed in the context of the many social and psychological barriers that exist, both in the disabled themselves and in the general public—even in a so-called "sex liberated" country such as Sweden—to hinder sexual rehabilitation.


Both biological and psychological facets of sexual functioning in the spinal-cord-injured male are reviewed in order to acquaint counselors and therapists with accurate scientific information concerning sexual functioning in general and in these specific cases. Rehabilitation personnel are urged to take the initiative in discussing sexual problems with such patients and to encourage the patient toward experimenta-
tion and reeducation to help him achieve the maximum possible degree of sexual satisfaction.


Two studies conducted in Japan involving sexual functioning in patients following spinal-cord injury are presented. The first study examined sexual behavior and function in 638 male and 17 female patients, and the second study involved an analysis of testicular biopsy, seminal vesiculography, 24-hour urine K's, and chromatographic fraction in 62 patients. Results of these studies are discussed, along with some conclusions.


Psychosocial aspects of hemiplegic patients are discussed in this paper. Among the specific implications of this disability, changes in sexual behavior and attitudes are markedly noticed. Many hemiplegic patients, especially males, feel an increase in sexual desire. Patients attempt to have sexual coitus more frequently, often disregarding the time, the place, and the partner's needs. This behavior often poses a major problem for the patient's spouse. In severe cases, a patient may cause damage to the partner's genitals through extremely active and vigorous sexual behavior. The author indicates that "management of this problem is difficult; sedatives, tranquilizers, and muscle relaxants are the treatment of choice." He suggests that estrogen therapy should be used with great caution.


This study was an attempt to evaluate the general public's attitude and knowledge concerning sexual functioning of males with spinal-cord injuries. Subjects for this study were taken randomly from the general population of a large western metropolitan city. A small sampling was also taken from the staff of a rehabilitation center to see if those who work directly with the disabled had similar attitudes. The individuals filled out a questionnaire that included an attitude survey and items on sexuality interspersed with questions relating to psychological, social, educational, and vocational information. Items on sexuality dealt with
both the functioning of and attitudes toward the disabled. Results are presented.


The authors report the results of a study they conducted to examine the impact of a complete spinal-cord lesion on erection ability, ejaculation, orgasm, and sexual libido in 56 spinal-cord-injury male patients. Lower motor and sensory dysfunction was complete in all subjects. Interviews were conducted with patients at intervals of 7.5 months and 15 months from the onset of the injury. Results of these two sets of interviews are discussed and conclusions are drawn.


Due to the importance of sexual adjustment in the total rehabilitation process of severely disabled persons, rehabilitation educators have recognized the need to include sexual instruction in the training of rehabilitation counselors. An instructional plan and sequence in human sexuality and disabilities is specified in this article. The plan includes film presentations and small group discussions to assist students in re-assessing and restructuring their attitudes toward sexuality. The films used are “Just What Can You Do” and “Touching.” The authors suggest that a follow-up to this plan would be the opportunity for participants to discuss sexuality with a disabled person.


Sexual implications of spinal-cord injuries in both male and female patients are discussed in one of the chapters of this book. Also discussed are aspects of marriage and parenthood in these patients.


For the purpose of making the physical therapist aware of the complications involved and their effects on the patient, the authors review some of the sexual problems encountered by patients following spinal-
Disorders of the Nervous System
cord trauma. The psychological factors, physiological factors, and fertility of the patients are discussed.


Although the spinal-cord-injury person may lose some of his physical capacity for sex, he still has sexual drives and needs. This article discusses the sexual response in both males and females with spinal-cord injuries. The effects of the injury on sexual functioning vary from patient to patient depending on the location, severity, and completeness of the injury. A physiological explanation of how paralysis affects erection and ejaculation is also presented.


The purpose of this study was to examine psychosocial difficulties and sexual functioning associated with spinal-cord injury in males (n = 100). Patients were grouped into four categories according to the level of their spinal lesion. These categories were (a) cervical, (b) upper thoracic, (c) lower thoracic, and (d) lumbar, which also included cauda equina lesions. The variables studied were type of erection (complete, incomplete, or none), and presence of conception after injury. Correlations between the ability to have an erection and the level of the spinal lesion were found. It seemed that reflex erections can occur with any lesion above the sacral level. The higher the spinal lesion, the greater the probability that a satisfactory erection may be obtained. Sixty-four percent of the men had complete erections, while fourteen percent experienced no erections. Thirty-eight percent had attempted intercourse, while twenty-six percent indicated that intercourse was successful. Other findings show that five percent of the males could experience orgasm and only three percent reported ejaculation.

Posttraumatic and postconcussional states are accompanied by anxiety and depression. The effect of these conditions on sexual activity and functioning is the focus of this paper.


The main purpose of this study was to examine the impact of cerebrovascular accident on sexual functioning and behavior. Interviews were conducted with 105 patients, age 20 to 60 years, who had suffered such an accident. Results show that a cerebrovascular accident tends largely to diminish libido and the frequency of active coitus. The decrease in libido seems to be more common after a right-side paralysis than a left-side one. Other findings and conclusions are presented.


Among 739 World War II veterans with head injuries seen for follow-up medical examinations, 87 percent reported they had no sexual dysfunctions, and only 8 percent complained of impotence and decrease in sexual libido.


The author identifies and discusses psychological and sexual implications of brain injuries. Lesions of the limbic system contribute the most overt disturbances in sexual behavior. Electroconvulsive shock therapy and ruptured aneurysms at the base of the brain also may result in altered sexual behavior. Brain dysfunction (as evidenced by an abnormal EEG), premorbid personality, individual adaptive ability, and the doctor-patient relationship are factors to be considered in

**Brain Injury**
evaluation of the dysfunction. Alterations in sexual behavior may be demonstrated by delusions, breast and genitalia exposure, masturbation, verbal and physical advances, and repeated joking regarding sex. Behavior disorders, including violence, changes in mood and psychomotor activity, and disorientation, are frequently seen. Further review of relevant studies is followed by a discussion of other psychosexual manifestations in brain-injured patients.


Although changes in sexual behavior have frequently been cited among individuals suffering from brain disease, no serious attempt has been made to analyze these behaviors and their significance. The purpose of this article was to describe these behaviors and their relationship to other changes, and to consider other influencing factors, such as motivation and social interaction. The material described is based on a study conducted by the authors. Neurological patients of two general hospitals were studied, during hospitalization and after discharge (n=196). Observations by staff were made of any altered sexual behaviors which persisted for at least one week. Results show that 36 patients, 19 women and 17 men, showed altered sexual behaviors of more than one week's duration. Most patients with altered sexual behaviors manifested them by verbal references to sexuality. Physical advances were less common than verbal ones. Exposure and masturbation were prominent in 12 patients. Delusions which contained primarily sexual material were reported in 20 patients. Other findings are presented and conclusions are drawn.

**Epilepsy**

Bandler, B., Kaufman, I. C., Dykens, J. W., Arico, J. T., and Geller, H. The role of the psychologic factors related to the menstrual cycle and the sexual life of women in the production
of epileptic seizures. *Journal of Nervous and Mental Disease*, 1953, 117, 162.

This study of epileptic women was designed to investigate the role of the patient's sexual life (sexuality, menstruation, pregnancy) in the production of seizures. It consisted of an integrated approach to various aspects of the problem, along psychologic and physiologic paths but with a unitary point of view. Effective diagnosis, including the use of electroencephalograms, and effective treatment, including antiepileptic drugs and intensive psychotherapy, were central to this work. The psychiatric interviews also served the purpose of psychologic investigation. Rorschach and thematic apperception tests, including specially devised cards, were used to gain an understanding of each patient's personality structure and fantasies. The various phases of each patient's menstrual cycle were charted through the use of daily vaginal smears and daily basal temperatures. The state of fluid balance was determined by daily weighing.


The idea that there is a relationship between the epileptic seizure and the female patient's sexual life is well known. This study examined the normality of the menstrual cycle of epileptic women with respect to length and ovulation. Also studied was the hypothesis that sexuality plays an important etiological role in the occurrence of seizures in epileptic women between the menarche and the menopause. Results and conclusions are presented and discussed.


The purpose of this paper was to present some evidence in support of the authors' theory regarding the etiology of epileptic seizures. The authors' experience in a combined psychiatric and psychologic investigation of 30 epileptic women leads them to conclude that the dynamic activity which leads to epileptic seizures is a sexual conflict. They present selected case material describing an epileptic seizure and automatism episode. The material shows that epileptic seizures occur in relationship to current sexual conflicts and to the sexual transference the patient experiences. However, "aggression is mainly intelligible as
either a response to the sexual conflicts or as an attempted solution of them.”


This paper presents the authors’ attempt to support their hypothesis that sexual conflicts are the main etiology in the occurrence of epileptic seizures in women. They discuss selected excerpts from an extensive psychiatric and psychological investigation of an epileptic woman. Material shows that epileptic attacks occur in relationship to the patient’s current sexual conflicts. Material also shows the role of other types of conflicts, such as aggression, in the occurrence of seizures. However, aggression appears to represent only a response to the more basic, core conflicts of sexuality.


This paper presents two case histories of epileptic patients with a focus on their psychosexual misidentification, which is believed to contribute to their epileptic attacks. The first case is that of a 27-year-old unmarried male with both major and minor epileptic seizures. The other case study describes the history of a 37-year-old married male with atypical psychomotor attacks. The author, using a psychoanalytic approach, analyzes both cases to show that both patients had difficulties in normal heterosexual intercourse and identification. He also notes that the situations precipitating the epileptic attacks in both patients were psychodynamically similar.


The sexual histories of 50 temporal lobe epileptic patients were carefully examined. Of these, 58 percent were found to be hyposexual prior to unilateral temporal lobectomy, and 14 percent had distinct episodes of hypersexuality. In 6 patients the hypersexual episodes followed the abrupt cessation of temporal lobe seizure activity. The author asserts that his findings “document the role of the temporal limbic structures in the regulation of sexual arousal.” Several case histories of patients are presented and analyzed.

In this chapter, the author reviews the research and clinical literature on temporal lobe dysfunction and sexual aberrations. This extensive review reveals "good evidence for an occasional close relationship between sexual aberrations (transvestism in particular) and paroxysmal temporal lobe disorders." Erectial problems were found in all patients in whom transvestism was associated with temporal lobe epilepsy. The treatment of sexual aberration and temporal lobe epilepsy in transsexual patients is discussed. Hyposexuality associated with temporal lobe disturbances is also discussed.


The main purpose of this study was to document sexual changes which occur in the course of temporal lobe epilepsy and following unilateral temporal lobectomy (n=21). The authors also made an attempt to clarify the role of temporal lobe functions in human sexual behavior. The average age of the patients at the time of the operation was 33. Information was obtained on a wide range of sexual issues and activity, including frequency and satisfaction of intercourse and masturbation, sexual fantasies, libidinous feelings, and the like. Findings confirmed the results of previous studies by showing marked hyposexual reaction in 50 percent of the patients prior to unilateral temporal lobectomy. A total or a substantial lack of sexual interest, drive, and feelings had developed in patients following the onset of temporal lobe epileptic attacks. This correlation between seizure activity and hyposexuality was further confirmed after operation took place. Four patients in whom seizure activity was diminished became very active sexually. Postoperative hypersexual activity terminated in two subjects with recurrence of epileptic attacks. The authors assert that changes in sexual activity are not to be attributed to anticonvulsant drugs. The postoperative increase in sexual activities reported in some of the patients took place in spite of continued medication.

The author reports and discusses four case histories of transvestism associated with epileptic foci in the temporal lobe; three of the patients described had overt seizures. In one patient, the desire to transvest would be preceded by an aura of epigastric sensations, but later the desire to transvest occurred without the aura and became more persistent.


Temporal lobe disorder often may be a significant factor in cases of sexually deviant behavior, altered libido, and disturbed gender identity. This article discusses the relationships between temporal lobe dysfunctions and disordered sexual behavior.


The author presents and discusses a case of fetishism, two cases of fetishism-transvestism, and a case of transvestism, all with epileptic foci in the temporal lobe. One of the four cases reported had overt seizures.


The author presents a detailed case report of a female patient who “began to manifest nymphomania, which occurred in paroxysms of short duration, at the age of 43 years.” This condition was found to be associated with Jacksonian seizures she was having. Examination of this patient “revealed the presence of a neoplasm, causing excitation of the topical projection of the genital structures in the right paracentral lobule.” A year after the removal of the neoplasm, the patient no longer exhibited “nymphomania.”


Following an extensive review of relevant literature, the author presents his clinical findings regarding sexuality in patients following frontal lobotomy. Promiscuity, homosexual behavior, marriage and divorce, pregnancy and delivery, and child birth are the specific variables discussed. In his conclusions the author notes that frontal lobotomy is
often followed by an increased sexual libido; promiscuity is only seldom noted, and illegitimate pregnancy among lobotomy patients is no more frequent than in the general population.


This is a detailed case study of an epileptic patient who was undergoing psychoanalytic treatment. The role of the patient's sexuality and exhibitionistic impulses and tendencies in relation to his epileptic seizure is identified and analyzed. The author found that the exhibitionistic tendencies and their reaction formations were interwoven with the patient's epileptic attacks.


The authors examined fifteen patients with temporal lobe disorders who were sexually impotent. In this report they describe some of these patients and discuss the evidence implicating the temporal lobe in the control of sexual functioning. The fifteen patients examined were all married men who were between the ages of 31 and 48 at the onset of their sexual dysfunction. Twelve patients had temporal lobe epileptic attacks at some time while they were impotent, and one patient had general convulsions only.


The authors report clinical observations made on patients following temporal lobectomy for epilepsy. Of particular interest is the increase in sexual drive and potency found in thirteen of twenty-seven patients. It was also noted that three patients who formerly had a tendency toward "perverse" sexual behavior acquired "normal libidinal interest" and activity after the operation.


This article presents a case study report on a rare incidence of epilepsy induced by sexual orgasm in a 32-year-old housewife. To induce her epilepsy for the study, the patient was placed under hypnosis and it was suggested to her that she was having intercourse. After three minutes she became pale, lost consciousness, and twitching of the left arm and leg occurred. Discussion in this article centered around re-
viewing possible factors that may have stimulated the seizure. These include changes in body chemistry, peripheral neuronal mechanisms, and psychological factors. A cortical element is suspected of playing a part in orgasmo-epilepsy. In this woman's case it was suggested that orgasm lowered the threshold of the localized epileptic lesion. Different parts of the brain where the lesion may have been located were reviewed. In this woman's case the lesion was found in the right temporal area.


The authors' intent in this report was to demonstrate that "a form of automatic behavior seen in temporal lobe seizures can be almost identical with, and mistaken for, the psychiatric problem of exhibitionism." Two cases of patients suffering from temporal lobe epilepsy and having automatisms simulating exhibitionism are presented. In the first case, the scalp EEG showed a left temporal spike focus, and in the second case, the patient had a right temporal lobe astrocytoma. Both cases were involved in legal suits for exhibitionism. Major points of differentiation between true exhibitionism syndrome and ictal indecent exposure are also discussed.


The purpose of this paper was to present and discuss a case history of a patient with transvestism and fetishism present since age nine, in whom epileptic foci in the temporal lobe developed at age twenty-nine. Exacerbation of deviant sexual behavior of this patient coincided with a considerable increase in the epileptic seizures. Both the epilepsy and the abnormal sexual behavior were at first temporarily improved by anticonvulsant drugs, and then eliminated by left temporal lobectomy performed on the patient at age thirty-nine.


The author presents and discusses two case histories of impotent patients who were found to have intracerebral tumors. In the first patient, the tumor was limited to the temporal lobe, and in the second patient it was situated in the posterior part of the frontal lobe. The clinical and neurophysiological evidence supporting the relation of the limbic system to sexual functioning is discussed in light of a thorough review
of the literature. The author recommends that "inquiry into the sexual function should form part of the routine clinical history taking of patients suspected of organic cerebral disease."


This article presents results of a comparative study of medical histories of 200 male and female epilepsy patients. It was concluded that the hereditary factor in the etiology of epilepsy is more prominent in female than in male patients, and it is especially marked in female patients who have only petit mal seizures or who display mental deterioration.


Forty patients were interviewed from six months to four years after each underwent a prefrontal lobotomy. The purpose of the interviews was to determine postoperative changes in the preoperative patterns of sexual behavior. Subjects were questioned about their sex drive, inhibitions, fantasies, types of sexual activity, subjective responses, and moral and religious attitudes. An attempt was made to correlate these variables with the subject's clinical condition and work adjustment. Results showed that, in general, sexual expression remained primarily the same after as before the lobotomy. There was a striking decrease in feelings of anxiety, guilt, and modesty concerning sexual activity. Preoperative religious, moral, and social attitudes were maintained after lobotomy, but there was a reduction in modesty, embarrassment, and guilt in association with sexual activity. It was felt that making generalizations such as these was dangerous because not enough evidence exists concerning postlobotomy patients.


This article reports and discusses the results of a study that was done to answer questions concerning sexual drives, guilt, morals, and anxieties of people who had undergone frontal lobe lobotomies (n=40). Information concerning each patient's sexual drives, fantasies, sexual activities, inhibitory forces, social problems, and other variables was gathered. The authors conclude that the evaluation was difficult because of the unknown effects of long hospitalizations and long duration of illness. They did feel in general that homosexuality was decreased after the lobotomies, and fantasies were practically nonexistent. Re-
ligious, moral, and social attitudes were maintained after lobotomy; however, there was a reduction in modesty, embarrassment, and guilt in association with sexual activity. Sexual expression remained primarily the same after as before the lobotomy.


The authors present and discuss the case history of a patient in whom fetishism was believed to be associated with temporal lobe epilepsy. The patient's viewing of a fetish object became the invariable trigger of temporal lobe seizures at some time between the ages of eight and eleven years. During postictal confusional states, the patient used to dress himself in his wife's clothing. A left temporal lobectomy, at age thirty-eight, relieved both the epilepsy and the fetishism. The patient acquired normal libidinal interests and sexual activity.


Two case histories of patients exhibiting both sexual precocity and laughing seizures are presented and discussed in light of a review of the literature. Both patients were seen and examined at the Johns Hopkins Hospital.


This paper discusses changes in social functioning and behavior observed in temporal lobe epilepsy patients following surgical treatment. One specific aspect of postoperative behavior studied was sexual functioning. It was found that hyposexuality in patients was relieved following successful surgical treatment of temporal lobe epilepsy.

Sha'ked, A. Sexuality and the person with epilepsy: Rehabilitation practice applications. Paper read at the Third Annual Indiana Epilepsy Conference, Indianapolis, November 4–6, 1976.

The psychosexual aspects of disabilities in general, with a focus on epilepsy in particular, were presented. The impact of psychosexual adjustment on the total rehabilitation process was discussed in light of concepts of normalization and social integration. Finally, the unique role of the rehabilitationist in promoting sexual adjustment within the rehabilitation process was outlined.

This paper presents the results of an investigation of the sexual behavior of 100 patients with temporal lobe epilepsy. This study was a part of a broader evaluation of the outcomes of temporal lobectomy for epilepsy. Pre- and postoperative sexual behavior and functioning were examined and recorded. The results of this study are discussed in light of the findings of other studies reported in the literature. Results showed that 22 patients had improved their sexuality, but in 14 it had worsened, largely as a function of age. Patients in the former group were the most relieved of epilepsy. Adjustment varied with age, age at onset of epilepsy, and general social adjustment. Adjustment was found to be better among female patients than males. The most common sexual dysfunction was loss of sexual drive, rather than erectical or ejaculation problems. Heterosexual hypersexual behavior was rare.


The role of the temporal lobes in regulating sexual behavior is one of the topics of this chapter. It was found that bilateral temporal lobectomy results in hypersexual behavior in men.


The purpose of this study was to compare the psychopathic personality and the psychomotor epileptic. The author believes these two disorders are variations of the same fundamental cerebral disturbance. By using electroencephalograms of a patient with sexual psychopathic behavior and a patient with psychomotor seizures, he shows a striking similarity between the wave patterns. Overt actions of the patients were also observed to be similar.


In the course of a long-term follow-up of 50 patients who underwent unilateral anterior temporal lobectomy for epilepsy, the authors
studied changes in aggressivity and sexual functioning and activity. Before the operation, the majority of patients showed evidence of global hyposexuality, while after the operation most patients showed a very significant increase in sexual activity.

Parkinson’s Disease


The impact of L-dopa therapy on the sexual function of 86 Parkinson’s disease patients is one of the aspects discussed in this article. Increased libido was reported by only 5 percent of the patients studied.


A number of observations pertaining to sexual behavior and functioning have been made by physicians treating parkinsonian patients with L-dopa. Results of these observations are presented and discussed. Also presented are the results of a study conducted by the authors examining the sexual effects of L-dopa treatment on 19 parkinsonian patients.


The results of a study examining the sexual effect of L-dopa therapy in 41 Parkinson’s disease patients are presented. Increased sexual libido was reported by 24 percent of the patients.

The sexual effect of L-dopa therapy in a group of 90 Parkinson's disease patients was one of the variables studied and discussed in this article. Increased libido was reported in only 2 percent of the patients.


The effect of L-dopa on sexual function in 32 Parkinson's disease patients was one of the variables observed in this study. Increased sexual libido was reported by 9 percent of the patients.


The sexual effect of L-dopa therapy in a group of 152 Parkinson's disease patients is one of the aspects examined in this study. Increased libido was reported in only 3 percent of the sample.


The impact of L-dopa therapy on the sexual function of Parkinson's disease patients (n=32) is one of the variables examined in this study. Increased sexual libido was reported in 6 percent of the sample.

**Cerebral Palsy**


Based on six years of clinical experience with handicapped children and adolescents, the author discusses the causes of psychiatric disorders. Special attention is given to sexual impulses among the handicapped, and to psychiatric referral and treatment in a society where the changing picture of adolescent behavior makes it difficult to establish any rigid criteria of normality. The pitfalls in work with handi-
capped adolescents that may be relevant to the prevention of emotional disability are identified.


Cerebral palsied individuals have been for the most part misunderstood, misinterpreted, and avoided in the area of sexuality. When asked, these people almost invariably state that they received no significant sex education. One major reason for this is that society often views them as asexual or as too vulnerable to sexual advances. The authors present these and other sexual and interpersonal relationship problems and concerns faced by persons with cerebral palsy. They stress that these persons should be given adequate sex education and help in developing social skills.


This paper presents a panel discussion conducted at the 1971 meeting of the American Academy of Cerebral Palsy. The panel included three persons with cerebral palsy and a mother of a cerebral palsied child. The discussion covers various topics such as social experiences, education, parents’ reactions, communication problems, and the like. At several points during this discussion, the participants spoke of their lack of preparation in sexual matters and in understanding their own sexuality. They expressed the feeling that nonhandicapped people usually think that physically disabled persons are nonsexual beings. This is contrary to what they really are.


The authors present a multidisciplinary sex counseling modality with severely disabled adults. For illustrative purposes, a detailed case study of a cerebral palsied woman who received premarital sex and genetic counseling is discussed. Childbirth, pregnancy, sexual intercourse positions, and other topics should be included in counseling of this nature.
Multiple Sclerosis


This article presents the results of a study conducted at Mayo Clinic and aimed at the examination of symptoms and signs of multiple sclerosis. Results show that 14 of the 54 male patients examined (26 percent) mentioned impotence as a presenting symptom of their condition. Whether the impotence described by patients was absolute, partial, or variable is not clear from this article.


A questionnaire was sent to 302 patients suffering from multiple sclerosis. The questionnaire asked, among other things, about the patient's sex life. Results show that sexuality was altered in 91 percent of the males and in 72 percent of the females. About half the patients reported either having an unsatisfactory sex life or having ceased sexual activity altogether. In males erection was normal in only 20 percent of the patients. In females there was a lack of orgasmic response in 33 percent and loss of libido in 27 percent. There was no correlation between the incidence of sexual dysfunctions and the duration of the disease. Some compensatory methods of maintaining sexual intercourse are discussed.


It is expected, depending on the site of the lesion, that multiple sclerosis may affect sexual functioning in different ways in different individuals. In this brief communication, the author identifies and discusses the sexual aspects of multiple sclerosis and presents specific suggestions for counseling. He notes that disorders of sexual function in patients with multiple sclerosis are likely to affect the upper rather than the lower motor-sensory neurons. In the male patient, impaired potency is common, while in female patients there may be a lack of feeling in...
the vagina and clitoris. At times, increased libido or hypersexuality is a feature of the disease, perhaps more in female than in male patients.


Patients with multiple sclerosis have a long-standing history of sexual impotence. This research study was conducted with 37 male patients who had multiple sclerosis. Different aspects of the patients’ testicular and autonomic functions were investigated. Results indicated that 47 percent of the 37 men examined had an impairment of erection, while neurological disability was not marked. Sudomotor function was examined in a controlled clinical setting where sweating was stimulated. Totally impotent patients perspired normally down to the waist but not below. Men classified as partially impotent had perspiration in all areas with the exception of the lower limbs. When the testing was repeated at a later date, changes in potency status correlated with sweating patterns. Another feature investigated was excretion of gonadatrophins. These levels were found to be elevated in all of the totally impotent men and in about one-third of the partially impotent men. Other results are presented and discussed in light of previous research findings.