Sexual Assault of Women

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Sexual violence affects up to one third of women during their lifetime. Sexual assault is underreported, and more than one half of assaults are committed by someone known to the survivor. Although both men and women can be sexually assaulted, women are at greatest risk. Some groups are more vulnerable, including adolescents; survivors of childhood sexual or physical abuse; persons who are disabled; persons with substance abuse problems; sex workers; persons who are poor or homeless; and persons living in prisons, institutions, or areas of military conflict. Family physicians care for sexual assault survivors immediately and years after the assault. Immediate care includes the treatment of injuries, prophylaxis for sexually transmitted infections, administration of emergency contraception to prevent pregnancy, and the sensitive management of psychological issues. Family physicians should collect evidence for a "rape kit" only if they are experienced in treating persons who have been sexually assaulted because of the legal ramifications of improper collection and storage of evidence. Sexual assault may result in long-term mental and physical health problems. Presentations to the family physician may include self-destructive behaviors, chronic pelvic pain, and difficulty with pelvic examinations. Prevention of sexual assault is societal and should focus on public health education. Safety and support programs have been shown to reduce sexual assaults. (*Am Fam Physician.* 2010;81(4):489-495, 496. Copyright © 2010 American Academy of Family Physicians.)

▶ **See related editorial on page 428.**

▶ **Patient information:** A handout on sexual assault, written by the authors of this article, is provided on page 496.

Sexual violence includes intimate partner violence, human trafficking, forced prostitution, bondage, exploitation, neglect, infanticide, and sexual assault. It occurs worldwide and affects up to one third of women over a lifetime.[1] Sexual assault includes vaginal, oral, and anal penetration and is more broadly conceived than the legal definition of rape as nonconsensual penetration by a penis. Sexual assault is underreported, and the wide range in estimated lifetime prevalence reflects the method of data collection, with lower rates (12 to 20 percent) reported in persons presenting for medical care and higher rates (20 to 30 percent) reported in community surveys.[2] Fifty to 80 percent of sexual assaults are committed by a person known to the survivor.[1,3,4] Less than one fourth of survivors report sexual assault to the police.[4]

Sexual violence is an act of aggression by the powerful against the less powerful. Although both men and women can be sexually assaulted, women are at greatest risk. Some groups are particularly vulnerable, including adolescents; survivors of childhood sexual or physical abuse; persons who are disabled; persons with substance abuse problems; sex workers; persons who are poor or homeless; and persons living in prisons, institutions, or areas of military conflict.[1,4,5] This article reviews treatment of women who have been sexually assaulted and the long-term sequelae of sexual assault. Reference to the American Academy of Family Physicians policy statement on sexual assault can be found in *Table 1,* along with a list of other recommended resources that provide information beyond the scope of this article.

Table 1. Resources on Caring for Persons Who Have Been Sexually Assaulted

American Academy of Family Physicians. Rape victim treatment. Web site: http://www.aafp.org/online/en/home/policy/policies/r/rapevictimtreatments.html Policy statement on treatment of persons who have been raped
Ernoehazy W Jr, Murphy-Lavoie H. Sexual assault. eMedicine. February 29, 2008. Web site: http://emedicine.medscape.com/article/806120-overview Article on care of persons in an emergency department who have been sexually assaulted
U.S. Department of Justice, Office on Violence Against Women. A national protocol for sexual assault medical forensic examinations. September 2004. Web site: http://www.ncjrs.gov/pdffiles1/ovw/206554.pdf
Sexual Assault Forensic Examiner technical assistance. Web site: http://www.safeta.org/ Resources for sexual assault forensic examiners

SORT: KEY RECOMMENDATIONS FOR PRACTICE

Clinical recommendation	*Evidence rating*	*References*	*Comment*
Emergency contraception should be offered to all sexual assault survivors who are of childbearing potential and have a negative pregnancy test.	C	8	Based on expert opinion
All sexual assault survivors should be treated for the prevention of sexually transmitted infections.	C	9	Based on expert opinion

A = consistent, good-quality patient-oriented evidence; B = inconsistent or limited-quality patient-oriented evidence; C = consensus, disease-oriented evidence, usual practice, expert opinion, or case series. For information about the SORT evidence rating system, go to http://www.aafp.org/afpsort.xml.

Care of the Sexual Assault Survivor

Immediate treatment of a woman who has been sexually assaulted should address three areas: legal, medical, and psychosocial. Care is coordinated among law enforcement officers, medical personnel, and psychosocial support staff. It is critical that the survivor be assured that she is safe and not to blame for the assault.

Most women who have been sexually assaulted will present to the emergency department. If a woman presents to the family physician's office, the physician should determine if he or she can evaluate the patient appropriately and, if necessary, discuss referral with her. The decision to refer should be based on: (1) the availability of another site for assessment; (2) time available to complete the evaluation (30 to 60 minutes for the actual visit, with further time for coordination of legal, social, and psychological care)[6]; (3) experience with evaluation and treatment of sexual assault survivors; and (4) the ability to collect and preserve appropriate evidence (e.g., having the contents of a "rape kit" available *[Table 2[6]]*). The benefits of seeing the woman in the family physician's office include a less intimidating environment and an established relationship with the physician. If the survivor decides to

Table 2. Items in a "Rape Kit" and Their Uses

Contents	*Purpose*
Instructions, check-off form, and history and physical examination documentation forms	To ensure that all appropriate evidence is collected
Large paper sheet	For patient to stand on while undressing, to collect any evidence that may fall off in the process of undressing
Paper bags	To collect and label evidence (DNA may degrade in a moist environment, which is why plastic is not used)
Envelopes with:	
Cotton-tipped swabs	To collect samples from oropharynx, vagina, and rectum
Comb	To collect evidence from pubic hair
Filter paper	To remove evidence from the comb
Small cardboard boxes	To transport red- and purple-topped tubes used to collect blood samples and other evidence
Patient discharge instructions	To include information with available local community resources, follow-up appointment information, and appropriate telephone numbers

Information from reference 6.

report the assault, the local law enforcement agency should be contacted.

EVALUATION AND TREATMENT OF INJURIES

Using a gentle, nonjudgmental approach, the health care professional taking the history should document it in the patient's own words *(Table 3[6])*. As with any trauma, the history may seem to be disjointed and asynchronous. A woman may think that she did something to cause the assault and that others will blame her. Obtaining the patient's consent at each step of the examination helps her to regain a sense of control over the situation and is often a legal requirement. If available, a videotape explaining the evaluation procedures or the presence of a victim advocate is helpful.

The physical examination begins with an assessment for injuries. Injuries are noted in approximately one half of all reported assaults, and nongenital injuries are more common than genital ones.[4] Many facilities use a body diagram as part of the medical record to document the location of, size of, and specific information about physical injuries, such as abrasions, lacerations, bite marks, scratches, and ecchymoses. Alternatively, photography can be used with patient consent. Most physical injuries are minor, but any major trauma requires immediate attention and takes priority over further forensic evaluation.[4] In the absence of major trauma, collection of evidence is done concurrently with the physical examination.

COLLECTION OF APPROPRIATE EVIDENCE

The chain of evidence, or chain of custody, refers to the documentation of what evidence (e.g., sperm samples, torn clothing) is collected, when, and by whom, as well as how it is subsequently transported. Documentation of the designated person or persons who have physical custody of the evidence is required. The chain of evidence is critical for potential future legal proceedings. Most emergency departments have a rape kit and protocol, but an office-based physician may need to assemble one. Evidence to be collected includes: the patient's clothing; fingernail scrapings; head and pubic hair combings; plucked hair from the patient; swabs of the oropharynx, vagina, and rectum; and blood samples.[6] Patient discharge information includes local community resources and follow-up plans. Because of the potential legal implications of evidence collection in sexual assault cases, physicians are cautioned against making their own rape kit, unless absolutely necessary.

Drug-facilitated sexual assault should be considered when the survivor reports amnesia (partial or total) or the sense that "something sexual happened."[7] The presence of drugs or alcohol may be used as an excuse by the perpetrator and to blame the woman for the sexual assault.[2,7] The substance most commonly associated with sexual assault is alcohol, often combined with over-the-counter, prescription, or illegal drugs. Drugs used include chloral hydrate, gamma hydroxybutyrate, ketamine (Ketalar), and benzodiazepines (e.g., flunitrazepam [Rohypnol]). They are detectable in the urine up to 72 hours after use. Flunitrazepam and gamma hydroxybutyrate are illegal drugs and not obtained by a prescription.

PREVENTION OF PREGNANCY AND SEXUALLY TRANSMITTED INFECTIONS

Although the risk of pregnancy after a sexual assault is relatively low (approximately 5 percent), emergency contraception should be offered to all women of childbearing

Table 3. Tips on Taking a History from Women Who Have Been Sexually Assaulted

Use the patient's exact words
Use the phrases "alleged sexual assault" or "sexual assault by history"; avoid using "rape" because it is a legal, not medical, term
Document the ages of and identifying information about the patient and the assailant; the date, time, and location of the assault; the specific circumstances of the assault, including details of sexual contact and any exposure to bodily fluids; and what the patient has done since the assault (e.g., bathing, douching, changing clothes)
Note use of restraints (e.g., weapons, drugs, alcohol)
Record the patient's gynecologic history (including most recent consensual sexual encounter)

Information from reference 6.

Table 4. Prophylaxis After a Sexual Assault

Sexually transmitted infections
Hepatitis B vaccination (if not immune)
Gonorrhea, chlamydia, and trichomoniasis
Ceftriaxone (Rocephin), 125 mg intramuscularly
plus
Metronidazole (Flagyl), 2 g orally
plus
Azithromycin (Zithromax), 1 g orally, *or* doxycycline, 100 mg orally twice daily for seven days
Pregnancy
Levonorgestrel (Plan B), two pills taken at once (other hormonal emergency contraceptive formulations are also acceptable)

Information from references 8 and 9.

potential with a negative pregnancy test *(Table 4)*.[8,9] The only absolute contraindication to emergency contraception is a confirmed pregnancy.[8] Emergency contraception is most effective within 12 hours of unprotected sexual intercourse, and continues to be effective for up to five days.[4]

All survivors of sexual assault should be treated to prevent sexually transmitted infections (STIs).[9] Initial laboratory evaluation after a sexual assault is outlined in *Table 5*.[6,9] Repeat testing for syphilis and human immunodeficiency virus (HIV) should be performed at six weeks and again at three and six months after the assault.[9] Prophylaxis for STIs should be offered because follow-up may be unreliable *(Table 4)*.[8,9]

The risk of acquiring HIV infection after a sexual assault depends on the local prevalence of the virus and the type of assault.[4] According to the Centers for Disease Control and Prevention, the per-episode risk of acquiring HIV infection in consensual sex is 0.5 to 3 percent from receptive anal intercourse, 0.1 to 0.2 percent from vaginal intercourse, and less from oral sex,[9] but risk of transmission may be increased with mucosal trauma and bleeding. Postexposure prophylaxis should begin within 72 hours, if indicated *(Table 6)*.[9]

Survivors of sexual assault should be instructed to seek medical evaluation if symptoms of STIs develop, to abstain from sexual contact until completion of prophylactic treatment, and to schedule a follow-up appointment one to two weeks after the assault. They should also be encouraged to contact a local sexual assault crisis center, if available.

PROVIDING PSYCHOSOCIAL SUPPORT

Psychological sequelae vary among women who have been sexually assaulted. Survivors may immediately present with symptoms of disbelief, anxiety, fear, emotional lability, and guilt.[6] The "second rape" refers to secondary victimization from legal, medical, and mental health systems.[10] Physician training and the presence of victim

Table 5. Laboratory Testing After a Sexual Assault

Source	*Test*
Serum	Venereal Disease Research Laboratory or rapid plasma reagin
	Human immunodeficiency virus
	Hepatitis B (surface antigen and immunoglobulin M antibodies to hepatitis B core antigen); hepatitis C not routinely recommended
Urine	Pregnancy
Vaginal, anal, or oral swab (at any site of penetration)	Culture or antigen testing for *Neisseria gonorrhoeae* and *Chlamydia trachomatis*
	Wet mount prepraration for detection of sperm (motile for approximately six hours)
	Vaginal only: clue cells associated with bacterial vaginosis and *Trichomonas vaginalis*

Information from references 6 and 9.

advocates have improved responsiveness, but up to one half of women report unhelpful or harmful contacts and inconsistent medical care. Survivors report "cold, impersonal, and detached" treatment by health care professionals.[10] Rape myths are pernicious, endemic, and often internalized. Common examples include the sentiments that it could not be rape because, "they were lovers," "she was not hurt," "she is too old," or "she (or he) was drunk." For every 100 rape cases reported, seven may result in a prison sentence.[10] Sexual assault affects not only the survivor, but also her family, friends, and significant other.[3]

Long-Term Issues Associated with Sexual Assault

DELAYED PRESENTATION

Trauma disclosure is a process, and sexual assault survivors may give this history to family physicians days to decades after the assault. Family physicians may learn about a sexual assualt just days after it occurred while providing care in the office or months after it occurred while treating patients with posttraumatic stress disorder (PTSD). A patient may have difficulty with pelvic examinations even years after the assault.[11] Patients are more likely to reveal a sexual assault history when directly asked; however, disclosure is less likely as the rape deviates from the stereotypical scenario of stranger rape. Survivors, even years later, need to report their trauma in their own manner.

There is no definitive cutoff for collecting a rape kit after a sexual assault; however, it is difficult to collect evidence after 48 to 72 hours. Clothing can be collected for up to one month for DNA evidence if it has not been laundered or stored in a moist environment (which may destroy evidence).[6] STI treatment and pregnancy prevention may still be necessary. Assuring the survivor that she is safe is paramount.

PHYSICAL AND PSYCHOLOGICAL SEQUELAE

Sexual assault may be associated with pelvic pain, other chronic pain syndromes, headaches, irritable bowel syndrome, fibromyalgia, and sexual dysfunction *(Table 7[6])*. In one pelvic pain clinic, 46 percent of patients had a history of abuse.[12] Two other studies found that women with a history of sexual assault experienced more abdominal pain from their irritable bowel syndrome[13] and pain with speculum insertion during routine pelvic examination.[14]

Although the most common psychological sequela of sexual assault is PTSD, with

Table 6. HIV Postexposure Prophylaxis After a Sexual Assault

Assess for risk of HIV infection in the assailant
Determine characteristics of the assault that may increase the risk of HIV transmission (i.e., mucosal trauma and bleeding)
Consider consulting an HIV specialist (or consult the National Clinicians' Post-Exposure Prophylaxis Hotline [PEPline]: 888-448-4911)
Discuss low seroconversion rates in a risk-targeted approach and highlight the toxicity of routine antiretroviral prophylaxis
If the patient starts postexposure prophylaxis, schedule follow-up within seven days
When prescribing postexposure prophylaxis, obtain a complete blood count and chemistry panel at baseline
Check HIV serology at baseline, six weeks, and three and six months

HIV = human immunodeficiency virus.

Adapted from Centers for Disease Control and Prevention. Sexually transmitted diseases treatment guidelines 2006. http://www.cdc.gov/std/treatment/2006/sexual-assault.htm. Accessed September 21, 2009.

Table 7. Long-term Effects of Rape and Sexual Assault

Medical	Psychological
Chronic pain (pelvis, back)	Alcohol and drug abuse
Fibromyalgia	Anxiety
Headaches	Depression
Irritable bowel syndrome	Eating disorders
Poor overall health status	Posttraumatic stress disorder
Sexual dysfunction	Sleep disorders
Somatoform disorders	

Information from reference 6.

reported rates of 30 to 65 percent,[15] depression, anxiety, substance abuse, and eating disorders may also result. Predictors of PTSD severity include characteristics of the survivor and the assault (e.g., perceived life threat, use of violent force); negative reactions to disclosure; ethnicity (minorities experience more severe PTSD); and previous abuse, depression, or alcoholism.[15,16]

Special Populations

ADOLESCENTS

Young women (16 to 24 years of age) are four times more likely to be sexually assaulted than women of any other age,[17] and dating violence or date rape estimates range up to 30 percent.[18] Adolescents who have been sexually assaulted not only have long-term medical and psychological effects, but they are also at high risk of revictimization, criminal behavior,[19] and future self-destructive behaviors, including high-risk sexual practices, intravenous drug use, prostitution, and delinquency.[17]

Revictimization is defined as the increased likelihood of survivors of childhood or adolescent sexual or physical abuse to experience further abuse as an adult.[5,10] This group is at extremely high risk of long-term sequelae.[17]

SEXUAL ASSAULT AND WAR

Women and children are at risk of sexual assault during conflict, when fleeing conflict, and in displacement. Rape persists as a strategy of war and as an opportunistic offense perpetrated by persons with power in locations lacking security.[20]

OTHER AT-RISK GROUPS

Military sexual trauma includes sexual harassment and sexual assault. Up to 60 percent of women in the military experience some type of sexual trauma, and 23 percent have experienced sexual assault.[21] Military sexual trauma is directly related to PTSD.[22]

Older women are more likely to be assaulted by a stranger or a health care worker, are more commonly assaulted in their homes or health care facilities, and incur greater genital trauma.[23-25] Women with physical disabilities are also at increased risk.[26,27] In both of these groups, data are poor because there is often coexisting cognitive disability.

Women living in detention facilities are at high risk of sexual assault, but accurate data are hard to obtain.[28]

Women in underrepresented cultural groups may experience more PTSD symptomatology[15] and may be more likely to believe that their community blames them for the assault.[29]

Prevention

Primary prevention of violence is societal. Effective programs confront public attitudes about love and sexuality and teach conflict resolution skills. Teaching women life skills may decrease their vulnerability to sexual violence. Safety and support programs (e.g., telephone hotlines), transportation policies and procedures, campus and community safety programs, and crime prevention programs have been shown to decrease the incidence of sexual assaults.[30]

Initial recognition that a sexual assault has occurred and effective care of survivors represent secondary prevention for the survivor, but primary prevention of revictimization. The availability of victim advocates and training programs for physicians and other health care professionals, such as Sexual Assault Nurse Examiner programs, improves care and provides accurate collection and documentation of forensic evidence, which improves prosecution rates.[3,10]

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Author disclosure: Nothing to disclose.

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