3. When providing information regarding the use of the hormonal skin patch, the nurse should include the following: *(Select all that apply.)*
   1. The patch is worn for 4 weeks then replaced on a different part of the body.
   2. The patch is applied to dry skin of the buttock, abdomen, upper arm, or torso.
   3. The initial application of the patch is the first day of the menstrual period.
   4. Occluding the patch by taping it to the skin can adversely alter its effectiveness.
4. Which patient should not use Depo-Provera?
   1. Woman with sickle cell disease
   2. Adolescent
   3. 2-week postpartum, breastfeeding mother
   4. Woman taking anticonvulsant medications
5. Primary infertility is diagnosed when:
   1. A single woman desires pregnancy without a male partner.
   2. Couples conceive but repeatedly lose the fetus before it is viable.
   3. After one successful pregnancy, the couple is unable to conceive a second time.
   4. The couple is unable to conceive at all after at least 1 year of unprotected sexual intercourse.
6. A technique that involves bypassing blocked or absent fallopian tubes is called:
   1. Transcervical balloon tuboplasty
   2. Gamete intrafallopian transfer
   3. In vitro fertilization
   4. Intracytoplasmic sperm injection
7. When providing information to a patient at a family planning clinic, the nurse should include which instruction(s)? *(Select all that apply.)*
   1. Spermicides are highly effective forms of birth control.
   2. Abstinence is completely effective in preventing pregnancy.
   3. The diaphragm should not be left in place for more than 24 hours.
   4. IUDs are not recommended for women who have multiple sexual partners.
   5. Oral contraceptives may interact with other medications.

Critical Thinking Questions

1. A woman, married for 6 months, does not want to become pregnant for 2 years so that she can establish her career. She is interested in using an IUD. What advice would you give her about using this method?
2. A woman states that she is sexually active. The physician prescribed an OC for her. What advice would you give her about taking OCs? What advice would you give her about protection against STIs?

chapter

20 Women's Health Issues

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Objectives

1. Define key terms listed.
2. Describe toxic shock syndrome, list four of its symptoms and prevention measures.
3. Describe premenstrual syndrome, and list potential ways to reduce it.
4. Identify potential causes of dysmenorrhea, and explain how it can be relieved.
5. Explain the physiologic factor that initiates menopause.
6. State two screening techniques for early detection of breast cancer.
7. Explain the technique of breast self-examination.
8. Describe two options in the management of breast cancer.
9. Define endometriosis, and state one typical symptom.
10. Describe the transmission, treatment, and prevention of common sexually transmitted infections.
11. Explain methods to prevent transmission of infections acquired through blood and body fluids.
12. Discuss the prevention of human papillomavirus infections.

Key Terms

amenorrhea (ə-men″o-re′ə, p. 393)
climacteric (klī-MĂK-tĕr-ĭk, p. 393)
dysmenorrhea (dĭs-mĕn-ō-RĒ-ă, p. 392)
dyspareunia (dĭs-pă-ROO-nē-ă, p. 399)
endometriosis (ĕn-dō-mē-trē-Ō-sĭs, p. 398)
leiomyomas (lī-ō-mī-Ō-măs, p. 393)
menopause (MĔN-ō-păwz, p. 393)
menorrhagia (mĕn-ō-RĀ-jă, p. 393)
metrorrhagia (mĕ-trō-RĀ-jă, p. 393)
oligomenorrhea (ol′∼ĭ-go-men″o-re′ə, p.393)
osteoporosis (ŏs-tē-ō-pŏ-RŌ-sĭs, p. 394)
Papanicolaou (Pap) test (păp″ə-nĭ″ko-la′oō, p. 395)
pelvic inflammatory disease (PID) (PĔL-vĭk ĭn-FLĂM-ă-tō-rē, p. 399)
polymenorrhea (pol″e-men″o-re′ə, p. 393)
premenstrual dysphoric disorder (PMDD) (prē-MĔN-strŭl, p. 392)
premenstrual syndrome (PMS) (p. 392)
sexually transmitted infections (STIs) (p. 400)
stress incontinence (p. 394)
toxic shock syndrome (TSS) (p. 391)

WOMEN'S HEALTH CARE

Today, women from all ethnic backgrounds choose to be active participants in their health care and therefore need information about their bodies, health promotion, self-care techniques, and choices concerning treatment options.

Culturally competent communication is the key to empowering the woman to feel confident about her ability to care for herself and her family. In some cultures, women ask questions when they want to know something related to their health; in other cultures, women wait to be told what to do (see Chapters 1 and 7). To be an effective teacher about health behaviors, the nurse must understand the patient's cultural needs, experiences, and individual goals. The nurse offers support, knowledge, and caring behaviors that help the woman cope with screening tests or problems.

Some goals of *Healthy People 2020* relate to women's health, including curbing the rise in breast cancer, increasing the number of women over the age of 40 who have mammograms, reducing the number of deaths from cervical cancer, increasing the number of women over the age of 18 who have Papanicolaou (Pap) tests, reducing the occurrence of vertebral fractures in older women with osteoporosis, and reducing the occurrence of sexually transmitted infections (STIs [formerly known as sexually transmitted diseases, or STDs]). Achievement of these goals requires preventive care, screening, and increased accessibility to health care.

Women are assertive health care consumers. As women age, the intergenerational phase (caring for young children and older parents) influences their health care needs. As a woman's life expectancy increases, living with disabilities or long-term illness presents financial, psychological, and physical strains that affect their health care needs.

Lifestyle management, adaptation to multiple roles, and self-care play a large role in women's health care,

especially in the areas of health promotion and illness prevention. The perinatal experience is often the first encounter with a health care provider that is maintained on a long-term basis as the new mother assumes the caregiving role for her child.

The older woman presents a unique challenge to nurses and health care providers. Older women may be single, live alone, have below-poverty income, and be without caregivers. The nurse must be aware of normal physiologic changes associated with aging when assessing the older woman. Although normal physiologic changes cannot be modified, associated decline in the ability to function depends on lifestyle choices and the individual's ability to adapt to change. Aerobic and resistance exercise programs are popular, and exercise programs for the older woman can be individualized for best results.

The majority of health care delivery for women is based in a location other than the acute care hospital facility. This chapter provides an overview of the more common health care problems of women in the community.

SMOKING AND HEALTH

Newborns and children who live in an environment where parents smoke are at increased risk for respiratory problems, including sudden infant death syndrome (SIDS) and asthma. Smoking during pregnancy places the woman at risk for preterm delivery or places the fetus at risk for intrauterine growth restriction. Counseling, public health campaigns, and smoking cessation programs have been implemented, and these are some of the continued goals of *Healthy People 2020*.

Stress is often associated with smoking, and stress management programs may be an important part of any smoking cessation program. An understanding of addictive behavior, motivation for change, and behavioral strategies to accomplish smoking cessation is important to the success of any program. A sample interview concerning smoking assessment, intervention, and self-help is shown in Table 20-1.

TOXIC SHOCK SYNDROME

Toxic shock syndrome (TSS), a multisystem infection that results from the response of the body to toxins produced by *Staphylococcus aureus* and group A streptococci, is potentially fatal. The toxin produced alters capillary permeability, which allows intravascular fluid to leak from the blood vessels, resulting in hypovolemia, hypotension, and shock. The toxin also causes direct tissue damage to organs and precipitates serious defects in blood coagulation.

Table 20-1 Tobacco Cessation Teaching Plan

Ask About Tobacco Use and Exposure		
Risks to self and fetus or newborn include increased risk for cancer, lung disease, strokes, heart disease, stomach ulcers, preterm labor, low-birth-weight newborns, sudden infant death syndrome, learning problems, more colds, and ear infections. Benefits to mother and fetus or newborn include living an average of 20-25 years longer, better health, more money, food tastes better, better chance of normal birth weight, fewer health problems at birth, fewer respiratory illnesses, and fewer allergies.		
Ask Whether Patient Wants to Quit		
No	**Yes**	**Exposure Only**
Continue telling about risks of smoking and benefits of quitting at every prenatal visit.	Help patient develop a plan to quit smoking.	Help the patient's partner quit smoking in the same way, and also teach about nicotine replacement products,* such as nicotine gum and patches or medications such as bupropion.
Join smoking cessation programs. Stop "cold turkey" (choose a date and time then never smoke again). Smoke at fixed intervals (only smoke at set times and make the times progressively further and further apart). Change smoking behaviors (take shorter puffs or smoke less of each cigarette). Change routines (e.g., if patient is used to smoking while reading the newspaper after breakfast, suggest reading the newspaper while eating and then going for a walk after breakfast).		Do not let anyone smoke inside of the house. Stay away from smoky areas. Spend more time with friends who do not smoke.
Find Out Whether Patient Has Attempted to Stop Smoking in the Past		
No	**Yes**	
Arrange follow-up. Suggest that the patient join smoking cessation groups, attend counseling sessions, make office visits, make phone calls, or choose someone to help stick to the plan.	Explain that it often takes seven attempts before successfully quitting. Ask what got in the way of success when he or she last tried to quit. Help develop a plan to avoid the same problems that interfered with the previous attempt at quitting.	

*Nicotine-replacement products have not been proven to have fewer health risks than regular tobacco.

Certain factors increase the risk for the toxin to gain entry into the bloodstream. These include the use of high-absorbency tampons during menstruation and barrier methods of contraception (diaphragm or cervical cap), both of which can trap and hold bacteria if left in place for more than 48 hours.

Early diagnosis and treatment are important in preventing a fatal outcome. Symptoms include a sudden spiking fever and flulike symptoms (headache, muscle aches, vomiting, diarrhea, and sore throat), hypotension, generalized rash resembling sunburn, and skin peeling from the palms of the hands and soles of the feet 1 to 2 weeks after the onset of the illness. Laboratory findings usually reveal elevated blood urea nitrogen (BUN) and creatinine levels and low platelet count. Prevention includes changing tampons every 4 hours, using peri pads rather than tampons during sleep, not using diaphragms or cervical caps during menstruation, and washing the hands before and after inserting anything into the vagina. Hospitalization and intensive care may be required if TSS occurs.

PREMENSTRUAL SYNDROMES

Premenstrual syndrome (PMS), also known as **ovarian cycle syndrome,** is defined as the presence of physical, psychological, or behavioral symptoms that regularly recur with the luteal phase of the menstrual cycle, significantly disappear during the remainder of the cycle, and completely disappear the week after the menstrual period. Approximately 5% to 10% of menstruating women experience PMS that interferes with activities of daily living. The symptoms that occur between ovulation and the onset of menses include weight gain, bloating, irritability, loss of concentration, headaches, constipation, acne, breast tenderness, anger, fatigue, and feelings of being out of control that may interfere with work or school.

Premenstrual dysphoric disorder (PMDD) is a more severe type of PMS that involves irritability, dysphoria, mood swings, fatigue, appetite changes, and a sense of being overwhelmed (American Psychiatric Association, 2000). A woman's personal diary can confirm symptoms recurring during the specific phase of the ovarian cycle. The psychological symptoms are usually the result of a decreased ability to cope with psychological stressors rather than the appearance of new emotional distress. For this reason, psychotherapy may help the woman cope with or resolve problems that are aggravated by PMS. Medical treatment often includes drugs that inhibit ovulation. Pyridoxine (vitamin B_6) is thought to be helpful, although its use is not validated by research. Excess dosages of vitamin B_6 (more than 1000 mg/day) may result in peripheral nerve toxicity. Calcium and multivitamins with vitamin E may be advised by some obstetricians. Diuretics may be helpful when water retention is a problem. Selective serotonin reuptake inhibitors (SSRIs), such as fluoxetine (Prozac) and sertraline (Zoloft), have been shown to be effective in decreasing psychological symptoms. Gonadotropin-releasing hormone (GnRH) agonists do not show strong evidence of efficacy in the comprehensive treatment of PMS symptoms. Diet modifications include eating a well-balanced diet and avoiding a high salt intake to prevent water retention. Reducing caffeine intake to reduce breast tenderness and consuming low-fat, high-complex carbohydrates to increase brain serotonin synthesis help decrease nervousness, frustration, irritability, and agitation that the woman may be experiencing.

Management includes self-care measures directed toward developing a healthy behavior. The nurse can suggest stress management such as relaxation techniques and aerobic exercise, especially during the luteal phase of the cycle. Exercise has been found to increase blood levels of beta-endorphin (an opiate-like substance produced in the body). Complementary and alternative medicine (CAM) approaches to care include yoga, massage therapy, and herbs such as black cohosh, ginger, and chaste tree fruit (see Chapter 21).

DYSMENORRHEA

Dysmenorrhea refers to painful menstrual cramps that occur during or before the onset of menstruation and disappear by the end of menses. Dysmenorrhea is classified as primary or secondary. Primary dysmenorrhea is caused by prostaglandins, which are produced by the uterus in higher concentrations during menses. This increases uterine contractility and decreases uterine artery blood flow, resulting in painful ischemia, which is known to cause the sensation of cramps. Treatment of primary dysmenorrhea includes oral contraceptives (which block ovulation) and prostaglandin inhibitors (such as ibuprofen and aspirin). Self-care measures such as exercise, rest, heat, and proper nutrition help some women. Biofeedback has also been used with some success.

Secondary dysmenorrhea is associated with a pathologic condition of the reproductive tract. The symptoms appear after menstruation has been established. Some causes are endometriosis, pelvic inflammatory disease, and ovarian cysts. Some nutritionists suggest that vitamin E, a mild prostaglandin inhibitor, may decrease uterine discomfort. Warmth helps by promoting increased blood flow. Drinking hot herbal tea or sitting in a warm bath is soothing. Massage can soothe aching back muscles and promote relaxation, and daily exercise can ease the cramps.

MENSTRUAL IRREGULARITIES (DYSFUNCTIONAL BLEEDING)

Menstruation relies on a balance of several hormonal events that involve the hypothalamic, pituitary, ovarian, and uterine function that results in sloughing of the endometrium when pregnancy does not occur. Dysfunctional bleeding includes:

- **Menorrhagia**: More than 80 mL of blood is lost or menstruation lasts more than 7 days.
- **Polymenorrhea**: Menstruation occurs regularly in less than 21-day cycles (more frequent than normal).
- **Oligomenorrhea**: Menstruation occurs in cycles of more than 35 days.
- **Metrorrhagia**: Menstruation occurs at irregular and frequent intervals.
- *Menometrorrhagia:* Prolonged or excessive bleeding occurring at frequent intervals.
- *Postmenopausal vaginal bleeding:* Occurs at least 1 year after cessation of spontaneous menstruation.
- **Amenorrhea**: The absence of menstrual bleeding (primary, before regular menses is established, or secondary, after regular menses has been established).

Bleeding can be anovulatory, which is most common at the beginning or the end of reproductive life. There is no ovum, corpus luteum, or progestin to prepare uterine lining. Bleeding can also be ovulatory, which usually occurs at the height of the reproductive life cycle. It is associated with prolonged progesterone secretion or prostaglandin release. Risk factors include, age, obesity, excessive exercise, and high stress or medical condition such as polycystic ovarian syndrome (Ayers & Montgomery, 2009).

The form of management depends on the cause of the bleeding and should be investigated by the health care provider. The treatment of anovulatory bleeding includes combination oral contraceptives, and the treatment of ovulatory bleeding includes NSAIDs taken 1-2 days before menses to decrease prostaglandin production. OCs may also be used. Lysteda (tranexamic acid) has been approved by the FDA as a non-hormonal treatment for menorrhagia. It works by reducing clot breakdown in the uterus. It should not be used with oral contraceptives (USFDA, 2010). Surgical removal of polyps may be performed to diagnose endometrial hyperplasia.

LEIOMYOMAS

Uterine fibroids, also known as **leiomyomas** or myomas, are benign uterine tumors that develop during the woman's reproductive years. They are estrogen-dependent and progress to cancer in about 0.5% of patients diagnosed with fibroids. The majority of women with fibroids are diagnosed at the time of pelvic examination and may receive confirmation with a pelvic ultrasound. Detectable fibroids manifest as a pelvic mass, excessive menstrual bleeding, or both. In some women, the excessive bleeding leads to iron deficiency anemia. Small tumors are often undetectable and present no symptoms. Diagnosis can be confirmed with ultrasound, in most cases.

Although it is commonly believed that all fibroids grow larger during pregnancy, some fibroid tumors increase in size, whereas others actually regress. Women who have fibroids and become pregnant are subject to certain risks, including antepartum bleeding, dystocia from interference with the efficiency of uterine contractions, potential cesarean birth, and early pregnancy loss. There also appears to be an increased risk of preterm labor. Although specific risks exist, most pregnancy outcomes are quite favorable. Therefore, women with fibroids should not be discouraged from becoming pregnant.

Hormonal management includes the use of oral contraceptives (as an off-label use) or GnRH analogs, such as Lupron (Leuprolide), Synarel (Nafarelin acetate), and Zoladex (Goserelin acetate) to treat endometriosis and decrease the size of fibroids prior to surgery (Flowers, 2008).

The removal of the fibroid or myoma that impinges on or interferes with the endometrial cavity reduces the risk of pregnancy loss. Treatment options include a nonsurgical uterine fibroid embolization, magnetic resonance imaging (MRI)–guided focused ultrasound embolization, or a surgical myomectomy. For women with heavy or prolonged menstrual bleeding, a hysterectomy may be performed.

MENOPAUSE

Menopause occurs when a woman's menstrual periods have ceased for 1 year. The **climacteric** (change of life) refers to the physiologic and psychological alterations that occur around the time of menopause. Pregnancy can occur during the climacteric period. Psychological responses are affected by the woman's expectations, marital and financial stability, family views, and social or ethnic cultural values. The changes in women's health care enable women to cope more effectively, form new goals and priorities for this new phase, and enjoy a productive life.

Physical changes are a result of lowered estrogen levels. The average age of menopause in the United States is 51.5 years (Cedars & Evans, 2008). The uterine endometrium and myometrium atrophy, as do the cervical glands. The vaginal mucosa becomes smooth and thin, and the rugae disappear, leading to loss of elasticity. Sexual intercourse may be painful, but this can be overcome by using water-soluble lubricating gels. The woman may have hot flashes and feel a burning

Box 20-1 Contraindications to Menopausal Estrogen Treatment

- Pregnancy or possible pregnancy
- Unexplained vaginal bleeding
- Active or chronic impaired liver function
- Breast cancer
- Endometrial cancer, except in certain circumstances
- Recent vascular thrombosis (with or without emboli)

sensation in the face and chest, followed by perspiration. The woman may also notice chills, palpitations, dizziness, and tingling of the skin resulting from vasomotor instability.

A woman's view of menopause as a normal life transition or as a medical condition that requires treatment will determine management strategies. Decreasing estrogen does increase the risk for osteoporosis or increased cholesterol levels. Treatment options include exercise, a high-fiber diet that is rich in antioxidants, and calcium and magnesium supplements. Hormone replacement therapy (HRT) is acceptable for short-term treatment in younger women but not long-term treatment in older women (NAMS, 2008) (Box 20-1). CAM therapy includes yam root, which contains a natural progesterone-like substance; ginseng; soy products that contain phytoestrogens; black cohosh (thought to reduce luteinizing hormone); and vitamin E (see Chapter 21).

PELVIC FLOOR DYSFUNCTION

Pelvic floor dysfunction occurs when the supporting structures to pelvic organs are damaged or weakened. The damage may be the result of childbirth injury. Two classifications of pelvic floor dysfunction, which may occur at the same time, are vaginal wall prolapse (which includes cystocele, enterocele, and rectocele) and uterine prolapse. A **cystocele** occurs when the upper vaginal wall becomes weakened and unable to support the bladder, causing a downward displacement of the bladder. **Stress incontinence** (loss of urine) may result and is particularly noticeable when the woman coughs or sneezes. An **enterocele** occurs when the upper posterior vagina is weakened, allowing a loop of bowel to herniate downward between the uterus and rectum. A **rectocele** occurs when the posterior vaginal wall becomes weakened. When the woman strains to defecate, the feces are pushed against the wall instead of toward the rectum. Digital pressure against the posterior vaginal wall may facilitate defecation.

A **uterine prolapse** occurs when the supporting structures (ligaments) of the uterus and vagina are weakened, causing the uterus to protrude through the vagina. The woman feels pelvic pressure, fatigue, and backache. Uterine prolapse may occur in a woman who has had several vaginal births or large newborns born vaginally.

Treatment and Nursing Care

Age, physical condition, and sexual activity are considered in the medical management of pelvic floor relaxations. The vaginal wall(s) may be repaired, or a vaginal hysterectomy may be done. A pessary support device can be used if the woman is unable or chooses not to have surgery. Kegel exercises can help strengthen the pubococcygeal muscle—the major support for the urethra, vagina, and rectum (see Chapter 5). A diet high in fiber and adequate fluids can soften the stools and make it easier to defecate.

OSTEOPOROSIS

Osteoporosis is a degenerative musculoskeletal disorder in which a decrease in bone density results in an increased porosity in bone, making the person more vulnerable to fractures. The North American Menopause Society (NAMS) defines *osteoporosis* as a bone-mineral density score under 2.5 or presence of fragility fractures. In the United States, 1.3 million fractures occur yearly as a result of osteoporosis. Women at greatest risk are of Asian descent or small-boned, fair-skinned white women of Northern European descent. Other risk factors are family history, early menopause, a sedentary lifestyle, and inadequate calcium intake. Caffeine, alcohol, smoking, and long-term use of steroids also contribute to the decrease in bony skeletal mass.

Prevention of osteoporosis is the primary goal of care. Preventive measures should begin during youth. Women are advised to maintain an adequate calcium intake. Young women should have at least 1200 mg calcium per day, and postmenopausal women should take 1500 mg per day. Vitamin D, 400 to 800 units, should be taken to aid in calcium absorption. Calcium supplementation is most efficient when single doses do not exceed 500 mg and when it is taken with meals. Medications can be used, such as calcitonin (nasal spray), with nasal irritation as the major side effect, and alendronate (Fosamax), which is effective but has side effects such as esophageal irritation and gastric discomfort. To reduce the side effects of esophageal irritation, the drug must be taken on awakening, with a minimum of 8 oz of water, followed by staying in an upright position for 30 minutes. Although there is some evidence that estrogen replacement therapy increases bone density and reduces fractures, the risks involved with HRT must be weighed against the benefits. Low impact exercises are advised. Raloxifene (Evista), a selective estrogen receptor modifier (SERM) may be prescribed to prevent bone loss, Teriparatide (Forteo), an injectable parathyroid hormone is approved for menopausal women with high risk for fractures, for a 2-year period of therapy (NAMS, 2008).

The woman's height should be measured at each annual checkup because loss of height is often an early

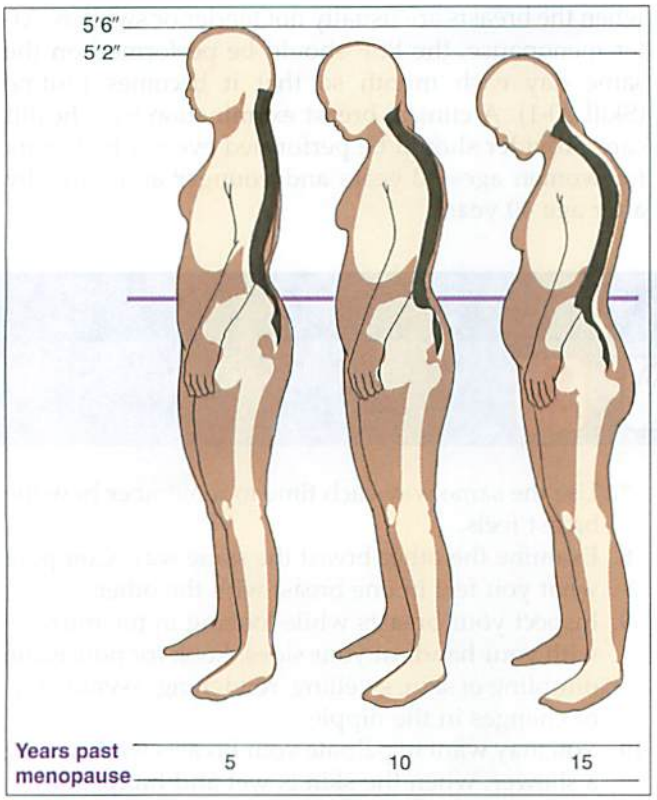


FIGURE 20-1 With progression of osteoporosis, the vertebral column collapses as a result of loss of bone mass, causing loss of height and back pain. Dowager's hump refers to the curvature of the upper back.

sign of compressed vertebrae caused by decreasing bone mass (Figure 20-1). A dowager's hump (cervical lordosis with dorsal kyphosis) occurs when the vertebrae can no longer support the upper body in an upright position. Treatment recommendations include educating the woman concerning healthy nutrition, calcium and vitamin D intake, regular exercise, and fall prevention. Follow-up concerning compliance and repeat bone density studies are recommended at 1-2 years after start of treatment or 5 years after initial testing (Bonnick, 2010). Further information can be found at www.nof.org.

BENIGN BREAST DISORDERS

The breast undergoes regular cyclic changes in response to hormonal stimulation. Each month, in rhythm with the ovulatory cycle of the ovaries and uterus, the breasts become engorged with fluid and the woman may have sensations of tenderness, lumpiness, or discomfort. Mastodynia (pain in the breasts) is common and usually lasts for 3 or 4 days before the onset of menses. In fibrocystic breast disease, a mobile, localized cyst may form that can be diagnosed and treated by needle aspiration. A fibroadenoma is a movable, well-defined solid breast mass that is nontender. Surgical removal may be indicated. A nonpalpable solitary nodule discovered by mammogram may be an interductal papilloma. Excision is the treatment of choice. These conditions are most often benign but require follow-up and referral to a health care provider.

SCREENING TESTS FOR CANCER DETECTION

PAPANICOLAOU TEST

In most cases, changes occur in cells of the cervix before cervical cancer develops. The **Papanicolaou (Pap) test** (a screening device) is useful for detecting precancerous and cancerous cells that may be shed by the cervix. Regular Pap test screening detects early changes and enables early treatment, thereby increasing survival rates for cervical cancer. The U.S. Food and Drug Administration (FDA)–approved PapNet testing is an advanced method of computer technology that automatically detects and displays abnormal cells on a high-resolution color monitor for interpretation and diagnosis.

Health education concerning the need for regular Pap tests as part of routine health care and emotional support for women who have a positive Pap test result are nursing responsibilities. Gardasil is the first human papillomavirus (HPV) vaccine approved by the FDA. It is almost 100% effective in preventing HPV type 6, 11, 16, and 18 and associated precancerous lesions. It is indicated for women 9 to 26 years of age as a regular part of routine immunization programs. Annual PAP tests are recommended to start at age 21 and repeated every 2 years between 21 and 29 years of age unless pathology is seen. Women over 30 years of age with three consecutive negative PAP tests can lengthen the interval to every 3 years. Women with cervical cancer should be screened annually for 20 years after treatment. Screening is not necessary for women who have had elective cesarean sections or women over age 70 with 3 consecutive negative screenings (ACOG, 2009).

VULVAR SELF-EXAMINATION

During the pelvic examination, the nurse or health care provider can educate the woman about her vulva. Self-examination of the vulva, like breast self-examination, permits early detection of abnormalities, with possible early treatment and cure. The vulvar self-examination should be performed monthly, especially for all sexually active women. Vulvar self-examination is composed of visual inspection and palpation of the female external genitalia. Any abnormalities (discharge, irritation, or growths observed) should be reported to the health care provider. A good light and mirror are needed for the examination.

BREAST SELF-EXAMINATION

Women have been encouraged to perform a breast self-examination (BSE) every month. If the woman becomes knowledgeable about her breasts by performing a regular self-examination, she often is able to detect an abnormality earlier or recognize that the finding is normal and has not changed for years. The BSE should begin during adolescence. Some health care providers

feel mammography alone is sufficient because many BSEs result in false-positive interpretations (Chiarelli, Majpruz, Brown, et al., 2009).

The nurse or health care provider should teach the woman how to perform a BSE during a routine physical examination. BSE should be performed approximately 1 week after each menstrual period, when the breasts are usually not tender or swollen. After menopause, the BSE should be performed on the same day each month so that it becomes routine (Skill 20-1). A clinical breast examination by a health care provider should be performed every 1 to 3 years for women ages 40 years and younger and annually after age 40 years.

Skill 20-1 Breast Self-Examination

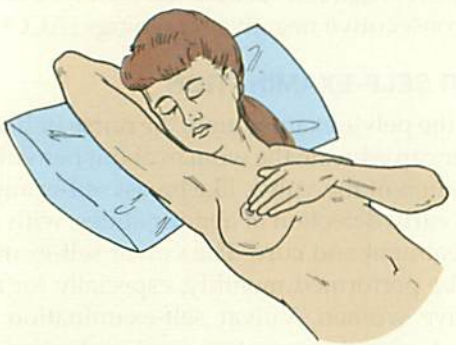
PURPOSE

To learn how the breasts feel and detect any changes.

Note: Perform breast self-examination (BSE) monthly, approximately 1 week after the menstrual period, when breasts are not tender or swollen from hormonal changes. This is an ideal time to feel breasts for consistency in breast tissue. Perform BSE the same day each month so it becomes routine (you will be less likely to forget to do it).

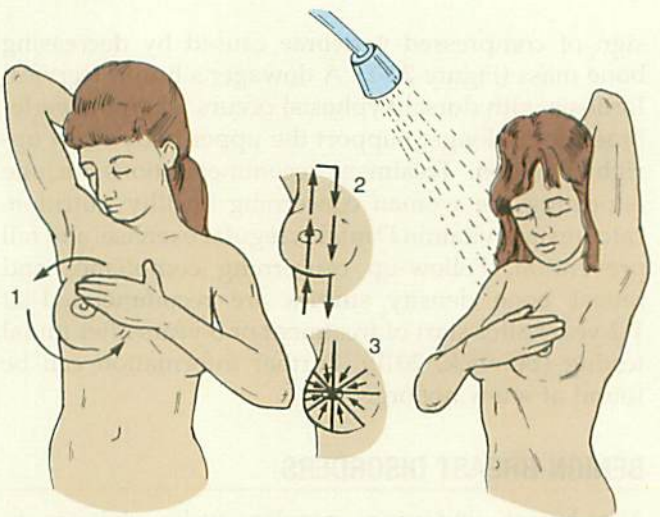
Steps

1. Lie down.
2. Flatten your breast by placing a pillow under your shoulder on the side being examined.
3. Put one hand behind your head.
4. Use finger pads of your three middle fingers to feel for lumps or thickening.



5. Press firmly enough to distinguish different breast textures.
6. Move around the breast in a set way. (You can choose the circle movement, the up-and-down line, or the wedge movement.)

7. Use the same way each time to remember how the breast feels.
8. Examine the other breast the same way. Compare what you feel in one breast with the other.
9. Inspect your breasts while looking in the mirror with your hands at your sides. Look for noticeable dimpling of skin, swelling, reddening, asymmetry, or changes in the nipple.
10. You may want to palpate your breasts while taking a shower, when the skin is wet and lumps may be easier to feel. Your soapy hands will glide over the wet skin, making it easy to check how your breast feels.



11. Report any changes, such as lumps, dimpling, thickening of skin, or nipple discharge.

MAMMOGRAPHY

A **mammogram** is a soft-tissue radiographic image of the breast taken without the injection of a contrast medium. It can detect lesions in the breast before they can be felt and is an effective screening tool for breast cancer. Currently, the American Cancer Society suggests that all women age 40 years and older have an annual mammogram. The National Cancer Institute recommends mammograms every 1 to 2 years for women ages 40 to 49 years and annually for all women ages 50 years and older. The National Cancer Advisory Board also suggests that women at high risk for breast cancer should ask their physicians about beginning mammography before the age of 40 years. The digital mammography technique has reduced the occurrence of false-positive readings (Buzek, 2010).

One national goal for *Healthy People 2010* related to women's health was met in the year 2010: access to mammograms for women ages 50 years and older. Mammography is a useful tool, but it cannot replace BSE and clinical examination; both are needed. Up to 10% of early-stage breast cancers are first detected by clinical examination, not by mammogram. Transillumination, thermography, and ultrasound can aid in detecting cancerous lesions in dense breast tissue.

BREAST CANCER

RISK FACTORS

Each year an estimated 1 in 8 women is diagnosed with breast cancer in the United States. Two inherited genes linked to breast cancer have been identified: *BRCA-1*, located on chromosome 17, and *BRCA-2*, located on chromosome 13. It is thought that as many as 30% of women given the diagnosis of cancer before 45 years of age may be carriers of the *BRCA-1* gene. Other risk factors include age greater than 50 years, family history of premenopausal breast cancer, use of alcohol, smoking, high-fat diet, high caffeine intake, early menarche, late menopause, and nulligravid status. Studies concerning genetic links to breast and gynecologic cancer are ongoing.

Although genetic testing for the risk of breast cancer was intended to enhance informed decision making and influence self-care, often the early knowledge that a genetic mutation is present with a high risk for developing breast cancer sometime during the life cycle may result only in increased anxiety and depression that may decrease quality of life.

Inflammatory breast cancer (IBC) is a rare type of cancer that is very aggressive and occurs in younger women and many African American women. A rapidly appearing red, inflamed breast tissue typically occurs rather than the traditional breast lump. Breast conservation therapy is not an option for this type of breast cancer at this time (Morris, 2010).

Treatment and Nursing Care

Surgical Procedures. When the woman is told that she has breast cancer, important decisions must be made regarding the type of surgery available or whether she has other options. Conservative breast surgery in early disease combined with radiation or adjuvant chemotherapy improves survival rates comparable to those for radical mastectomy (Box 20-2). Today, less emphasis is placed on radical procedures. Mastectomy rates from 1997 to 2003 decreased from 45% to 31% but then increased to 43% in 2006, even though the outcomes were not shown to be better than lumpectomy or radiation (Katipamula, Degnim, Hoskin, et al., 2009; Morrow & Harris, 2009). The most common surgical procedures are:

- **Lumpectomy:** Removal of a tumor from the breast. This is considered conservative treatment, and the excision is performed without major cosmetic deformity. Some axillary lymph nodes are often removed to rule out spread of the disease. Radiotherapy may or may not be prescribed.
- **Simple mastectomy:** Removal of the entire breast. Axillary dissection is omitted, although some lymph nodes may be removed to rule out the spread of the disease.
- **Modified radical mastectomy:** Removal of breast tissue, axillary nodes, and some chest muscles. The pectoralis major muscles are preserved. This procedure is recommended when a large primary lesion is found in a relatively small breast.
- **Radical mastectomy:** Removal of the entire breast, including the axillary nodes and the pectoral muscles. It is rarely performed today.

The nurse should encourage the woman to verbalize her feelings and express her fears. The loss of a body part and fear of pain, disability, and death can be overwhelming. Education concerning the diagnosis and treatment options is a nursing responsibility.

Adjuvant Therapy. Adjuvant therapy is additional therapy after the surgical procedures. Some tumors are estrogen-receptor positive, meaning that their growth is stimulated by estrogen; therefore, estrogen-blocking drugs are administered, such as tamoxifen, which blocks estrogen by binding with it. The side effects of tamoxifen vary, but the most

Box 20-2 Breast Surgery Options

- **Lumpectomy:** Removing the tumor mass and a narrow margin of normal tissue surrounding it.
- **Simple mastectomy:** Removing the tumor, nipple, and areola and removing axillary lymph nodes for staging purposes.
- **Modified radical mastectomy:** Removing breast tissue, axillary nodes, and some chest muscles, while preserving the pectoralis major muscles.
- **Radical mastectomy:** Removing all breast tissue, pectoral muscles, and axillary nodes; less common.

Box 20-3 Discharge Planning After Breast Surgery

- Assist the woman in understanding her diagnosis, therapy, and long-term prognosis.
- Encourage the woman to participate in her recovery program.
- Teach the woman to recognize complications that may occur.
- Advise the woman about planned exercises, activities, and follow-up care.
- Encourage the woman to attend Reach to Recovery group discussions.

common are hot flashes, leg cramps, bladder problems, nausea, and anorexia. Raloxifene is a similar drug, which may have fewer side effects. Initial treatment may interfere with nutrition due to nausea and vomiting or loss of appetite, but patients should be warned that antioxidant supplements may reduce the effectiveness of chemotherapy or radiation treatment. Megadoses of vitamins are not recommended. The American Cancer Association guidelines include the use of plant sources of vitamins with limited supplements, limiting high-fat foods and daily physical activity. Green tea is a natural antioxidant, soy contains isoflavones that can mimic estrogens and are a source of protein and fish-oil, omega-3 fatty acids from 3 oz of fish twice a week are helpful suggestions (Blackwell & Burns, 2010). Statin drugs have been prescribed to reduce cholesterol and prevent heart attacks, but now some studies show that statin drugs may be useful in reducing the risk of cancer and increasing the response to chemotherapy (Elmore & Li, 2010).

Discharge teaching and follow-up care are important (Box 20-3). Women who take aspirin 2-5 days per week after breast surgery may reduce complications (Holmes, Chen, Li, Hertzmark, Spiegelman, & Hankinson, 2010). Most women benefit from information about support groups, such as Reach to Recovery and Encore. Someone from Reach to Recovery who has had breast cancer surgery may visit the woman before she leaves the hospital. The visitor will explain the importance of rehabilitation, such as arm exercises, and encourage the patient to join a support group of women who have had breast cancer surgery.

ENDOMETRIOSIS

Endometriosis is the presence of endometrial tissue implanted predominantly in extrauterine sites (ovaries, fallopian tubes, cul-de-sac, uterine ligaments, and other areas in the reproductive tract; Figure 20-2). Endometrial cells contain glands and stroma, which respond to the cyclic hormonal stimulation in the same way that the uterine endometrium does. As the lesions build up and slough off during the menstrual cycles,

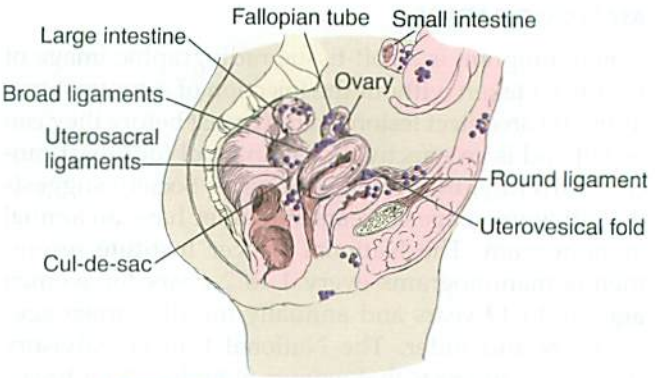


FIGURE 20-2 Common sites of endometriosis.

they often cause pelvic pain, pressure, and inflammation to the adjacent organs. This results in an inflammatory response, causing adhesions to form. The exact cause of endometriosis is poorly understood. Proposed causative factors include retrograde menstrual flow that transplants endometrial tissue outside of the uterus, hereditary tendency, and possible immunologic defect.

Management varies with the severity of the pain, extent of the disease, desire for children, patient age, and threat to the gastrointestinal or urinary tract. NSAIDs provide pain relief for some women. Continuous OC therapy for 6 to 12 months may suppress endometrial growth. Surgical intervention is often needed for severe symptoms. For women who want to retain their reproductive capacity, laser therapy or surgery with careful removal of all endometrial tissue is an option.

Other interventions include teaching nonpharmacologic measures to relieve pain, such as frequent rest periods, application of heat to the lower abdomen, moderate exercise, and a well-balanced diet. Suppressing endocrine production to limit lesion growth and medically induced menopause can be used to treat this condition. The nurse should advise the woman about potential side effects of GnRH agonists, which may cause hot flashes, vaginal dryness, mood swings, bone loss, and irregular bleeding. Nafarelin acetate (Synarel [a GnRH agonist]) is used as a nasal spray, or leuprolide acetate (Lupron depot, a time-release injection) may be given. Recent studies provide evidence that the use of aromatase inhibitors along with combination oral contraceptives or progestin effectively treats pelvic pain that is resistant to other therapies in both premenopausal and postmenopausal women.

DOUCHING

Douching is placing a liquid into the vagina for cleanliness, odor control, or comfort. It is estimated that 32% of women douche regularly. There are no evidence-based benefits of douching, but the risks are great. Douching

alters the vaginal flora predisposing the development of bacterial vaginosis, which can be a risk to a normal pregnancy or cause pelvic inflammatory disease (PID). Douching may increase the risk for ectopic pregnancy and susceptibility to HIV and STI pathogens. The risks of douching should be discussed with women, especially those considering pregnancy (Cottrell, 2010).

PELVIC INFLAMMATORY DISEASE

Pelvic inflammatory disease (PID) is an infection of the upper genital tract involving a tubal infection (salpingitis). Although many organisms have been found to cause PID, *Chlamydia trachomatis* and *Neisseria gonorrhoeae* are most common, and infectious organisms can ascend from the vagina to the cervix and upper genital tract. Early onset of sexual activity and multiple sexual partners increase the risk for PID. PID may also place the woman at risk for infertility, ectopic pregnancies, pelvic abscess, and adhesions.

Minimal criteria established for diagnosis and treatment include pelvic pain; adnexal tenderness; cervical motion tenderness, which often causes **dyspareunia** (painful intercourse); fever; and purulent vaginal discharge. Positive ultrasound and elevated erythrocyte sedimentation rate (ESR) further confirm diagnosis. The use of a home test for vaginal pH can determine the need for early intervention for vaginitis. A decrease in vaginal acidity allows pathogens to invade and can result in PID (Wysocki, 2010).

Women with serious infection may require hospital care and intravenous therapy with cefotetan or doxycycline hyclate (Vibramycin). Outpatient treatment with levofloxacin and metronidazole for 14 days has had high success rates. The sexual partner should also be seen by a health care provider and treated as indicated. Follow-up care is important. Health education concerning safer sexual practices and prevention of repeated PID is imperative.

VIOLENCE AGAINST WOMEN

Violence against women is a widespread problem. It is known by a variety of names, such as domestic violence, intimate partner violence, spouse abuse, wife battering, and marital rape. Battering is the single most common source of injury to women. Each year, 3 million to 4 million women in the United States are battered by men with whom they live. Battering is often associated with rape. Violence may start or become worse during pregnancy, and the abdomen is often the target for battery.

Violence comes in many forms. Because physical assault is the easiest to measure, it is the type of abuse most discussed. However, emotional abuse, characterized by intimidation and assault on self-esteem, is receiving more attention than in the past. Abuse may be physical, emotional, sexual, social, or financial and involves one individual exercising power and control over another in the relationship.

Often the abuser does not perceive his violent behavior as a problem and denies responsibility for the violence by blaming the woman. Although many abusive men have alcohol or other substance abuse problems, many also batter women when they are sober. It is important to remember that violence against women is deliberate, can be severe, and generally is repeated. Often the abusive episode is followed by apologies and a kind, loving "honeymoon" period. However, the cycle typically repeats.

Assessment, such as observing bruises and injuries, is an important nursing intervention. These women may wait for someone to ask them about their injuries because they are too ashamed to volunteer the information (Nursing Care Plan 20-1). The nurse can help gather sufficient information in a nonthreatening, nonjudgmental way. Lack of safety, isolation, poor self-esteem, and lack of a support network can cause the woman to be afraid to leave the abusive relationship. Counseling and referral to available community resources are essential. The National Domestic Violence Hotline (800-787-7233) provides crisis intervention.

RAPE TRAUMA SYNDROME

Rape is not a sexual experience for a woman, and, in many cases, the male perpetrator does not have a sexual basis for the violent act. The nurse should understand the response of the female rape victim so that he or she can provide caring and comprehensive support.

The victim's immediate response is fear of death or mutilation. After the attack, the woman may appear calm but is focused inward, often not hearing or complying with requests of medical personnel. Anxiety and irritability are primary behavioral responses, which gradually change to shock, disbelief, fear, guilt, and shame. The long-term response can include a change in lifestyle, distrust of men, and development of phobias and fears that interfere with activities of daily living. Posttraumatic stress disorder may be a long-term complication of the experience, and appropriate referrals for psychological help must be initiated as early as possible.

Although specific medical examinations and tests are required, the nurse's primary role is to help the woman regain a feeling of control in the examination setting. Some choices should be made available to the woman. Informed consent is required for examination and collection of evidence. Often, tetanus and antibiotic prophylaxis for sexually transmitted infections may be prescribed. Human immunodeficiency virus (HIV) testing and counseling are provided, and postcoital contraception is offered when appropriate. Psychological referral is highly recommended. The nurse should contact social services to ensure that the woman has transportation to a safe location with friends or relatives and has written appointments for follow-up care and testing.

Nursing Care Plan 20-1 The Battered Woman

Scenario

A 28-year-old woman has a history of not keeping appointments and providing evasive reasons for the cause of her injuries. Complete physical examination reveals bruises and old injuries to face, chest, and abdomen. The woman verbalizes that her husband frequently tells her she is not worthwhile, "especially when he drinks," and he physically abuses her. The woman's chief symptom is low self-esteem.

Selected Nursing Diagnosis

Situational low self-esteem related to spousal emotional abuse

Expected Outcomes	Nursing Interventions	Rationales
Patient will improve her self-esteem.	Gather information in a nonthreatening and nonjudgmental way.	The woman is dependent on her spouse.
	Ask the woman to express her feelings and concerns.	She (like many women) places blame for abuse on herself.
	Encourage woman to discuss her bruises and old injuries.	Verbalization helps clarify the problem.

Selected Nursing Diagnosis

Ineffective coping related to low self-esteem

Expected Outcomes	Nursing Interventions	Rationales
Patient will increase her self-determination.	Acknowledge her state of confusion in response to questions.	The woman can be assisted in recognizing her self-worth and in developing assertiveness.
	Provide reassurance.	
	Identify supportive counseling for the woman.	

Selected Nursing Diagnosis

Deficient knowledge related to lack of information of available community resources

Expected Outcomes	Nursing Interventions	Rationales
Patient will discuss resources available to her.	Identify support services available to the woman.	She may think she has no options and therefore is trapped in her situation.
	Name available community resources such as safe houses.	She is unaware of community resources.
	Explain the reason for developing an exit plan to protect her from danger.	An exit plan is a way to escape if threatened. It requires advance preparation.
	Provide names and phone numbers of support groups.	Support groups assist the woman in coping without her spouse.

Critical Thinking Question

1. A patient has been admitted to the unit with a diagnosis of rape trauma syndrome. She is irritable and refuses to complete activities of daily living. What is the best response you can provide the patient?

HEPATITIS

Hepatitis is an inflammation of the liver caused by a virus. There are five identified strains of virus causing hepatitis, termed A, B, C, D, and E. Immunizations are available for hepatitis A and B. Hepatitis B may be transmitted by sexual activity, intravenous drug use, or intimate contact with blood and body fluids. In health care workers, exposure may be caused by infected blood from an accidental needle puncture. Vaccination against hepatitis B is advised for all health care workers. Hepatitis A is transmitted by contaminated food and water or the fecal-oral route. Hepatitis B, C, and D are chronic infections. Hepatitis E occurs most often in the Middle East and Asia and is a self-limiting condition.

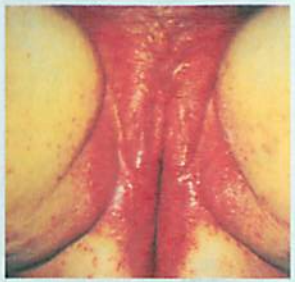
SEXUALLY TRANSMITTED INFECTIONS

Previously termed *sexually transmitted diseases* (STDs), **sexually transmitted infections (STIs)** are specific infections that are transmitted primarily during sexual contact. The infection is spread by contact with bodily fluids from the mouth, genitalia, rectum, and blood. STIs during pregnancy can cause spontaneous abortion, preterm birth, intrauterine growth restriction, neonatal death, congenital infection, and postpartum uterine infection (Table 20-2).

Community education, free clinics, disease detection, partner tracing, and improved treatment are goals to reduce the incidence and effects of STIs (Box 20-4 on p. 404). Health care providers must take necessary precautions in caring for individuals with STIs. Rapid diagnosis of

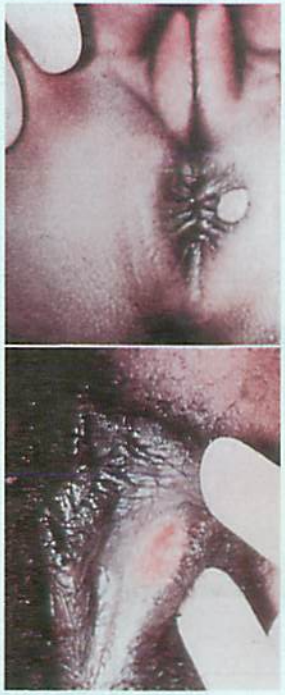
(*Text continued on p. 404*)

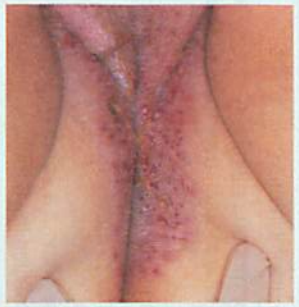
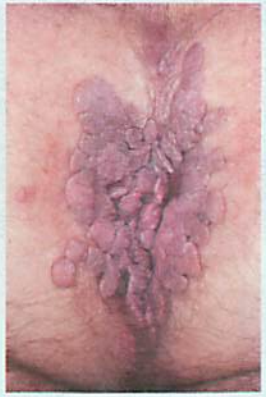
Table 20-2 Sexually Transmitted Infections

INFECTION (CAUSATIVE ORGANISM)	SIGNS AND SYMPTOMS	DIAGNOSIS	PREGNANCY, FETAL, AND NEONATAL EFFECTS	TREATMENT	COMMENTS
Candidiasis (yeast) *(Candida albicans)* 	Itching and burning on urination, inflammation of vulva and vagina, "cottage cheese" appearance to discharge	Signs and symptoms; identification of spores of the causative fungus	Can infect newborn at birth	Miconazole nitrate (Monistat), clotrimazole (Gyne-Lotrimin), nystatin (Mycostatin), fluconazole (Diflucan)	Medications are available over-the-counter (OTC), but the woman should seek medical attention to diagnose her first infection or if she has persistent or recurrent infections.
Trichomoniasis *(Trichomonas vaginalis)*	Thin, foul-odor, greenish yellow vaginal discharge; vulvar itching; edema; redness	Identification of the organism under microscope in a wet-mount preparation and rapid antibody test; DNA/RNA	Does not cross placenta Can cause postpartum infection	Metronidazole (Flagyl) if not pregnant during first trimester; clotrimazole (Gyne-Lotrimin) for symptom relief during first trimester	Organism thrives in an alkaline environment. Most infections are thought to be transmitted by sexual contact.
Bacterial vaginosis *(Gardnerella vaginalis)*	Thin, grayish white discharge that has a fishy odor	Microscopic evidence of clue cells (epithelial cells with bacteria clinging to their surface) and rapid detection tests	Associated with preterm delivery	Bacteria are normal inhabitants of the vagina, but overgrow. Treatment aims to restore normal balance of vaginal bacterial flora. Metronidazole (Flagyl) may relieve symptoms.	Avoid alcohol during treatment with metronidazole (Flagyl) and for 24 hours after. Flagyl cannot be used during first trimester of pregnancy.
Chlamydia *(Chlamydia trachomatis)*	Yellowish discharge and painful urination Often asymptomatic in women, which delays treatment	Culture, rapid detection tests, DNA probe using urine specimen is noninvasive NAAT	Transmitted via birth canal Causes conjunctivitis and pneumonia in newborn	Azithromycin, doxycycline, erythromycin in pregnancy All newborns have prophylactic eye care.	Untreated infection can ascend into fallopian tubes, causing scarring. Infertility or ectopic pregnancy may result. Can spread to neonate's eyes by contact with infected vaginal secretions.

Continued

Table 20-2 Sexually Transmitted Infections—cont'd

INFECTION (CAUSATIVE ORGANISM)	SIGNS AND SYMPTOMS	DIAGNOSIS	PREGNANCY, FETAL, AND NEONATAL EFFECTS	TREATMENT	COMMENTS
Gonorrhea *(Neisseria gonorrhoeae)*	Purulent discharge, painful urination, dyspareunia	Culture of organism NAAT	Transmitted to newborn's eyes during birth, causing blindness (ophthalmia neonatorum)	Cephalosporin antibiotics (fluoroquinolones are not effective) (CDC, 2006) All newborns have prophylactic eye care	Can result in pelvic inflammatory disease with tubal scarring.
Syphilis *(Treponema pallidum)* 	3 stages: *Primary:* painless chancre on genitalia, anus, or lips *Secondary:* 2 months after primary syphilis; enlargement of spleen and liver, headache, anorexia, generalized skin rash, wartlike growths on vulva *Tertiary:* may occur many years after secondary syphilis and cause heart, blood vessel, nervous system damage	*Primary:* examining material scraped from chancre with darkfield microscopy to identify the spirochete organism; serologic tests are not positive this early *Secondary or tertiary:* serologic test (VDRL [less specific], RPR, and FTA-ABS [more specific])	Transmitted across placenta Causes congenital syphilis, stillbirth, spontaneous abortion	Penicillin; doxycycline, tetracycline, or erythromycin if allergic Tetracycline is not recommended during pregnancy; desensitization of the woman is recommended.	Primary and secondary stages are the most contagious. Spread is through sexual contact, by inoculation (sharing needles), or through the placenta from an infected mother.

Herpes genitalis (herpes simplex virus [HSV], types I and II) 	Clusters of painful vesicles (blisters) on the vulva, perineum, and anal areas Vesicles rupture in 1-7 days and heal in 12 days	By signs and symptoms; confirmed by viral culture antibody or DNA-based rapid test	Can cause spontaneous abortion, stillbirth Active genital infection requires cesarean delivery Causes neonatal CNS problems	No cure exists; acyclovir (Zovirax) or valacyclovir (Valtrex) reduces symptoms. Treated with hygiene, sitz baths during pregnancy.	HSV II usually causes genital lesions. The first episode is usually most uncomfortable The virus "hides" in the nerve cells and can reemerge in later outbreaks that are as contagious as the first.
Condylomata acuminata (human papillomavirus [HPV]) 	Dry, wart-like growths on the vagina, labia, cervix, and perineum	By typical appearance and location	Growth may obstruct birth canal Infant may have laryngeal papillomas.	Removal with cryotherapy (cold), electrocautery, laser, or podophyllin applications are alternatives.	Also known as venereal or genital warts; associated with higher rates of cervical cancer. Gardasil is a vaccine that protects against HPV types 6, 11, 16, and 18.
Acquired immunodeficiency syndrome (AIDS) (human immunodeficiency virus [HIV])	Initially, no symptoms; later symptoms include weight loss, night sweats, fever and chills, fatigue, enlarged lymph nodes, skin rashes, diarrhea Late symptoms include immunosuppression, opportunistic infections, and malignancies	Serologic tests: positive ELISA, followed by positive Western blot test	Avoid breaks in skin to mother and fetus during birth process Transmitted antepartum to newborn Drug therapy advised Infant should be bottle fed.	No cure available yet Zidovudine (AZT, Retrovir) and didanosine (Videx) may slow progression Lamivudine and nelfinavir given during pregnancy	Transmitted through contact of nonintact skin or mucous membranes with infectious secretions, exposure to blood, and transmission from mother to fetus. Standard precautions reduce risk for caregivers. Condom use reduces risk for sexual transmission.

CNS, central nervous system; *DNA/RNA*, deoxyribonucleic acid/ribonucleic acid; *ELISA*, enzyme-linked immunosorbent assay; *FTA-ABS*, fluorescent treponemal antibody absorption test; *NAAT*, nucleic acid amplification test; *RPR*, rapid plasma reagin; *VDRL*, Venereal Disease Research Laboratory.

Box 20-4 Patient Education for Sexually Transmitted Infections

- Make certain the patient understands what infection he or she has, how it is transmitted, why it must be treated, and when and how to take prescribed medications.
- Impress on the patient the need to take medications as prescribed, even though the symptoms of the disease may have disappeared. Discontinuing antibiotics before the infection is completely gone not only leads to recurrent infection, but also increases the likelihood that drug-resistant strains of pathogen may flourish.
- Prevent reinfection by treating the sexual partner.
- Advise patients to avoid sexual intercourse while completing the full course of therapy.
- Urge the patient to continue to use condoms to prevent repeated infections at all times.
- Help the patient recognize that good health habits require regular assessment of one's body, including genital self-examination.
- Mention that the American Social Health Association maintains a hotline for people to call for current information about sexually transmitted infections (1-800-227-8922).

many STIs is possible in the physician's office, avoiding the need for a waiting period and return visit. *Point of care tests*, which provide rapid test results, are available for herpes simplex virus 2, chlamydia, and gonorrhea. HIV point of care testing is currently used in many delivery rooms for patients who are seen without prenatal care. Point of care HIV testing should be followed by serum testing for secondary confirmation of the rapid test results.

HUMAN PAPILLOMAVIRUS (HPV)

An estimated 11,000 women in the United States were diagnosed with cervical cancer in 2008, and 97% of the cancer specimens showed strains of HPV 16 or 18 and HPV DNA (Klisz & Kaplan, 2009). HPV can also manifest as genital warts caused by HPV strains 6 and 11. The treatment for HPV infection does not necessarily eradicate the virus, and recurrence is common. The goal is to prevent HPV with early vaccination and safe sex education. There are currently two HPV vaccines available and recommended for girls ages 10 to 25:

1. Gardasil—protects against strains 6, 11, 16, and 18.
2. Cervarix—protects against strains 16 and 18.

Gardasil is also recommended for boys and men to prevent genital warts caused by strains 6 and 11 and as a means to prevent cervical cancer in women (Klisz & Kaplan, 2009).

HPV vaccine should be stored in the refrigerator but not frozen.

PREVENTION OF SEXUALLY TRANSMITTED INFECTIONS

Developmentally appropriate education, screening, and immunizations are strategies for preventing STIs. A mutually monogamous relationship with an uninfected partner is best to prevent STIs. With many individuals, this option is not feasible; therefore, they must be aware of how STI transmission takes place. The identification of high-risk behavior, nonjudgmental counseling, diagnosis, treatment, immunization when indicated, and education should be part of every physical checkup.

Safer sex practices, reduction in partners, and avoidance of the exchange of blood and body fluids are all essential components of primary education of STI prevention. Also, critically important is the use of condoms during sexual encounters. Community programs that provide information concerning STIs, their effects, and prevention must start in the public schools and be supported in the home (Table 20-3).

Table 20-3 Principles to Reduce the Risk of Acquiring Sexually Transmitted Infections

BASIC INFORMATION	HEALTH PROTECTION AND RATIONALE
Know that sexual activity provides potential contact with STIs and that precautions reduce risk.	Practice abstinence or restriction to one partner; increased number of partners increases risk.
Practice sexual activities that do not cause exchange of bodily fluids with multiple partners.	STI organisms are transmitted by direct contact with mucous surfaces or open skin.
Understand that barrier forms of contraception such as condoms reduce risk.	Properly used, condoms along with spermicides (contraceptive foam or jelly) reduce risk of many STIs; if an individual's infectious lesions are exposed, the contraceptive devices will not be helpful in preventing STIs.
Avoid unsafe sex practices.	Avoid practices that may cause skin or mucous membrane injury; avoid unprotected anal contact (e.g., anal intercourse); avoid sexual activities that cause bleeding.
Recognize importance of periodic screening for STIs.	Individuals at high risk, especially those with more than one sex partner, should be screened or tested often.
Recognize individuals at high risk for HIV/AIDS.	Recognize those who share intravenous needles; who engage in anal sex, oral-genital sex, or vaginal intercourse without a condom; who have sex with someone who has or who themselves have multiple partners.
Ask for partner's cooperation.	Recognize that individuals with STIs (e.g., chlamydia, gonorrhea, or HIV infection) may or may not have symptoms.

AIDS, acquired immunodeficiency syndrome; *HIV*, human immunodeficiency virus; *STIs*, sexually transmitted infections.

Get Ready for the NCLEX® Examination!

Key Points

- TSS is a serious disorder caused by toxins released by a strain of S. aureus or group A streptococci. It is associated with the use of tampons and some barrier methods of contraception. Occluding the cervical os for a prolonged period may allow organisms to reproduce in the vagina and then enter the bloodstream.
- PMS, also called *ovarian cycle syndrome*, involves physical and behavioral symptoms that occur during the luteal phase of the menstrual cycle.
- Dysmenorrhea refers to painful menstrual cramps. Oral contraceptives and prostaglandin inhibitors may provide relief. NSAIDs may lessen discomfort.
- Menopause is the cessation of menses and a time of transition for the woman as a result of lowered estrogen level.
- Osteoporosis results from the loss of bone mass with bones becoming porous, fragile, and susceptible to fracture.
- Disorders of the breasts may be benign, such as fibrocystic breast changes.
- Gardasil, an FDA-approved HPV vaccine, should be part of the regular immunization regimen of young girls. It is also recommended for boys.
- Each year 1 in 8 women in the United States develops breast cancer. Risk factors other than the genes identified include premenopausal breast dysplasia, first-degree relatives (mother or sister) with cancer, and early menarche with late menopause. Lifestyle factors such as smoking, high-fat diet, and consumption of alcohol are also suspected risks.
- Management of breast cancer includes surgical removal of the tumor and varying amounts of surrounding tissue and lymph glands. Adjuvant therapies include radiation, chemotherapy, and hormonal therapy.
- Endometriosis is a condition in which endometrial tissue is present outside of the uterine cavity. Symptoms include dysmenorrhea, deep seated aching pain, dyspareunia, and infertility.
- PID is a condition that results from an infection ascending into the fallopian tubes and sometimes the peritoneal cavity. It can be a contributing cause of ectopic pregnancy and infertility.
- Violence against women is widespread and underreported. It is known by different names, such as battering or intimate partner violence. The violence may start or become worse during pregnancy. It may involve physical, sexual, emotional, social, or financial abuse and involves power and control over the woman.
- STIs are transmitted during sexual contact and with exposure to bodily fluids, including blood.
- Rapid diagnosis of some STIs is available in the health care provider's office.

Additional Learning Resources

SG Go to your Study Guide on pages 511–512 for additional Review Questions for the NCLEX® Examination, Critical Thinking Clinical Situations, and other learning activities to help you master this chapter content.

evolve Go to your Evolve website (http://evolve.elsevier.com/Leifer/maternity) for the following FREE learning resources:

- Animations
- Answer Guidelines for Critical Thinking Questions
- Answers and Rationales for Review Questions for the NCLEX® Examination
- Concept Map Creator
- Glossary with pronunciations in English and Spanish
- Patient Teaching Plans
- Skills Performance Checklists and more!

Online Resources

- www.4women.gov
- www.aarp.org/grandparents
- www.ashastd.org
- www.breastcancer.org/symptoms/types/inflammatory
- www.cancer.gov/cancertopics/factsheet/sites-types/IBC
- ww.cdc.gov/reproductivehealth/unintendedpregnancy/vsmec.htm
- www.cdc.gov/std
- www.hormonecme.org
- www.menopause.org
- www.ndvh.org
- www.niams.nih.gov/boneosteoporosisinfo
- www.preventiveservices.ahrq.gov
- www.quitnet.com

Review Questions for the NCLEX® Examination

1. A woman has been prescribed calcitonin nasal spray to prevent osteoporosis. When explaining potential side effects, the nurse states that the major side effect with use of calcitonin nasal spray is:
   1. Esophageal irritation
   2. Gastric discomfort
   3. Nasal irritation
   4. Headaches

2. Risk factors for the development of breast cancer include: *(Select all that apply.)*
   1. Multigravid status
   2. Age greater than 50 years
   3. Use of alcohol
   4. High-fat diet

3. A patient has returned to the nursing care unit following a surgical procedure that involved removal of the entire right breast, including axillary nodes and the pectoral muscles. The nurse is aware that this surgical procedure is known as a:
   1. Lumpectomy
   2. Simple mastectomy
   3. Modified radical mastectomy
   4. Radical mastectomy

4. It is suspected that a woman has pelvic inflammatory disease (PID). A diagnostic test that would confirm this diagnosis is an elevated:
   1. WBC count
   2. RBC count
   3. Creatinine level
   4. Erythrocyte sedimentation rate (ESR)

5. Toxic shock syndrome (TSS) is a multisystem infection that results from the response of the body to toxins produced by:
   1. *Staphylococcus aureus*
   2. *Chlamydia trachomatis*
   3. *Neisseria gonorrhoeae*
   4. Human papillomavirus

6. What should be included in patient education concerning a breast self-examination (BSE)? *(Select all that apply.)*
   1. Perform a BSE once every 2 months.
   2. A BSE should be performed 1 week after the menstrual period.
   3. Cease BSE after menopause.
   4. A clinical breast examination should be performed every 1 to 3 years for women age 40 and younger.

7. According to the American Psychiatric Association, premenstrual dysphoric disorder (PMDD) is a more severe type of PMS that involves which symptom(s)? *(Select all that apply.)*
   1. Irritability
   2. Dysmenorrhea
   3. Mood swings
   4. Appetite changes

Critical Thinking Question

1. A mother objects to her 10-year-old daughter getting an HPV vaccine. The mother states her daughter is too young to be worried about sexual activity and does not need the vaccine until she is older. What is the best response you can provide?