LEARNING OBJECTIVES

• Identify the structures and functions of the female reproductive system.
• Compare the hypothalamic-pituitary, ovarian, and endometrial cycles of menstruation.
• Identify the four phases of the sexual response cycle.
• Identify reasons why women enter the health care delivery system.
• Discuss financial, cultural, and gender barriers to seeking health care.
• Explain conditions and characteristics that increase health risks.
• Outline the components of taking a woman’s history and performing a physical examination.
• Discuss how assessment and physical examination can be adapted for women with special needs.
• Identify the correct procedure for assisting with and collecting specimens for Papanicolaou testing.
• Review health promotion and prevention suggestions for the common health risks.

KEY TERMS AND DEFINITIONS

breast self-examination (BSE) Systematic examination of the breasts by the woman. 
climacteric The period of a woman’s life when she is passing from a reproductive to a nonreproductive state, with regression of ovarian function; the cycle of endocrine, physical, and psychosocial changes that occurs during the termination of the reproductive years; also called climacterium. 
cycle of violence Violence against a woman (usually) occurs in a pattern consisting of three phases: period of increasing tension, the abusive episode, and a period of contrition and kindness. 
Kegel exercises Pelvic muscle exercises to strengthen the pubococcygeal muscles. 
menarche Onset, or beginning, of menstrual function. 
menopause From the Greek words mensis (month) and pausis (cessation), the actual permanent cessation of menstrual cycles; so diagnosed after 1 year without menses. 
menstrual cycle A complex interplay of events that occur simultaneously in the endometrium, the hypothalamus and pituitary glands, and the ovaries that results in ovarian and uterine preparation for pregnancy. 
menstruation Periodic vaginal discharge of bloody fluid from the nonpregnant uterus that occurs from the age of puberty to menopause. 

ovulation Periodic ripening and discharge of the ovum from the ovary, usually 14 days before the onset of menstrual flow. 
Papanicolaou (Pap) test (or smear) Microscopic examination using scrapings from the cervix, endocervix, or other mucous membranes that will reveal, with a high degree of accuracy, the presence of premalignant or malignant cells. 
perimenopause Period of transition of changing ovarian activity before menopause and through the first few years of amenorrhea. 
preconception care Care designed for health maintenance and health promotion for the general and reproductive health of all women of childbearing potential. 
prostaglandins (PGs) Substances present in many body tissues; have roles in many reproductive tract functions, used to induce abortions and for cervical ripening for labor induction. 
sexual response cycle The phases of physical changes that occur in response to sexual stimulation and sexual tension release. 
squamocolumnar junction Site in the endocervical canal where columnar epithelium and squamous epithelium meet; also called transformation zone. 
vulvar self-examination (VSE) Systematic examination of the vulva by the woman.
Many women initially enter the health care system because of some reproductive system–related situation, such as pregnancy; irregular menses; desire for contraception; or episodic illness, such as vaginal infection. Once women are in the system, however, it is incumbent on health care providers to recognize the need for health promotion and preventive health maintenance and to provide these services as part of lifelong care for women. This chapter reviews female anatomy and physiology, including the menstrual cycle. Physical assessment and screening for disease prevention for women in their reproductive years is presented. Barriers to seeking health care and an overview of conditions and circumstances that increase health risks in the childbearing years are discussed. Anticipatory guidance suggestions for health promotion and prevention are also included.

**FEMALE REPRODUCTIVE SYSTEM**

### External Structures

The external genital organs, or vulva, include all structures visible externally from the pubis to the perineum: the mons pubis, labia majora, labia minora, clitoris, vestibular glands, vaginal vestibule, vaginal orifice, and urethral opening (Fig. 4-1). The mons pubis is a fatty pad that lies over the anterior surface of the symphysis pubis. In the postpubertal female, the mons is covered with coarse curly hair. The labia majora are two rounded folds of fatty tissue covered with skin that extend downward and backward from the mons pubis. The labia are highly vascular structures that develop hair on the outer surfaces after puberty. They protect the inner vulvar structures. The labia minora are two flat, reddish folds of tissue visible when the labia majora are separated. Anteriorly, the labia minora fuse to form the prepuce (hoodlike covering of the clitoris) and the frenulum (fold of tissue under the clitoris). The labia minora join to form a thin, flat tissue called the fourchette underneath the vaginal opening at midline. The clitoris is located underneath the prepuce. It is a small structure composed of erectile tissue with numerous sensory nerve endings.

The vaginal vestibule is an almond-shaped area enclosed by the labia minora that contains openings to the urethra, Skene glands, vagina, and Bartholin glands. The urethra is not a reproductive organ but is considered here because of its location. It usually is found approximately 2.5 cm below the clitoris. The Skene glands are located on each side of the urethra and produce mucus, which aids in lubrication of...
the vagina. The vaginal opening is in the lower portion of the vestibule and varies in shape and size. The hymen, a connective tissue membrane, surrounds the vaginal opening. Bartholin glands (see Fig. 4-1) lie under the constrictor muscles of the vagina and are located posteriorly on the sides of the vaginal opening, although the ductal openings are usually not visible. During sexual arousal the glands secrete a clear mucus to lubricate the vaginal introitus.

The area between the fourchette and the anus is the perineum, a skin-covered muscular area that covers the pelvic structures. The perineum forms the base of the perineal body, a wedged-shaped mass that serves as an anchor for the muscles, fascia, and ligaments of the pelvis. The pelvic organs are supported by muscles and ligaments that form a sling.

**Internal Structures**

The internal structures include the vagina, uterus, uterine tubes, and ovaries. The vagina is a fibromuscular, collapsible tubular structure that extends from the vulva to the uterus and lies between the bladder and rectum. During the reproductive years the mucosal lining is arranged in transverse folds called rugae. These rugae allow the vagina to expand during childbirth. Estrogen deprivation that occurs after childbirth, during lactation, and at menopause causes dryness and thinness of the vaginal walls and smoothing of the rugae. Vaginal secretions are acidic (pH 4 to 5), so the vagina’s susceptibility to infections is reduced. The vagina serves as a passageway for menstrual flow, as a female organ of copulation, and as a part of the birth canal for vaginal childbirth. The uterine cervix projects into a blind vault at the upper end of the vagina. Anterior, posterior, and lateral pockets called fornices surround the cervix. The internal pelvic organs can be palpated through the thin walls of these fornice.

The uterus is a muscular organ shaped like an upside-down pear that sits midline in the pelvic cavity between the bladder and rectum above the vagina. Four pairs of ligaments support the uterus: the cardinal, uterosacral, round, and broad. Single anterior and posterior ligaments also support the uterus. The cul-de-sac of Douglas is a deep pouch, or recess, posterior to the cervix and formed by the posterior ligament.

The uterus is divided into two major parts: an upper triangular portion called the corpus and a lower cylindrical portion called the cervix (Fig. 4-2). The fundus is the dome-shaped top of the uterus and is the site where the uterine tubes enter the uterus. The isthmus (lower uterine segment) is a short, constricted portion that separates the corpus from the cervix.
The uterus serves for reception, implantation, retention, and nutrition of the fertilized ovum and later the fetus during pregnancy and expulsion of the fetus during childbirth. It also is responsible for cyclic menstruation.

The uterine wall consists of three layers: the endometrium, the myometrium, and part of the peritoneum. The endometrium is a highly vascular lining made up of three layers, the outer two of which are shed during menstruation. The myometrium is made up of layers of smooth muscles that extend in three different directions (longitudinal, transverse, and oblique) (Fig. 4-3). Longitudinal fibers of the outer myometrial layer are found mostly in the fundus, and this arrangement assists in expelling the fetus during the birth process. The middle layer contains fibers from all three directions, which form a figure-eight pattern encircling large blood vessels. This arrangement assists in constricting blood vessels after childbirth and controls blood loss. Most of the circular fibers of the inner myometrial layer are around the site where the uterine tubes enter the uterus and around the internal cervical os (opening). These fibers help keep the cervix closed during pregnancy and prevent menstrual blood from flowing back into the uterine tubes during menstruation.

The cervix is made up of mostly fibrous connective tissues and elastic tissue, making it possible for the cervix to stretch during vaginal childbirth. The opening between the uterine cavity and the canal that connects the uterine cavity to the vagina (endocervical canal) is the internal os. The narrowed opening between the endocervix and the vagina is the external os, a small circular opening in women who have never been pregnant. The cervix feels firm (like the end of a nose) with a dimple in the center, which marks the external os.

The outer cervix is covered with a layer of squamous epithelium. The mucosa of the cervical canal is covered with columnar epithelium and contains numerous glands that secrete mucus in response to ovarian hormones. The squamocolumnar junction, where the two types of cells meet, is usually located just inside the cervical os. This junction is also called the transformation zone and is the most common site for neoplastic changes; cells from this site are scraped for the Papanicolaou (Pap) test (see p. 90).

The uterine tubes (fallopian tubes) attach to the uterine fundus. The tubes are supported by the broad ligaments and range from 8 to 14 cm in length. The uterine tubes provide a passage between the ovaries and the uterus for the passage of the ovum.

The ovaries are almond-shaped organs located on each side of the uterus below and behind the uterine tubes. During the reproductive years, they are approximately 3 cm long, 2 cm wide, and 1 cm thick; they diminish in size after menopause. The two functions of the ovaries are ovulation and production of estrogen, progesterone, and androgen.

**Bony Pelvis**

The bony pelvis serves three primary purposes: protection of the pelvic structures, accommodation of the growing fetus during pregnancy, and anchorage of the pelvic support structures. Two innominate (hip) bones (consisting of ilium, ischium, and pubis), the sacrum, and the coccyx make up the four bones of the pelvis (Fig. 4-4). Cartilage and ligaments form the symphysis pubis, sacrocccygeal, and two sacroiliac joints that separate the pelvic bones. The pelvis is divided into two parts: the false pelvis and the true pelvis (Fig. 4-5). The false pelvis is the upper portion above the pelvic brim or inlet. The true pelvis is the lower curved bony canal, which includes the inlet, the cavity, and the outlet through which the fetus passes during vaginal birth.
Variations that occur in the size and shape of the pelvis are usually a result of age, race, and injury. Pelvic ossification is complete by approximately 20 years of age.

Breasts

The breasts are paired mammary glands located between the second and sixth ribs (Fig. 4-6). Approximately two thirds of the breast overlies the pectoralis major muscle, between the sternum and midaxillary line, with an extension to the axilla referred to as the tail of Spence. The lowest third of the breast overlies the serratus anterior muscle. The breasts are attached to the muscles by connective tissue called fascia.

The breasts of healthy mature women are approximately equal in size and shape but are often not absolutely symmetric. The size and shape vary depending on the woman’s age, heredity, and nutrition. However, the contour should be smooth with no retractions, dimpling, or masses. Estrogen stimulates growth of the breast by inducing fat deposition in the breasts, development of stromal tissue (i.e., increase in its amount and elasticity), and growth of the extensive ductile system. Estrogen also increases the vascularity of breast tissue. The increase in progesterone at puberty causes maturation of mammary gland tissue, specifically the lobules and acinar structures. During adolescence, fat deposition and growth of fibrous tissue contribute to the increase in the gland’s size.

Each mammary gland is made of 15 to 20 lobes, which are divided into lobules. Lobules are clusters of acini. An acinus is a saclike terminal part of a compound gland emptying through a narrow lumen or duct. The acini are lined with epithelial cells that secrete colostrum and milk. Just below the epithelium is the myoepithelium (myo, or muscle), which contracts to expel milk from the acini.

The ducts from the clusters of acini that form the lobules merge to form larger ducts draining the lobes. Ducts from the lobes converge in a single nipple (mammary papilla) surrounded by an areola. Just as the ducts converge, they dilate to form common lactiferous sinuses, which are also called ampullae. The lactiferous sinuses serve as milk reservoirs. Many tiny lactiferous ducts drain the ampullae and exit in the nipple.

The glandular structures and ducts are surrounded by protective fatty tissue and are separated and supported by
fibrous suspensory Cooper's ligaments. Cooper's ligaments provide support to the mammary glands while permitting their mobility on the chest wall (see Fig. 4-6). The round nipple is usually slightly elevated above the breast. On each breast the nipple projects slightly upward and laterally. It contains 15 to 20 openings from lactiferous ducts. The nipple is surrounded by fibromuscular tissue and covered by wrinkled skin (the areola). Except during pregnancy and lactation, there is usually no discharge from the nipple.

The nipple and surrounding areola are usually more deeply pigmented than the skin of the breast. The rough appearance of the areola is caused by sebaceous glands, Montgomery tubercles (see Fig. 4-6), directly beneath the skin. These glands secrete a fatty substance thought to lubricate the nipple.

The vascular supply to the mammary gland is abundant. The skin covering the breasts contains an extensive superficial lymphatic network that serves the entire chest wall and is continuous with the superficial lymphatics of the neck and abdomen. In the deeper portions of the breasts, the lymphatics form a rich network as well. The primary deep lymphatic pathway drains laterally toward the axillae.

The breasts change in size and nodularity in response to cyclic ovarian changes throughout reproductive life. Increasing levels of both estrogen and progesterone in the 3 to 4 days before menstruation increase vascularity of the breasts, induce growth of the ducts and acini, and promote water retention. As a result, breast swelling, tenderness, and discomfort are common symptoms just before the onset of menstruation. After menstruation, cellular proliferation begins to regress, acini begin to decrease in size, and retained water is lost. In time, after repeated hormonal stimulation, small persistent areas of nodulations may develop just before and during menstruation, when the breast is most active. The physiologic alterations in breast size and activity reach their minimum level approximately 5 to 7 days after menstruation stops. Therefore breast self-examination (BSE) is best carried out during this phase of the menstrual cycle (see Patient Instructions for Self-Care box).

Menstruation

Menarche and puberty

Menarche is a broad term that denotes the entire transitional stage between childhood and sexual maturity. Although young girls secrete small, rather constant amounts of estrogen, a marked increase occurs between 8 and 11 years of age. The term menarche denotes first menstruation. In North America this occurs in most girls at about 13 years of age. Although pregnancy can occur in exceptional cases of true precocious puberty, most pregnancies in young girls occur after the normally timed menarche. All girls would benefit from knowing pregnancy can occur at any time after the onset of menses.

Menstrual cycle

Initially, menstrual periods are irregular, unpredictable, painless, and anovulatory. After the ovary produces adequate cyclic estrogen to make a mature ovum, periods tend to be regular and ovulatory. The menstrual cycle is a complex interplay of events that occur simultaneously in the endometrium, hypothalamus and pituitary glands, and ovaries. The menstrual cycle prepares the uterus for pregnancy. When
C H A P T E R 4

Assessment and Health Promotion

69

PATIENT INSTRUCTIONS FOR SELF-CARE

Breast Self-Examination

1. The best time to do breast self-examination is about a week after your period, when breasts are not tender or swollen. If you do not have regular periods or sometimes skip a month, do it on the same day every month. If you are breastfeeding or no longer menstruating, choose a date and examine your breasts at the same time each month.

2. Lie down and put a pillow under your right shoulder. Place your right arm behind your head (Fig. 1).

3. Use the finger pads of your three middle fingers on your left hand to feel for lumps or thickening. Your finger pads are the top third of each finger.

4. Press firmly enough to know how your breast feels. If you’re not sure how hard to press, ask your health care provider or try to copy the way your health care provider uses the finger pads during a breast examination. Learn what your breast feels like most of the time. A firm ridge in the lower curve of each breast is normal.

5. Move around the breast in a set way. You can choose either circles (Fig. 2, A), vertical lines (Fig. 2, B), or wedges (Fig. 2, C). Do it the same way every time. It will help you to make sure that you’ve gone over the entire breast area and to remember how your breast feels.

6. Gently compress the nipple between your thumb and forefinger and look for discharge.

7. Now examine your left breast using the finger pads of your right hand.

8. If you find any changes, see your health care provider right away.

9. You may want to check your breasts while standing in front of a mirror right after you do your breast self-examination each month. See if there are any changes in the way your breasts look: dimpling of the skin, changes in the nipple, or redness or swelling.

10. You may also want to do an extra breast self-examination while you’re in the shower (Fig. 3). Your soapy hands will glide over the wet skin, making it easy to check how your breasts feel.

11. It is important to check the area between the breast and the underarm and the underarm itself. Also examine the area above the breast to the collarbone and to the shoulder.

pregnancy does not occur, menstruation follows. Menstruation is the periodic uterine bleeding that begins approximately 14 days after ovulation. The average length of a menstrual cycle is 28 days, but variations are common. The first day of bleeding is designated as day 1 of the menstrual cycle, or menses (Fig. 4-7). The average duration of menstrual flow is 5 days (range of 3 to 6 days), and the average blood loss is 50 ml (range of 20 to 80 ml), but these vary greatly.

The woman’s age, physical and emotional status, and environment also influence the regularity of her menstrual cycles. Hypothalamic-pituitary cycle. Toward the end of the normal menstrual cycle, blood levels of estrogen and progesterone fall. Low blood levels of these ovarian hormones stimulate the hypothalamus to secrete gonadotropin-releasing hormone (GnRH). In turn, GnRH stimulates anterior pituitary secretion of follicle-stimulating hormone.
Fig. 4-7  Menstrual cycle: hypothalamic-pituitary, ovarian, and endometrial.

(FSH). FSH stimulates development of ovarian graafian follicles and their production of estrogen. Estrogen levels begin to fall, and hypothalamic GnRH triggers the anterior pituitary release of luteinizing hormone (LH). A marked surge of LH and a smaller peak of estrogen (day 12; see Fig. 4-7) precede the expulsion of the ovum (ovulation) from the graafian follicle by approximately 24 to 36 hours. LH peaks at approximately the thirteenth or fourteenth day of a 28-day cycle. If fertilization and implantation of the ovum do not occur by this time, the corpus luteum regresses. Levels of
progesterone and estrogen decline, menstruation occurs, and the hypothalamus is once again stimulated to secrete GnRH. This process is termed the hypothalamic-pituitary cycle.

Ovarian cycle. The primitive graafian follicles contain immature oocytes (primordial ova). Before ovulation, from 1 to 30 follicles begin to mature in each ovary under the influence of FSH and estrogen. The preovulatory surge of LH affects a selected follicle. The oocyte matures, ovulation occurs, and the empty follicle begins its transformation into the corpus luteum. This follicular phase (preovulatory phase) (see Fig. 4-7) of the ovarian cycle varies in length from woman to woman and accounts for almost all variations in ovarian cycle length. On rare occasions (approximately 1 in 100 menstrual cycles), more than one follicle is selected and more than one oocyte matures and undergoes ovulation.

After ovulation, estrogen levels drop. For 90% of women, only a small amount of withdrawal bleeding occurs, so it goes unnoticed. In 10% of women there is sufficient bleeding for it to be visible, resulting in what is known as midcycle bleeding.

The luteal phase begins immediately after ovulation and ends with the start of menstruation. This postovulatory phase of the ovarian cycle usually requires 14 days (range of 13 to 15 days). The corpus luteum reaches its peak of functional activity 8 days after ovulation, secreting both estrogen and progesterone. Coincident with this time of peak luteal function, the fertilized ovum is implanted in the endometrium. If no implantation occurs, the corpus luteum regresses. With the rapid fall in progesterone, menstruation occurs.

While progesterone, regresses. The rapid fall in progesterone and estrogen levels, the spiral arteries go into spasm. During the ischemic phase, the blood supply to the functional endometrium is blocked and necrosis develops. The functional layer separates from the basal layer, and menstrual bleeding begins, marking day 1 of the next cycle (see Fig. 4-7).

Other cyclic changes. When the hypothalamic-pituitary-ovarian axis functions properly, other tissues undergo predictable responses. Before ovulation the woman’s basal body temperature (BBT) is often below 37° C; after ovulation, with rising progesterone levels, her BBT rises. Changes in the cervix and cervical mucus follow a generally predictable pattern. Preovulatory and postovulatory mucus is viscous (thick), so sperm penetration is discouraged. At the time of ovulation, cervical mucus is thin and clear. It looks, feels, and stretches like egg white. This stretchable quality is termed spinnbarkeit. Some women experience localized lower abdominal pain, termed mittelschmerz, that coincides with ovulation.

Climacteric. The climacteric is a transitional phase during which ovarian function and hormone production decline. This phase spans the years from the onset of premenopausal ovarian decline to the postmenopausal time when symptoms stop. Menopause refers to the last menstrual period. Unlike menarche, however, menopause can be dated only with certainty 1 year after menstruation ceases. The average age at natural menopause is 51.4 years, with an age range of 35 to 60 years. Menopause is preceded by a period known as the perimenopause, during which ovarian function declines. Ova slowly diminish, and menstrual cycles are anovulatory, resulting in irregular bleeding; the ovary stops producing estrogen, and eventually menopause no longer occurs. This period lasts about 4 years (Stenchever, Droegemueller, Herbst, & Mishell, 2001).

Prostaglandins

Prostaglandins (PGs) are oxygenated fatty acids classified as hormones. The different kinds of PGs are distinguished by letters (PGE, PGF), numbers (PGE2), and letters of the Greek alphabet (PGF2). PGs are produced in most organs of the body, but most notably by the endometrium. Menstrual blood is a potent prostaglandin source. Prostaglandins affect smooth muscle contractility and modulation of hormonal activity. Indirect evidence supports PGs’ effects on ovulation, fertility, changes in the cervix and cervical mucus that affect receptivity to sperm, tubal and uterine motility, sloughing of endometrium (menstruation), onset of abortion (spontaneous and induced), and onset of labor (term and preterm).

Sexual Response

The hypothalamus and anterior pituitary gland in females regulate the production of FSH and LH. The target tissue for these hormones is the ovary, which produces ova and secretes progesterone. A feedback mechanism involving hormone secretion from the ovaries, hypothalamus, and anterior pituitary aids in the control of the production of sex cells and steroid sex hormone secretion.
Although the first outward appearance of maturing sexual development occurs at an earlier age in females, both females and males achieve physical maturity at approximately 17 years of age. However, individual development varies greatly. Anatomic and reproductive differences notwithstanding, women and men are more alike than different in their physiologic response to sexual excitement and orgasm. For example, the glans clitoris and the glans penis are embryonic homologues. Not only is there little difference between female and male sexual response, but the physical response is essentially the same whether stimulated by coitus, fantasy, or masturbation. Physiologically, according to Masters (1992), sexual response can be analyzed in terms of two processes: vasocongestion and myotonia.

Sexual stimulation results in vasocongestion (congestion of blood vessels, usually venous) that causes vaginal lubrication and engorgement and distention of the genitals. This venous congestion occurs to a lesser degree in the breasts and other parts of the body. Arousal is characterized by myotonia (increased muscular tension), resulting in voluntary and involuntary rhythmic contractions. Examples of sexually stimulated myotonia are pelvic thrusting, facial grimacing, and spasms of the hands and feet (carpopedal spasms).

The sexual response cycle is divided into four phases: excitement phase, plateau phase, orgasmic phase, and resolution phase. The four phases occur progressively with no sharp dividing line between any two phases. Specific body changes take place in sequence. The time, intensity, and duration for cyclic completion also vary for individuals and situations. Table 4-1 compares male and female body changes during each of the four phases of the sexual response cycle.

**TABLE 4-1**

<table>
<thead>
<tr>
<th>Four Phases of Sexual Response</th>
<th>REACTIONS IN FEMALES</th>
<th>REACTIONS IN MALES</th>
</tr>
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<tbody>
<tr>
<td><strong>EXCITEMENT PHASE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heart rate and blood pressure increase. Nipples become erect. Myotonia begins.</td>
<td>Clitoris increases in diameter and swells. External genitals become congested and darken. Vaginal lubrication occurs; upper two thirds of vagina lengthen and extend. Cervix and uterus pull upward. Breast size increases.</td>
<td>Erection of the penis begins; penis increases in length and diameter. Scrotal skin becomes congested and thickens. Testes begin to increase in size and elevate toward the body.</td>
</tr>
<tr>
<td><strong>PLATEAU PHASE</strong></td>
<td></td>
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<tr>
<td>Heart rate and blood pressure continue to increase. Respirations increase. Myotonia becomes pronounced; grimacing occurs.</td>
<td>Clitoral head retracts under the clitoral hood. Lowest third of vagina becomes engorged. Skin color changes occur—red flush may be observed across breasts, abdomen, or other surfaces.</td>
<td>Head of penis may enlarge slightly. Scrotum continues to grow tense and thicken. Testes continue to elevate and enlarge. Pregnomic emission of two or three drops of fluid appears on the head of the penis.</td>
</tr>
<tr>
<td><strong>ORGASMIC PHASE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heart rate, blood pressure, and respirations increase to maximum levels. Involuntary muscle spasms occur. External rectal sphincter contracts.</td>
<td>Strong rhythmic contractions are felt in the clitoris, vagina, and uterus. Sensations of warmth spread through the pelvic area.</td>
<td>Testes elevate to maximum level. Point of “inevitability” occurs just before ejaculation and an awareness of fluid in the urethra. Rhythmic contractions occur in the penis. Ejaculation of semen occurs.</td>
</tr>
<tr>
<td><strong>RESOLUTION PHASE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heart rate, blood pressure, and respirations return to normal. Nipple erection subsides. Myotonia subsides.</td>
<td>Engagement in external genitalia and vagina resolves. Uterus descends to normal position. Cervix dips into seminal pool. Breast size decreases. Skin flush disappears.</td>
<td>Fifty percent of erection is lost immediately with ejaculation; penis gradually returns to normal size. Testes and scrotum return to normal size. Refractory period (time needed for erection to occur again) varies according to age and general physical condition.</td>
</tr>
</tbody>
</table>
REASONS FOR ENTERING THE HEALTH CARE SYSTEM

Women's health assessment and screening focus on a systems evaluation beginning with a careful history and physical examination. During the assessment and evaluation, the responsibility for self-care, health promotion, and enhancement of wellness are emphasized. Nursing care includes assessment, planning, education, counseling, and referral as needed, as well as recommendations for good self-care that the woman has practiced. This enables women to make informed decisions about their own health care.

Preconception Counseling

Preconception health promotion provides women and their partners with information that is needed to make decisions about their reproductive future. Preconception counseling guides couples on how to prevent unintended pregnancies, stresses risk management, and identifies healthy behaviors that promote the well-being of the woman and her potential fetus (Moos, 2003).

The initiation of activities that promote healthy mothers and babies must occur before the period of critical fetal organ development, which is between 17 and 56 days after fertilization. By the end of the eighth week after conception and certainly by the end of the first trimester, any major structural anomalies in the fetus are already present. Because many women do not realize that they are pregnant and do not seek prenatal care until well into the first trimester, the rapidly growing fetus may be exposed to many types of intrauterine environmental hazards during this most vulnerable developmental phase. Therefore preconception health care should occur well in advance of an actual pregnancy (Hobbins, 2003).

Critical Thinking Exercise

Preconception Counseling

Margo is a 37-year-old woman who has never been pregnant and is now considering whether or not to attempt to conceive. She has come to the clinic for a Pap test. She asks the nurse what she needs to consider to be in a healthy state before conceiving. What advice or counseling would you give Margo?

1. Evidence—Is there sufficient evidence to draw conclusions about what intervention is needed?
2. Assumptions—Describe underlying assumptions about the following issues:
   a. Risk factor assessment for disease prevention
   b. Health promotion for pregnancy
   c. Critical periods of fetal organ development
   d. Pregnancy after age 35
3. What implications and priorities for nursing care can be drawn at this time?
4. Does the evidence objectively support your conclusion?
5. Are there alternative perspectives to your conclusion?

Preconception care is important for women who have had a problem with a previous pregnancy (e.g., miscarriage, preterm birth). Although causes are not always identifiable, in many cases problems can be identified and treated and may not recur in subsequent pregnancies. Preconception care is also important to minimize fetal malformations. There are many examples illustrating effects of maternal age or illnesses; conditions that produce anomalies in the fetus (teratogenic agents), such as drugs, viruses, chemicals, or genetically inherited diseases; and conditions that might be harmful to the woman should a pregnancy occur. In many instances, counseling can allow for behavior modification before damage is done or a woman can make an informed decision about her willingness to accept potential hazards (Postlethwaite, 2003).

A suggested model for preconception care of women of reproductive age targets all women from menarche to menopause. Providing optimal health care for women whether or not they desire to conceive can result in a high level of preconception wellness (Moos, 2003). Suggested components of preconception care, such as health promotion, risk assessment, and interventions, are outlined in Box 4-1.

Pregnancy

A woman’s entry into health care is often associated with pregnancy, either for diagnosis or for actual care. Suspicion of pregnancy occurs most commonly when a woman is late with her menses. It is highly desirable for a woman to enter prenatal care within the first 12 weeks of pregnancy. This allows for early pregnancy counseling, especially for the woman who has had no preconception care. Extensive discussion of pregnancy is found in Unit Three.

Well-Woman Care

Current trends in the health care of women have expanded beyond a reproductive focus. A holistic approach to women's health care includes a woman's health needs throughout her lifetime. This view is one that goes beyond simply her reproductive needs. Women's health assessment and screening focus on a multisystem evaluation emphasizing the maintenance and enhancement of wellness (Moos, 2003).

Fertility Control and Infertility

More than half of the pregnancies in the United States each year are unintended even with birth control use (Kowal, 2004). Education is the key to encouraging women to make family planning choices based on preference and actual risk-to-benefit ratios. Women who enter the health care system seeking contraceptive counseling can be assisted to use a chosen method correctly (see Chapter 6 for further discussion).

Women also enter the health care system because of their desire to achieve a pregnancy. Approximately 15% of couples in the United States have some degree of infertility. Infertility can cause emotional pain for many couples, and the inability to produce an offspring sometimes results in feelings of failure and inadequate stress on the relationship. Steps toward prevention of infertility should be undertaken as part
of ongoing routine health care, and such information is especially appropriate in preconception counseling. For additional information about infertility, see Chapter 6.

Menstrual Problems
Irregularities or problems with the menstrual period are among the most common concerns of women and often cause them to seek help within the health care system. Common menstrual disorders include amenorrhea, dysmenorrhea, premenstrual syndrome, endometriosis, and menorrhagia or metrorrhagia. These problems are discussed in Chapter 5.

Perimenopause
Although fertility is greatly reduced during the perimenopausal period, women are urged to maintain some method of birth control because pregnancies still can occur. Most women seeking health care at this time do so because of irregular bleeding that may accompany the perimenopause. Others are concerned about vasomotor symptoms (hot flashes and flushes). All women need to have factual information, the dispelling of myths, a thorough examination, and periodic health screenings.

BOX 4-1
Components of Preconception Care

HEALTH PROMOTION: GENERAL TEACHING
- Nutrition
  - Healthy diet, including folic acid
- Optimal weight
- Exercise and rest
- Avoidance of substance abuse (tobacco, alcohol, "recreational" drugs)
- Use of safer sex practices
- Attending to family and social needs

RISK FACTOR ASSESSMENT
- Medical history
  - Immune status (e.g., rubella, hepatitis B)
  - Family history (e.g., genetic disorders)
  - Illnesses (e.g., infections)
- Current use of medication (prescription, non-prescription)
- Reproductive history
- Contraceptive
- Obstetric
- Psychosocial history
  - Spouse or partner and family situation, including intimate partner violence

INTerventions
- Anticipatory guidance or teaching
- Treatment of medical conditions and results
- Medications
- Cessation or reduction in substance use and abuse
- Immunizations (e.g., rubella, tuberculosis, hepatitis)
- Nutrition, diet, and weight management
- Exercise
- Referral for genetic counseling
- Referral to and use of:
  - Family planning services
  - Family and social needs management

Employment-based financing of health insurance has resulted in a system in which one’s health insurance is linked to a job, and the system is working well for fewer and fewer people, especially women. Fourteen percent of young women have no health insurance, and 5 million more have coverage so inadequate that it does not even include maternity care (National Women’s Law Center, 2000). In the United States disparity among races and socioeconomic classes affects many facets of life, including health. With limited money and awareness, there is a lack of access to care, delay in seeking care, few prevention activities, and little accurate information about health and the health care system. Women use health services more often than do men but are more likely than men to have difficulty in financing the services; they are twice as often underinsured (i.e., have limited coverage with high-cost co-payments or deductibles). Women make up the majority of Medicaid recipients, but they are limited to treatment of pregnancy-related conditions and terminate 60 days after birth. Current questions abound regarding possible changes in the Medicaid coverage related to care for mother and child during the maternity cycle. More and more states are requiring their Medicaid recipients to enroll in managed care programs; whether this improves access and outcomes is yet to be determined.

Financial Issues
The United States spends almost 15% of its gross domestic product on health, far more than any other industrialized nation in the world, yet major problems still exist.
individuals are less likely to have insurance. Often, unmarried teenagers, who are usually covered by their parents’ medical insurance, do not have maternity coverage because policies have inclusion statements that cover only the employee or spouse.

Midwifery care has helped contain some health care costs, but reimbursement issues still exist in some areas. Nursing data must be identified and placed in a database to be included in public policy decisions; nursing variables such as patient education and supportive care must become part of the national data-gathering system. Nurses should deal with the politics involved in cost-containment health care policies, because they, as knowledgeable experts, can provide solutions to many of the health care problems at a relatively low cost.

Cultural Issues

Although they are most significant, financial considerations are not the only barriers to obtaining quality health care. As our nation becomes more racially, ethnically, and culturally diverse, the health of minority groups becomes a major issue. Providers must consider culturally based differences that could affect the treatment of diverse groups of women, and the women themselves must discuss with their health care providers the practices and beliefs that could influence their management responses or willingness to comply (Matson, 2000). For example, women in some cultures value privacy to such an extent that they are reluctant to disrobe and as a result avoid physical examination unless absolutely necessary. Other women rely on their husbands to make major decisions, including those affecting the woman’s health. Religious beliefs may dictate a plan of care, as with birth control measures or blood transfusions. Some cultural groups prefer folk medicine, homeopathy, or prayer to traditional Western medicine, and yet others attempt combinations of some or all practices.

Gender Issues

Gender influences patient communication and may influence access to health care in general. The most obvious gender consideration is that between men and women. Researchers have reported significant male-female differences in receipt of major diagnostic and therapeutic interventions, especially with cardiac and kidney problems. Women tend to use primary care services more often (and, some believe, more effectively) than men. The sex of the provider plays a role, because studies have shown that female patients have tests such as the Pap test and mammogram more consistently if they are seen by female providers.

Sexual orientation may produce another barrier. Lesbian women have primary erotic attractions and relations with other women. Some lesbians may not disclose their orientation to health care providers because they may be at risk for hostility, inadequate health care, or breach of confidentiality. To offset stereotypes, it is necessary for providers to develop an approach that does not assume that all patients are heterosexual (Bonvicini & Perlin, 2003). Primary care of lesbians is not different from that for any other group of women, and lesbian patients have the same basic physical and psychologic needs as any woman.

HEALTH RISKS IN THE CHILDBEARING YEARS

Maintaining optimal health is a goal for all women. Essential components of health maintenance are identification of unrecognized problems and potential risks and the education/promotion needed to reduce them. This is especially important for women in their childbearing years because conditions that increase a woman’s health risks are not only of concern to her well-being but also are potentially associated with negative outcomes for both mother and baby in the event of a pregnancy. Prenatal care is the prime example of prevention that is practiced after conception. However, prevention and health maintenance are needed before pregnancy because many of the mother’s risks can be identified and eliminated or at least modified. An overview of conditions and circumstances that increase health risks in the childbearing years follows.

Age

Adolescence

All teens undergo progressive growth of sexual characteristics and also undertake developmental tasks of adolescence, such as establishing identity, developing sexual preference, emancipating from family, and establishing career goals. Some of these situations can produce great stress for the adolescent, and the health care provider should treat her very carefully. Female teenagers who enter the health care system usually do so for screening (Pap tests start three years after sexual activity begins or by age 21) or because of a problem such as episodic illness or accidents. Gynecologic problems are often associated with menses (either bleeding irregularities or dysmenorrhea), vaginitis or leukorrhea, sexually transmitted infections (STIs), contraception, or pregnancy. The adolescent is also at risk for major depressive disorder (Hauenstein, 2003).

Teenage pregnancy

Pregnancy in the teenager who is 16 years of age or younger often introduces additional stress into an already stressful developmental period. The emotional level of such teens is commonly characterized by impulsiveness and self-centered behavior, and they often place primary importance on the beliefs and actions of their peers. In attempts to establish a personal and independent identity, many teens do not realize the consequences of their behavior, and planning for the future is not part of their thinking processes.

Teenagers usually lack the financial resources to support a pregnancy and may not have the maturity to avoid teratogens or to have prenatal care and instruction or follow-up care. Children of teen mothers may be at risk for abuse or neglect because of the teen’s inadequate knowledge of growth, development, and parenting.
Young and middle adulthood

Because women ages 20 to 40 have need for contraception, pelvic and breast screening, and pregnancy care, they may prefer to use their gynecologic or obstetric provider also as their primary care provider. During these years, the woman may be “juggling” family, home, and career responsibilities with resulting increases in stress-related conditions. Health maintenance includes not only pelvic and breast screening but also promotion of a healthy lifestyle, that is, good nutrition, regular exercise, no smoking, moderate or no alcohol consumption, sufficient rest, stress reduction, and referral for medical conditions and other specific problems. Common conditions in well-woman care include vaginitis, urinary tract infections, menstrual variations, obesity, sexual and relationship issues, and pregnancy.

Parenthood after age 35 years. The woman older than 35 is at risk for age-related conditions that can affect pregnancy. For example, a woman with type 2 diabetes may not have had expression of her diabetes at age 22 but may have full-blown disease at age 38. Other chronic or debilitating diseases or conditions increase in severity with time, and these, in turn, may predispose to increased risks during pregnancy. Of significance to women in this age group is the risk for having a baby with certain genetic anomalies (e.g., Down syndrome), and the opportunity for genetic counseling should be available to all (Vian, Padula, & Eddy, 2002) (see Chapter 7).

Late reproductive age

Women of later reproductive age are often experiencing change and reordering personal priorities. Generally, the goals of education, career, marriage, and family have been achieved, and now the woman has increased time and opportunity for new interests and activities. Conversely, divorce rates are high at this age, and children leaving home may produce an “empty nest syndrome,” resulting in levels of depression. Chronic diseases also become more apparent. Most problems for the well woman are associated with perimenopause (e.g., bleeding irregularities, vasomotor symptoms). Health maintenance screening continues to be of importance because some conditions such as breast disease or ovarian cancer occur more often during this stage.

Social and Cultural Factors

Differences exist among people from different socioeconomic levels and ethnic groups with respect to risk for illness and distribution of disease and death. Some diseases are more common among people of selected ethnicity, for example, sickle cell anemia in African-Americans, Tay-Sachs disease in Ashkenazi Jews, adult lactase deficiency in Chinese, beta-thalassemia in Mediterranean peoples, and cystic fibrosis in northern Europeans. Cultural and religious influences also increase health risks because the woman and her family may have life and societal values and a view of health and illness that dictate practices different from those expected in the Judeo-Christian Western model. These may include food taboos or frequencies, methods of hygiene, effects of climate, care-seeking behavior, willingness to undergo screening and diagnostic procedures, and value conflicts. Socioeconomic contrasts result in major health differences as exemplified in birth outcomes. The rates of perinatal and maternal deaths, preterm births, and low-birth-weight babies are considerably higher in disadvantaged populations (Martin, Kochanek, Strobino, Guyer, & MacDorman, 2005). Social consequences for poor women as single parents are great because many mothers with few skills are caught in the bind of having insufficient income to afford child care. These families generate fewer and fewer resources and increase their risks for health problems. Multiple roles for women in general produce overload, conflict, and stress, resulting in higher risks for psychosocial health care.

Substance Use and Abuse

The inappropriate use of illicit and prescription drugs continues to increase and is found in all ages, races, ethnic groups, and socioeconomic strata. Addiction to substances is seen as a biopsychosocial disease with several factors leading to risk. These include biogenetic predisposition, lack of resilience to stressful life experiences, and poor social support. Women are less likely than men to abuse drugs, but the rate in women is increasing significantly. Substance-abusing pregnant women create severe problems for themselves and their offspring, including interference with optimal growth and development and addiction. In many instances the use of substances is identified through screening programs in prenatal clinics and obstetric units.

Smoking

Cigarette smoking is a major preventable cause of death and illness. Smoking is linked to cardiovascular heart disease, various types of cancers (especially lung and cervical), chronic lung disease, and negative pregnancy outcomes. Tobacco contains nicotine, which is an addictive substance that creates a physical and a psychologic dependence. Among adolescents and young adults, more women than men smoke (American Cancer Society [ACS], 2005). Cigarette smoking impairs fertility in both women and men, may reduce the age for menopause, and increases the risk for osteoporosis after menopause. Passive, or secondhand, smoke contains similar hazards and presents additional problems for the smoker, as well as harm for the nonsmoker. Smoking during pregnancy is known to cause a decrease in placental perfusion and is a cause of low birth weight (Behrman & Shiono, 2002).

Alcohol

About 1% to 2% of women of childbearing age have alcohol-related problems. Alcohol abuse during pregnancy has been associated with fetal growth restriction, altered face and development, and dental problems, specifically mental retardation (Easter, Kang, & Coombs, 2003). Women who...
Caffeine
Caffeine is a stimulant that is found in society's most popular drinks: coffee, tea, and soft drinks. It is a stimulant that can affect mood and interrupt body functions by producing anxiety and sleep interruptions. Heart arrhythmias may be made worse by caffeine, and there can be interactions with certain medications such as lithium. Birth defects have not been related to caffeine consumption; however, high intake has been related to a slight decrease in birth weight and may also increase the risk of miscarriage (Cnattingius, 2000).

Prescription drugs
Psychotherapeutic drugs. Stimulants, sleeping pills, tranquilizers, and pain relievers are used by a small percent of American women. Such drugs can bring relief from undesirable conditions such as insomnia, anxiety, and pain, but because the drugs have mind-altering capacity, misuse can produce psychologic and physical dependency in the same manner as illicit drugs. Risk-to-benefit ratios should be considered when such drugs are used for more than very short periods of time. All of these categories of drugs have some effect on the fetus when taken during pregnancy, and their use should be monitored very carefully.

Depression is the most common mental health problem in women. Everyone has a case of the “blues” periodically, but true depression impairs the ability to live a normal life and involves symptoms of pervasive sadness, isolation, fatigue, changes in eating and sleeping patterns, and general negativity. Severely depressed people are at risk for suicide. Drugs used to treat depression include tricyclic antidepressants (see Chapter 25).

Illicit drugs
Cocaine. Cocaine is a powerful central nervous system stimulant that is addictive because of the tremendous sense of pleasure or good feeling that it creates. It can be snorted, smoked, or injected. Cocaine affects all of the major body systems. Among other complications, it produces cardiovascular stress that can lead to heart attack or stroke, liver disease, central nervous system stimulation that can cause seizures, and even perforation of the nasal septum. Users are often poorly nourished and commonly have STIs. If the user is pregnant, there is an increased incidence of miscarriage, preterm labor, small-for-dates babies, abruption of the placenta, and stillbirth. Anomalies have also been reported (Briggs, Freeman, & Yaffe, 2002; Niemyl, 2002).

Heroin. Heroin is an opiate that is usually injected but can be smoked or snorted. It produces euphoria, relaxation, relief from pain, and “nodding out” (apathy, detachment from reality, impaired judgment, and drowsiness). Signs and symptoms are constricted pupils, nausea, constipation, slurred speech, and respiratory depression (Stuart & Laraia, 2001). Users are at increased risk for acquiring human immunodeficiency virus (HIV) and hepatitis B, C, and D viruses, primarily because of sharing needles that contain contaminated blood. Perinatal effects include interference with fetal growth, premature rupture of membranes, preterm labor, and prematurity.

Marijuana. Marijuana is a substance derived from the cannabis plant. It is usually rolled into cigarettes and smoked, but it may also be mixed into food and eaten. It produces an intoxicating and sensory-distorting “high.” Marijuana smoke has the same characteristics as tobacco smoke: both readily cross the placenta and have the effect of increasing carbon monoxide levels in the mother’s blood, which reduces the oxygen supply to the fetus. Fetal abnormalities are possible (Stuart & Laraia, 2001).

Other illicit drugs. A number of other street drugs pose risk to users. Variations of stimulants, such as “speed,” methamphetamine (“meth”), and “ice,” produce signs and symptoms similar to cocaine. Sedatives such as “downers,” “yellow jackets,” or “red devils” are used to “come down” from a high. Hallucinogens alter perception and body function. Phencyclidine hydrochloride (PCP, angel dust) and lysergic acid diethylamide (LSD) produce vivid changes in sensation, often with agitation, euphoria, paranoia, and a tendency toward antisocial behavior. Their use may lead to flashbacks, chronic psychosis, and violent behavior (Stuart & Laraia, 2001).

Nutrition
Good nutrition is essential for optimal health. A well-balanced diet helps prevent illness and is also used to treat certain health problems. Conversely, poor eating habits, eating disorders, and obesity are linked to disease and death.

Nutritional deficiencies
Overt disease caused by lack of certain nutrients is rarely seen in the United States; however, insufficient amounts or imbalances of nutrients do pose problems for individuals and families. Overweight or underweight status, malabsorption, listlessness, fatigue, frequent colds and other minor infections, constipation, dull hair and thin nails, and dental caries are examples of problems that can be related to nutrition and indicate the need for further nutritional assessment. Poor nutrition, especially related to obesity and high fat and cholesterol intake, may lead to more serious conditions and is said to contribute to four of the 10 leading causes of death in the United States: diseases of the heart, malignant neoplasms, cerebrovascular diseases, and diabetes (Hoyert, Kung, & Smith, 2005).

Obesity
During the past 20 years there has been a dramatic increase in obesity in the United States. It is estimated that 25% of women older than 20 years are obese (body mass index greater than 30).
index (BMI, 30 or higher), and 51% of women older than 20 years are overweight (BMI, 25 to 29.9) (Kealy, 2003; National Center for Chronic Disease Prevention and Health Promotion, 2000). In the United States the prevalence of obesity is highest among non-Hispanic black women, followed by Hispanic women and non-Hispanic white women (Flegal, Carroll, Ogden, & Johnson, 2002). The BMI is defined as a measure of an adult’s weight in relation to his or her height, specifically the adult’s weight in kilograms divided by the square of his or her height in meters (see Chapter 10).

Overweight and obesity are known risk factors for diabetes, heart disease, stroke, hypertension, gallbladder disease, osteoarthritis, sleep apnea, and some types of cancer (uterine, breast, colorectal, kidney, and gallbladder) (ACS, 2005). In addition, obesity is associated with high cholesterol, menstrual irregularities, hirsutism (excessive body and facial hair), stress incontinence, depression, complications of pregnancy, increased surgical risk, and shortened life span (U.S. Department of Health and Human Services & U.S. Department of Agriculture, 2005). Pregnant women who are morbidly obese are at increased risk for hypertension, diabetes, gallbladder disease, postterm pregnancy, and musculoskeletal problems (Cesario, 2003).

Other dietary extremes also can produce risk. For example, insufficient amounts of calcium can lead to osteoporosis, too much sodium can aggravate hypertension, and megadoses of vitamins can cause adverse effects in several body systems. Fad weight-loss programs and “yo-yo dieting” (repeated weight gain and weight loss) result in nutritional imbalances and, in some instances, medical problems. Such diets and programs are not appropriate for weight maintenance. Adolescent pregnancy produces special nutritional requirements because the metabolic needs of pregnancy are superimposed on the teen’s own needs for growth and maturation at a time when eating habits are less than ideal.

Anorexia nervosa
Some women have a distorted view of their bodies and, no matter what their weight, perceive themselves to be much too heavy. As a result, they undertake strict and severe diets and rigorous extreme exercise. This chronic and rarest of eating disorders is known as anorexia nervosa. A coexisting depression usually accompanies anorexia. Women can carry this condition to the point of starvation, with resulting endocrine and metabolic abnormalities. If nutritional status is not corrected, significant complications of arrhythmias, cardiomyopathy, and congestive heart failure occur and, in the extreme, can lead to death. The condition commonly begins during adolescence in young women who have some degree of personality disorder. They gradually lose weight over several months, have amenorrhea, and are abnormally concerned with body image. The condition requires both psychiatric and medical interventions.

Bulimia nervosa
Bulimia refers to secret, uncontrolled binge eating alternating with methods to prevent weight gain: self-induced vomiting, taking laxatives or diuretics, strict diets, fasting, and vigorous exercise. Bulimia usually begins in early adulthood (ages 18 to 25) and is found primarily in females. Complications can include dehydration and electrolyte imbalance, gastrointestinal (GI) abnormalities, dental problems, and cardiac arrhythmias.

Physical Fitness and Exercise
Exercise contributes to good health by lowering risks for a variety of conditions that are influenced by obesity and a sedentary lifestyle. It is effective in the prevention of cardiovascular disease and in the management of chronic conditions such as hypertension, arthritis, diabetes, respiratory disorders, and osteoporosis. Exercise also contributes to stress reduction and weight maintenance. Women report that engaging in regular exercise improves their body image and self-esteem and acts as a mood enhancer. Aerobic exercise produces cardiovascular involvement because increasing amounts of oxygen are delivered to working muscles. Anaerobic exercise, such as weight training, improves individual muscle mass without stress on the cardiovascular system. Because women are concerned about both cardiovascular and bone health, weight-bearing aerobic exercises such as walking, running, racket sports, and dancing are preferred. Excessive or strenuous exercise can lead to hormonal imbalances, resulting in amenorrhea and its consequences. Physical injury is also a potential risk.

Stress
The modern woman faces increasing levels of stress and as a result is prone to a variety of stress-induced complaints and illnesses. Stress often occurs because of multiple roles in which coping with job and financial responsibilities conflict with parenting and home. To add to this burden, women are socialized to be caretakers, which is emotionally draining in itself. Also, they find themselves in positions of minimal power that do not allow them to have control over their everyday environments. Some stress is normal and, in fact, contributes to positive outcomes. Many women thrive in busy surroundings. However, excessive or high levels of ongoing stress trigger physical reactions in the body, such as rapid heart rate, elevated blood pressure, slowed digestion, release of additional neurotransmitters and hormones, muscle tenseness, and weakened immune system. Consequently, constant stress can contribute to clinical illnesses such as flare-ups of arthritis or asthma, frequent colds or infections, GI upset, cardiovascular problems, and infertility. Psychologic signs such as anxiety, irritability, eating disorders, depression, insomnia, and substance abuse also have been associated with stress.

Sexual Practices
Potential risks related to sexual activity are undesired pregnancy and STIs. The risks are particularly high for adolescents and young adults, who engage in sexual intercourse at earlier and earlier ages (Hutchinson, Sosa, & Thompson, 2003). Ado-
lescents report many reasons for wanting to be sexually active, among which are peer pressure, desire to love and be loved, experimentation, enhancement of self-esteem, and enjoyment. However, many teens do not have the decision-making or values-clarification skills needed to take this important step at a young age and also lack a good knowledge base regarding contraception and STIs. They also do not believe that becoming pregnant or getting an STI will happen to them.

Although some STIs can be cured with antibiotics, many can cause significant problems. Possible sequelae include infertility, ectopic pregnancy, neonatal morbidity and mortality, genital cancers, acquired immunodeficiency syndrome, and even death (Centers for Disease Control and Prevention [CDC], 2002) (see Chapter 23). No method of contraception offers complete protection.

Medical Conditions
Most women of reproductive age are relatively healthy. However, certain medical conditions that occur during pregnancy can have deleterious effects on both mother and fetus. Of particular concern are risks from all forms of diabetes, urinary tract disorders, thyroid disease, hypertensive disorders of pregnancy, cardiac disease, and seizure disorders. Effects on the fetus vary and include intrauterine growth restriction, macrosomia, anemia, prematurity, immaturity, and stillbirth. Effects on the mother can also be severe. See Chapter 22 for information on specific conditions.

Gynecologic Conditions
Gynecologic conditions may contribute negatively to pregnancy by causing infertility, miscarriage, preterm labor, and fetal and neonatal problems. Most of these conditions are discussed in Chapter 5 and include pelvic inflammatory disease, endometriosis, STIs and other vaginal infections, uterine fibroids, and uterine deformities such as bicornuate uterus. Gynecologic cancers also affect women’s health. Risk factors depend on the type of cancer.

Cervical cancer
Human papillomavirus (HPV) infection is the most common cause of cervical cancer. At least 15 types of HPV are associated with an increase in cervical cancer; types HPV 16 and HPV 18 are related to over 60% of cervical cancers (ACS, 2005). Other risks for cervical cancer include early age of first sexual intercourse, cigarette smoking, HIV infection, possible other STIs (e.g., chlamydia), and multiple sexual partners. In the United States, African-American women have the highest rate of invasive cancer of the cervix. Abnormal spotting or vaginal bleeding is the primary symptom (ACS, 2005).

Endometrial cancer
The most common malignancy of the reproductive system is endometrial cancer. Estrogen-related exposures such as nulliparity, unopposed estrogen therapy, infertility, early menarche, and late menopause are the most significant risk factors. Other risk factors include obesity, hypertension, diabetes, and family history of breast or ovarian cancer. Use of birth control pills and pregnancy appear to provide some protection against endometrial cancer. It occurs most frequently in Caucasian women and after menopause. Abnormal uterine bleeding is the cardinal sign (ACS, 2005).

Ovarian cancer
Ovarian cancer is the most malignant of all gynecologic cancers, accounting for the most deaths from these cancers. Risk factors include family history of ovarian or breast cancer and having no children or having them late in life. Abdominal enlargement accompanied by persistent vague digestive symptoms is the most common sign (ACS, 2005).

Other gynecologic cancers
Cancer of the vulva, vagina, and uterine tubes accounts for less than 6% of all female reproductive cancers. Cancers of the vulva and vagina have been linked to HPV and herpes simplex virus, but the cause of uterine tube cancer is unknown. These cancers occur most often in postmenopausal women. Lesions are often the first sign of vulvar cancer. Women with vaginal or uterine tube cancer may be asymptomatic or have vaginal bleeding (DiSaia & Creasman, 2002).

Other Cancers
Lung cancer
Lung cancer is the leading cause of cancer deaths in women. Cigarette smoking is the most important risk factor. Other risks include exposure to certain industrial substances, organic chemicals (e.g., radon, asbestos), and radiation. Symptoms include a persistent cough, blood-tinged sputum, chest pain, and recurring pneumonia or bronchiectasis (ACS, 2005). Survival rates are low because most cancers are not detected while they are still localized.

Breast cancer
Cancer of the breast is the second leading cause of cancer deaths in women. Mortality rates since 1991 have declined, probably as a result of earlier detection and improved treatment (ACS, 2005). Risk factors include family history, inherited genetic mutations (BRCA1 and BRCA2), early menarche, late menopause, nulliparity or having children later in life, and possibly postmenopausal use of estrogen. The incidence is highest in Caucasian and lowest among Native-American women. The earliest sign is having an abnormality that shows up on a mammogram before it can be detected by the woman or a clinician (ACS, 2005). (See further discussion in Chapter 5.)

Colon cancer
Colon cancer is the third most common cancer in women. Risk factors include a personal or family history of colorectal cancer or polyps; inflammatory bowel disease; and a high-fat, low-fiber diet. The incidence is highest in African-American women. Signs include rectal bleeding, blood in the stool, and a change in bowel habits (ACS, 2005).
EVIDENCE-BASED PRACTICE
Decreasing the Discomfort and Pain of Mammography

BACKGROUND
- Mammography, the radiographic screening test for breast cancer, has been shown by randomized, controlled trials to decrease mortality rates. Each breast is pressed between two plates horizontally, then vertically, and a low-level x-ray is taken of each view. Mammography can find breast lumps that are too small to be palpable, thus enabling life-saving surgery to remove the cancer before it metastasizes. In spite of all these advantages, studies show that some women never return after their first mammogram. From 32% to 53% of women reported discomfort or pain with the procedure. It is important to make mammograms acceptable to the women who need them as a screening tool. Causes of pain may include the level of compression of the breast, a woman's expectation of the procedure, her level of confidence in the procedure and the technician, breast density, and timing of the mammogram during the woman's menstrual cycle. It is important to measure the pain accurately, with a standardized scale that has demonstrable reliability and validity (meaning, a tool that measures exactly what it claims to measure and nothing else).

OBJECTIVES
- The reviewers were seeking evidence of interventions that might relieve the discomfort and pain of mammography. Interventions might include technique and manner of staff and facility, the woman's preparation for the procedure (including analgesia and alternative therapy), the procedure itself, and her participation in the procedure. Outcomes would be pain and discomfort, and some way to standardize these measures. Quality of mammogram is also an important outcome, because false-positive results and recalls decrease the woman's confidence in the process.

METHODS
Search Strategy
- The search was extensive and used Cochrane, EBM Reviews, AMED, CANCERLIT, CINAHL, Current Contents, EMBASE, HealthSTAR, PREMEDLINE, MEDLINE, PsycINFO, dissertation and theses databases, and five journals, as well as relevant organizations and specialists. Search keywords were pain, mammogram, and screen, and the search was limited to humans and females. Three randomized, controlled trials were included in the review, dated 1993 to 1998, representing 574 women.

Statistical Analyses
- Meta-analysis was not possible because of the heterogeneity of the trials. Discomfort scales were not standardized, ranging from "comfortable–not comfortable" to a six-point visual analog scale from comfortable to very uncomfortable.

FINDINGS
- Trial findings are presented separately.
- Study 1 compared the comfort level of technician compression of one breast with patient-controlled compression of the other. This design enabled the woman to serve as her own control for comparison. Women reported significantly less pain in self-controlled compression than when the technician compressed the other breast, regardless of which went first. The qualities of the mammograms were equal, and the woman who was allowed to control the compression reported the procedure was more comfortable.
- Study 2 was a master's thesis and compared the comfort level in women who were given acetaminophen before the procedure with the control group with no pretreatment. There were no differences in discomfort levels between groups.
- Study 3 measured the discomfort levels of a standard mammogram compression on one breast with a standard compression that was loosened for one second on the other breast. Significance differences were found. More than half (52%) noted no difference, 23% felt the firmer compression to be the more uncomfortable side, and 20% felt the loosened compression to be the more uncomfortable side.

LIMITATIONS
- The small number of trials, and their small numbers of subjects, limits the power of the findings. Pain and discomfort could lend themselves well to standardized scales, which could then be metaanalyzed across trials, increasing their generalizability. Even though pain is discussed, the measures are all of discomfort, and they are not standardized. The quality of mammogram interpretation across trials was also not addressed.

CONCLUSIONS
- There are not enough data to draw conclusions about how to reduce the discomfort of mammograms. Increasing the woman's control of the procedure seemed to decrease her discomfort, but mild analgesics did not.

IMPLICATIONS FOR PRACTICE
- Some women may find the experience less unpleasant if they are given the option to control their own mammograms. The role of perception of control in alleviating pain is well documented in patient-controlled analgesia. Preparing a woman for a mammogram should include an honest description of the procedure and the sensations.

IMPLICATIONS FOR FURTHER RESEARCH
- More replication and further research into creative interventions to alleviate mammogram discomfort is needed. Measures of women's attitudes and confidence in the procedure still need research. This seems an ideal area in which to explore alternative interventions, such as hypnosis, guided imagery, aromatherapy, massage, temperature, music, and distraction. Research may show that pretreatment with other analgesics, such as nonsteroidal antiinflammatory drugs (NSAIDs), holds more promise than pretreatment with acetaminophen.
Environmental and Workplace Hazards

Environmental hazards in the home, workplace, and community can contribute to poor health at all ages. Environmental hazards can affect fertility, fetal development, live birth, and the child’s future mental and physical development. Everyone is at risk from air pollutants, such as tobacco smoke, carbon monoxide, smog, suspended particles (dust, ash, and asbestos), and cleaning solvents; noise pollution; pesticides; chemical additives; and poor preparation of food. Workers also face safety and health risks caused by ergonomically poor workstations and stress. It is important that risk assessments continue to be in effect to identify and understand environmental public health problems.

Violence against Women

Violence against women is a major health care problem in the United States, affecting over 4 million women each year and resulting in millions of dollars in annual medical costs (Tjaden & Thoennes, 2000). It is the second leading cause of injuries to women ages 15 to 44 in the United States (National Women’s Health Information Center [NWHIC], 2003). Women of all races and of all ethnic, educational, religious, and socioeconomic backgrounds are affected. The magnitude of the problem may be far greater than the statistics indicate, because violent crimes against women are underreported as a result of fear, lack of understanding, and stigma surrounding violent situations.

Maternity and women’s health nurses, by the very nature of their practice, are in a unique position to conduct case finding, provide sensitive care to women experiencing abusive situations, engage in prevention activities, and influence health care and public policy toward decreasing the violence.

Intimate partner violence

Intimate partner violence (IPV), wife battering, spouse abuse, and domestic violence or family violence are all terms applied to a pattern of assaultive and coercive behaviors that includes physical, sexual, and psychologic attacks, as well as economic coercion usually inflicted by a male partner in a marriage or other heterosexual, significant, intimate relationship. IPV is the preferred term.

Relationship violence rarely consists of a single episode, but rather is a pattern that may start with intimidation or threats and progress to more aggressive physical and sexual acts, resulting in injury to the woman. Common elements of battering are economic deprivation, sexual abuse, intimidation, isolation, and stalking and terrorizing victims and their children. Pregnancy is often a time when violence begins or escalates (NWHIC, 2003) (see Chapter 9).

Characteristics of women in battering relationships. Every segment of society is represented among abused women; race, religion, social background, age, and educational level are not significant factors in differentiating women at risk. Battered women may believe they are to blame for the situation because they are “not good enough wives.” Many women have low self-esteem and may have histories of domestic violence in their families of origin. Social isolation seems to be another characteristic of battered women, which may result from stigma, fear, or restrictions placed on them by their partners.

Cycle of violence: the dynamics of battering. According to the cycle of violence concept, battering is neither random nor constant; rather, it occurs in repeated cycles (Fig. 4-8). A three-phase cyclic pattern to the battering behavior has been described as a period of increasing tension leading to the battery, which is then followed by a
period of calm and remorse in which the male partner displays kind, loving behavior and pleas for forgiveness. This “honeymoon” phase lasts until stress or other factors cause conflict and tension to mount again toward another episode of battering. Over time, the tension and battering phases last longer and the calm phase becomes shorter until there is no honeymoon phase (Walker, 1984).

Sexual abuse and rape

Many female sexual abuse and assault victims experience posttraumatic stress disorder (PTSD) (NWHIC, 2003). Up to 27% of women have experienced childhood sexual abuse (Molnar, Buka, & Kessler, 2001). Common psychopathologic consequences are dissociative identity disorder, borderline personality disorder, and generalized anxiety disorder. Although pregnant or postpartum patients with these diagnoses may come to the attention of maternity nurses, women who experience symptoms of PTSD, sexual dysfunction, depression, anxiety, or substance abuse problems are more likely to be seen in gynecologic practice.

Rape is an act of violence rather than a sexual act. Rape is a legal and not a medical entity and in its strictest sense is the penile penetration of the female sex organ or labia without her consent. Sexual assault, a term used interchangeably with rape, is also an act of force and has a much broader definition to include unwanted or uncomfortable touches, kisses, hugs, petting, intercourse, or other sexual acts. States may also use different legal definitions of rape. Hymenial penetration or ejaculation does not have to occur to qualify as rape. The key feature to establish rape is the absence of consent: threat or coercion implies the lack of consent. The victim who is mentally retarded, who is unconsent to qualify as rape. The key feature to establish rape is the absence of consent: threat or coercion implies the lack of consent. The victim who is mentally retarded, who is unconscious or otherwise physically unable to move, who has taken drugs or who has been drugged without her knowledge, or who is a minor (statutory rape) is not capable of giving consent. The court must prove absence of consent; thus the term alleged rape or alleged sexual assault is used in medical records.

Medical considerations for the rape victim include treatment of physical injuries, prophylactic treatment for STIs, and prophylaxis for pregnancy (emergency contraception) (see Chapter 6). Emergency departments and ambulatory care facilities usually follow protocols for examination, collection of evidence and photographing injuries, treatment, and providing information on community resources for victims of violence.

Health Assessment

Interview

At a woman’s first visit, she is often expected to fill out a form with biographic and historical data before meeting with the examiner. The nurse is usually responsible for ensuring that the woman’s name, age, marital status, race, ethnicity, address, phone numbers, occupation, and date of visit are recorded. The interview should be conducted in a private, comfortable, and relaxed setting and in an unhurried manner (Fig. 4-9). The woman is addressed by her title and name (e.g., Mrs. Chang), and the nurse introduces herself or himself using name and title. It is important to phrase questions in a sensitive and nonjudgmental manner. The woman’s culture should be considered in case modifications in the examinations should be needed (Mattson, 2003). For example, a female examiner may be preferred or it may be inappropriate for the woman to disrobe completely for an examination. The nurse is cognizant of a woman’s vulnerability and assures her of strict confidentiality. Many women are uninformed, misguided by myths, or afraid they will appear ignorant by asking questions about sexual or reproductive functioning. The woman is assured that no question is irrelevant. The history begins with an open-ended question such as, “What brings you in to the office/clinic/hospital today? Anything else? Tell me about it.”

Communication may be hindered by different beliefs even when the nurse and patient speak the same language. Examples of communication variations are listed in the Cultural Considerations box.

Women with Special Needs

Women with Special Needs

Women with emotional or physical disorders have special needs. Women who are visually, aurally, emotionally, or physically disabled should be respected and involved in the assessment and physical examination to the full extent of their abilities. The assessment and physical examination can be adapted to each woman’s individual needs.

Communication with a woman who is hearing impaired can be accomplished without difficulty. Most of these women read lips, write, or both; therefore an interviewer who speaks and enunciates each word slowly and in full view may be easily understood. If a woman is not comfortable...
C H A P T E R 4
Assessment and Health Promotion

with lip reading, she may use an interpreter. The visually im-
paired woman needs to be oriented to the examination
room and may have her guide dog with her. As with all pa-
tients, the visually impaired woman needs a full explanation
of what the examination entails before proceeding. For ex-
ample, before touching the woman, the nurse explains,
"Now I am going to place a cuff on your right arm to take
your blood pressure." Ask the woman if she would like to
touch each of the items that will be used in the examination
to reduce her anxiety.

Many physically disabled women cannot comfortably lie
in the lithotomy position for the pelvic examination. Spe-
cially designed examination tables are available in some clin-
ics. When this equipment is not available, several alternative
positions may be used, including a lateral (side-lying) posi-
tion, a V-shaped position, a diamond-shaped position, and
an M-shaped position (Fig. 4-10). Ask the woman what has
worked best for her previously. If she has not had a pelvic
cuff or a comfortable examination in the past, show her a pic-
ture of various positions and ask her which one she prefers.
The nurse’s support and reassurance can help the woman to
relax, which will make the examination go more smoothly.

Abused women

Nurses should screen all women entering the health care
system for potential abuse. It is important to keep in mind
the possibility that violence against this woman may have
occurred. Help for the woman may depend on the sensitivity
with which the nurse screens for abuse, the discovery of

Cultural Considerations

Communication Variations

- Conversational style and pacing: Silence may show re-
spect or acknowledgment that the listener has heard.
In cultures in which a direct "no" is considered rude,
silence may mean no. Repetition or loudness may
mean emphasis or anger.
- Personal space: Cultural conceptions of personal space
differ, based on one's culture. Someone may be per-
ceived as distant for backing off when approached or
aggressive for standing too close.
- Eye contact: Eye contact varies among cultures from
intense to fleeting. In an effort to refrain from invading
personal space, avoiding direct eye contact may be a
sign of respect.
- Touch: The norms about how people should touch each
other vary among cultures. In some cultures, physical
contact with the same sex (embracing, walking hand
in hand) is more appropriate than that with an unre-
lated person of the opposite sex.
- Time orientation: In some cultures, involvement with
people is more valued than being "on time." In other
cultures, life is scheduled and paced according to clock
time, which is valued over personal time.

changing face of the U.S. AWHONN Lifelines, 4
(3), 48-52.

Fig. 4-10 Lithotomy and variable positions for women
who have a disability. A, Lithotomy position. B, M-shaped po-
E, V-shaped position.
Fear, guilt, and embarrassment may keep many women from giving information about family violence. Clues in the history and evidence of injuries on physical examination should give a high index of suspicion. The areas most commonly injured in women are the head, neck, chest, abdomen, breasts, and upper extremities. Burns and bruises in patterns resembling hands, belts, cords, or other weapons and multiple traumatic injuries may be seen.

Adolescents
As a young woman matures, she should be asked the same questions that are included in any history. Particular attention should be paid to hints about risky behaviors, eating disorders, and depression. Do not assume that a teenager is not sexually active. After rapport has been established, it is best to talk to a teen with the parent (or partner or friend) out of the room. Questions should be asked with sensitivity and in a gentle and nonjudgmental manner (Seidel, Ball, Dains, & Benedict, 2003).

History
A medical history usually includes the following:
1. Identifying data. Name, age, race, living household preference, occupation, religion, culture, and ethnicity are obtained.
2. Chief complaint(s). A verbatim response to the question, “What problem or symptom brought you here today?”
3. History of present illness. A chronologic narrative that includes onset of the problem, the setting in which it developed, its manifestations, and any treatments received are noted. The woman’s state of health before the onset of the problem is determined. If the problem is long-standing, the reason for seeking attention at this time is elicited. The principal symptoms should be described with regard to the following:
   • Location
   • Quality
   • Quantity or severity
   • Timing (onset, duration, frequency)
   • Setting
   • Factors that aggravate or relieve
   • Associated manifestations
4. Past medical history. Determine general state of health and strength:
   • Infectious diseases: measles, mumps, rubella, whooping cough, chicken pox, rheumatic fever, scarlet fever, diphtheria, polio, tuberculosis (TB), hepatitis
   • Chronic disease and system disorders: arthritis, cancer, diabetes, heart, lung, kidney, seizures, stroke, or ulcers
5. Past health status:

- Allergies: medications, previous transfusion reactions, or environmental allergies
- Immunizations: diphtheria, pertussis, tetanus, polio; measles, mumps, rubella (MMR); hepatitis B, varicella, influenza, and pneumococcal vaccine; last TB skin test
- Screening tests: Pap test (smear), mammogram, stool for occult blood, sigmoidoscopy or colonoscopy, chest x-ray study, hematocrit, hemoglobin, rubella titer, urinalysis and cholesterol test; blood type and Rh; last eye examination; last dental examination
- Environmental and chemical hazards: home, school, work, and leisure setting; exposure to extreme heat or cold, noise, industrial toxins such as asbestos or lead, pesticides, dieldrin, stilbestrol (DES), radiation, cat feces, or cigarette smoke
- Use of safety measures: seat belts, bicycle helmets, designated driver
- Exercise and leisure activities: regular
- Sleep patterns: length and quality
- Sexual history: Is she sexually active? With men, women, or both? Safer sex practices?
- Diet, including beverages: 24-hour dietary recall
- Medications: name, dose, frequency, duration, reason for taking, and compliance with prescription medications; home remedies, over-the-counter drugs, vitamin and mineral supplements used over a 24-hour period; herbal therapies
- Nicotine, alcohol, illicit or recreational drugs: type, amount, frequency, duration, and reactions
- Caffeine: coffee, tea, cola, or chocolate intake

6. Past surgical history. Type, date, reason, outcome, and any complications should be noted.

7. Family history. Information about age and health of family members may be presented in narrative or genogram: age, health status, or death of parents, siblings, spouse, children. Check for history of diabetes, heart disease, hypertension, stroke, respiratory disorders, renal disorders, thyroid disorders, cancer, bleeding disorders, hepatitis, allergies, asthma, arthrits, TB, epilepsy, mental illness, HIV, and other conditions.

8. Social history. Note birthplace, education, employment, marital status, living accommodations, children, persons at home, and hobbies. Does she enjoy what she is doing?

- Screen for abuse: Has she ever been hit, kicked, slapped, or forced to have sex against her wishes? Has she been verbally or emotionally abused? Does she have a history of childhood sexual abuse? If yes, has she received counseling or does she need referral?

9. Review of systems. It is probable that all questions in each system will not be included every time a history is taken. Some questions regarding each system should be included in every history. The essential areas to be explored are listed in the following head-to-toe sequence. If a woman gives a positive response to a question about an essential area, more detailed questions should be asked.

- General: weight change, fatigue, weakness, fever, chills, or night sweats
- Skin: skin, hair and nail changes, itching, bruising, bleeding, rashes, sores, lumps, or moles
- Lymph nodes: enlargement, inflammation, pain, suppuration (pus), or drainage
- Head, eyes, nose, and throat (HEENT): headache, vertigo (dizziness), convulsive disorder, syncope (fainting), headache location, frequency, pain type, nausea or vomiting, or visual symptoms; eyes—glasses, contact lenses, blurriness, tearing, itching, photophobia, diplopia, inflammation, trauma, cataracts, glaucoma, or acute visual loss; ears—hearing loss, tinnitus (ringing), vertigo, discharge, pain, fullness, recurrent infections, or mastoiditis; nose and sinuses—turbinate, rhinitis, nasal discharge, epistaxis, obstruction, sneezing, itching, allergy, or smelling impairment; mouth, throat, and neck—hoarseness, voice changes, soreness, ulcers, bleeding gums, goiter, swelling, or enlarged nodes
- Breasts: masses, pain, lumps, dimpling, nipple discharge, fibrocystic changes or implants; BSE practice
- Respiratory: shortness of breath, wheezing, cough, sputum, hemoptysis, pneumonia, pleurisy, asthma, bronchiectasis, embolism, or TB; date and result of last chest x-ray film
- Cardiac: hypertension, rheumatic fever, murmurs, angina, palpitations, dyspnea, tachycardia, orthopnea, edema, chest pain, cough, cyanosis, cold extremities, ascites, intermittent claudication (calf pain), phlebitis, or skin color changes
- GI: appetite, nausea, vomiting, indigestion, constipation, diarrhea, abdominal pain, melena (black, tarry stools), bowel habit changes, diarrhea, constipation, bowel movement frequency, food intolerance, hemorrhoids, jaundice, or hepatitis; sigmoidoscopy, colonoscopy, barium enema, or ultrasound
- Genitourinary (GU): frequency, hesitancy, urgency, polyuria, dysuria, herniation, nocturia, incontinence, stones, infection, or urethral discharge; dysmenorrhea, intermenstrual bleeding, dyspareunia, discharge, sores, itching, STIs, gravidity (G), parity (P), problems in pregnancy, contraception, menopause, hot flashes, or sweats (may be included here or as part of endocrine assessment)
- Vascular: leg edema, claudication, varicose veins, thrombosis, or emboli
- Endocrine: heat or cold intolerance, dry skin, excessive sweating, polyuria, polydipsia, polyphagia,
thyroid problems, diabetes, or secondary sex characteristic changes; age at menarche, length and flow of menses, last menstrual period (LMP), age at menopause, libido, or sexual concerns
- Hematologic: anemia, easy bruising, bleeding, petechiae, purpura, or transfusions
- Musculoskeletal: muscle weakness, pain, joint stiffness, scoliosis, lordosis, kyphosis, range-of-motion instability, redness, swelling, arthritis, or gout
- Neurologic: loss of sensation, numbness, tingling, tremors, weakness, vertigo, paralysis, fainting, twitching, blackouts, seizures, convulsions, loss of consciousness or memory
- Psychiatric: moodiness, depression, anxiety, obsessions, delusions, illusions, or hallucinations

Physical Examination

Objective data are recorded by system or location. A general statement of overall health status is a good way to start.

- General appearance: age, race, sex, state of health, stature, development, dress, hygiene, affect, alertness, orientation, cooperativeness, and communication skills
- Vital signs: temperature, pulse, respiration, blood pressure
- Height and weight
- Skin: color; integrity; texture; hydration; temperature; edema; excessive perspiration; unusual odor; presence and description of lesions; hair texture and distribution; nail configuration; color, texture, condition of nails or presence of nail clubbing
- Head: size, shape, trauma, masses, scars, rashes or scaling; facial symmetry; presence of edema or puffiness
- Eyes: pupil size, shape, reactivity; conjunctival injection; scleral icterus; fundal papilledema; hemorrhage; lids; extraocular movements; visual fields and acuity
- Ears: shape and symmetry, tenderness, discharge, external canal, and tympanic membranes; hearing: Weber should be midline (loudness of sound equal in both ears) and Rinne negative (no conductive or sensorineural hearing loss); should be able to hear whispered at 3 feet
- Nose: symmetry, tenderness, discharge, mucosa, turbinite inflammation, frontal and maxillary sinus tenderness; discrimination of odors
- Mouth, throat: hygiene, condition of teeth, dentures, appearance of lips, tongue buccal and oral mucosa, erythema, edema, exudate, tonsillar enlargement, palate, uvula, gag reflex, or ulcers
- Neck: mobility, masses, range of motion, trachea deviation, thyroid size, carotid bruits
- Lymphatic: cervical, intracranial, axillary, troclear, or inguinal adenopathy; size, shape, tenderness, and consistency
- Breasts: skin changes, dimpling, symmetry, scars, tenderness, discharge or masses; characteristics of nipples and areolae
- Heart: rate, rhythm, murmurs, rubs, gallops, clicks, heaves, or precordial movements
- Peripheral vascular: jugular vein distention, bruits, edema, swelling, vein distention, Homans sign, or tenderness of extremities
- Lungs: chest symmetry with respirations, wheezes, crackles, rhonchi, vocal fremitus, whispered pectoriloquy, percussion, and diaphragmatic excursion; breath sounds equal and clear bilaterally
- Abdomen: shape, scars, bowel sounds, consistency, tenderness, rebound, masses, guarding, organomegaly, liver span, percussion (tympany, shifting, dullness), costovertebral angle tenderness
- Extremities: edema, ulceration, tenderness, varicosities, erythema, tremor, or deformity
- GU: external genitalia, perineum, vaginal mucosa, cervix, inflammation, tenderness, discharge, bleeding, ulcers, nodules, masses, internal vaginal support, bimanual and rectovaginal examination; palpation of cervix, uterus, and adnexa
- Rectal: spincter tone, masses, hemorrhoids, rectal wall contour, tenderness, and stool for occult blood
- Musculoskeletal: posture, symmetry of muscle mass, muscle atrophy, weakness, appearance of joints, tenderness or crepitus, joint range of motion, instability, redness, swelling, or spine deviation
- Neurologic: mental status, orientation, memory, mood, speech clarity and comprehension, cranial nerves II through XII, sensation, strength, deep tendon and superficial reflexes, gait, balance, and coordination with rapid alternating motions

Pelvic Examination

Many women are intimidated by the gynecologic portion of the physical examination. The nurse in this instance can take an advocacy approach that supports a partnership relationship between the woman and the care provider (see Guidelines/Guías box). It is especially important to prepare the adolescent for her first speculum examination because it is especially important to prepare the adolescent for her first speculum examination because she will develop perceptions that will remain with her for future examinations. What the examination entails should be discussed with the teen while she is dressed. Models or illustrations can be used to show exactly what will happen. All of the necessary equipment should be assembled so that there are no interruptions. Pediatric specula that are 1 to 1.5 cm wide can be inserted with minimal discomfort. If the teen is sexually active, a small adult speculum may be used.

The woman is assisted into the lithotomy position (see Fig. 4-10, A) for the pelvic examination. When she is in the lithotomy position, the woman’s hips and knees are flexed with the buttocks at the edge of the table, and her feet are supported by heel or knee stirrups.
Some women prefer to keep their shoes or socks on, especially if the stirrups are not padded. Many women express feelings of vulnerability and strangeness when in the lithotomy position. During the procedure the nurse assists the woman with relaxation techniques.

One method of helping the woman relax is to have her place her hands on her chest at about the level of the diaphragm, breathe deeply and slowly (in through her nose and out through her O-shaped mouth), concentrate on the rhythm of breathing, and relax all body muscles with each exhalation (Barkauskas, Baumann, & Darling-Fisher, 2002). This breathing technique is particularly helpful for the adolescent or the woman whose introitus may be especially tight or for whom the experience may be new or may provoke tension. Some women relax when they are encouraged to become involved with the examination with a mirror placed so that they can view the area being examined. This type of participation helps with health teaching as well. Distraction is another technique that can be used effectively (e.g., placement of interesting pictures on the ceiling over the head of the table).

Many women find it distressing to attempt to converse in the lithotomy position. Most women appreciate an explanation of the procedure as it unfolds, as well as coaching for the type of sensations they may expect. Generally, however, women prefer not to have to respond to questions until they are again upright and at eye level with the examiner. Questioning during the procedure, especially if they cannot see their questioner’s eyes, may make women tense.

**External inspection**

The examiner sits at the foot of the table for the inspection of the external genitals and for the speculum examination. To facilitate open communication and to help the woman relax, the woman’s head is raised on a pillow and the drape is arranged so that eye-to-eye contact can be maintained. In good lighting, external genitals are inspected for sexual maturity, clitoris, labia, and perineum. After childbirth or other trauma there may be healed scars.

**External palpation**

The examiner proceeds with the examination using palpation and inspection. The examiner wears gloves for this portion of the assessment. Before touching the woman, the examiner explains what is going to be done and what the woman should expect to feel (e.g., pressure). The examiner may touch the woman in a less sensitive area such as the inner thigh to alert her that the genital examination is beginning. This gesture may put the woman more at ease. The labia are spread apart to expose the structures in the vestibule: urinary meatus, Skene glands, vaginal orifice, and Bartholin glands (Fig. 4-12). To assess the Skene glands, the examiner inserts one finger into the vagina and “milks” the area of the urethra. Any exudate from the urethra or the Skene glands is cultured. Masses and erythema of either structure are assessed further. Ordinarily the openings to the Skene glands are not visible; prominent openings may be seen if the glands are infected (e.g., with gonorrhea). During the examination the examiner keeps in mind the data from the review of systems, such as history of burning on urination.

The vaginal orifice is examined. Hymenal tags are normal findings. With one finger still in the vagina, the examiner

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**GUIDELINES/GUÍAS**

**Physical Examination**

- Take off all your clothes, please.
- Quite toda la ropa, por favor.
- Put on the gown, please.
- Póngase la bata, por favor.
- I am going to examine you.
- Le voy a examinar.
- You will feel less discomfort if you relax.
- Se sentirá más cómoda si se relaja el cuerpo.
- Lie down, please.
- Acuéstese, por favor.
- Put your feet in the stirrups.
- Póngase los pies en los estribos.
- Open your legs, please.
- Sepárese las piernas, por favor.
- I am going to take a sample from the lining of the cervix (Pap test).
- Le voy a tomar una muestra del cuello uterino (el examen de Papanicolau).
- We will test this sample for cancer.
- Haremos un análisis de esta muestra para determinar si hay cáncer.
- It won’t hurt.
- No le va a doler.
- Everything looks fine.
- Todo está bien.
- You may get dressed.
- Puede vestirse.

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![Fig. 4-12 External examination. Separation of the labia.](From Edge, V., & Miller, M. (1994). Women's health care. St. Louis: Mosby.)
repositions the index finger near the posterior part of the orifice. With the thumb outside the posterior part of the labia majora, the examiner compresses the area of Bartholin glands located at the 8 o’clock and 4 o’clock positions and looks for swelling, discharge, and pain.

The support of the anterior and posterior vaginal wall is assessed. The examiner spreads the labia with the index and middle finger and asks the woman to strain down. Any bulge from the anterior wall (urethrocele or cystocele) or posterior wall (rectocele) is noted and compared with the history, such as difficulty to start the stream of urine or constipation.

The perineum (area between the vagina and anus) is assessed for scars from old lacerations or episiotomies, thinning, fistulas, masses, lesions, and inflammation. The anus is assessed for hemorrhoids, hemorrhoidal tags, and integrity of the anal sphincter. The anal area is also assessed for lesions, masses, abscesses, and tumors. If there is a history of STI, the examiner may want to obtain a culture specimen from the anal canal at this time. Throughout the genital examination, the examiner notes the odor. Odor may indicate infection or poor hygiene.

**Vulvar self-examination.** The pelvic examination provides a good opportunity for the practitioner to emphasize the need for regular vulvar self-examination (VSE) and to teach this procedure. Because there has been a dramatic increase in cancerous and precancerous conditions of the vulva in recent years, a VSE should be performed as an integral part of preventive health care by all women who are sexually active or 18 years of age or older, monthly between menses or more frequently if there are symptoms or a history of serious vulvar disease. Most lesions, including malignancy, condyloma acuminatum (wartlike growth), and Bartholin cysts, can be seen or palpated and are easily treated if diagnosed early.

The examination can be performed by the practitioner and woman together, using a mirror. A simple diagram of the anatomy of the vulva can be given to the woman, with instructions to perform the examination herself that evening to reinforce what she has learned. She does the examination in a sitting position with adequate lighting, holding a mirror in one hand and using the other hand to expose the tissues surrounding the vaginal introitus. She then systematically examines the mons pubis, clitoris, urethra, labia majora, perineum, and perianal area and palpates the vulva, noting any changes in appearance of abnormalities, such as ulcers, lumps, warts, and changes in pigmentation.

**Internal examination**

A vaginal speculum consists of two blades and a handle and comes in a variety of types and styles. A vaginal speculum is used to view the vaginal vault and cervix (Procedure box—Assisting with Pelvic Examination). The closed speculum is gently placed into the vagina and inserted to the back of the vaginal vault. The blades are opened to reveal the cervix and are locked into the open position. The cervix is inspected for position and appearance of the os: color, lesions, bleeding, and discharge (Fig. 4-13). Cervical findings

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**Procedure**

**Assisting with Pelvic Examination**

- Wash hands. Assemble equipment (see Fig.).
- Ask woman to empty her bladder before the examination (obtain clean-catch urine specimen as needed).
- Assist with relaxation techniques. Have the woman place her hands on her chest at about the level of the diaphragm, breathe deeply and slowly (in through her nose and out through an O-shaped mouth), concentrate on the rhythm of breathing, and relax all body muscles with each expiration (Barkauskas, Baumann, & Darling-Fisher 2002).
- Encourage the woman to become involved with the examination if she shows interest. For example, a mirror can be placed so that she can see the area being examined.
- Assess for and treat signs of problems such as supine hypotension.
- Warm the speculum in warm water if a prewarmed one is not available.
- Assist the woman at completion of the examination to a sitting position and then a standing position.
- Provide tissues to wipe lubricant from perineum.
- Provide privacy for the woman while she is dressing.
that are not within normal limits include ulcerations, masses, inflammation, and excessive protrusion into the vaginal vault. Anomalies, such as a cockscomb (a protrusion over the cervix that looks like a rooster’s comb), a hooded or collared cervix (seen in DES daughters), or polyps are noted.

**Collection of specimens.** The collection of specimens for cytologic examination is an important part of the gynecologic examination. Infection can be diagnosed through examination of specimens collected during the pelvic examination. Possible infections include *Candida albicans*, *Trichomonas vaginalis*, *bacterial vaginosis*, *β-hemolytic streptococci*, *Neisseria gonorrhoeae*, *Chlamydia trachomatis*, and *herpes simplex virus* (see Chapter 5). Once the diagnoses have been made, treatment can be instituted. Carcinogenic conditions, potential or actual, can be determined by examination of cells from the cervix (e.g., Pap test, HPV DNA test) collected during the pelvic examination (see Procedure box—Papanicolaou [Pap] Test).

**Vaginal examination**

After the specimens are obtained, the vagina is viewed when the speculum is rotated. The speculum blades are unlocked and partially closed. As the speculum is withdrawn, it is rotated and the vaginal walls are inspected for color, lesions, rugae, fistulas, and bulging.

![Fig. 4-13 Insertion of speculum for vaginal examination. A, Opening of the introitus. B, Oblique insertion of the speculum. C, Final insertion of the speculum. D, Opening of the speculum blades. (From Barkauskas, V., Baumann, L., & Darling-Fisher, C. [2002]. *Health and physical assessment* [3rd ed.]. St. Louis: Mosby.)](image-url)
Bimanual palpation

The examiner stands for this part of the examination. A small amount of lubricant is placed on the first and second fingers of the gloved hand for the internal examination. To prevent tissue trauma and contamination, the thumb is abducted and the ring and little fingers are flexed into the palm (Fig. 4-14).

The vagina is palpated for distensibility, lesions, and tenderness. The cervix is examined for position, shape, consistency, motility, and lesions. The fornix around the cervix is palpated.

The other hand is placed on the abdomen halfway between the umbilicus and symphysis pubis and exerts pressure downward toward the pelvic hand. Upward pressure...
from the pelvic hand traps reproductive structures for assessment by palpation. The uterus is assessed for position, size, shape, consistency, regularity, motility, masses, and tenderness.

With the abdominal hand moving to the right lower quadrant and the fingers of the pelvic hand in the right lateral fornix, the adnexa is assessed for position, size, tenderness, and masses. The examination is repeated on the woman’s left side.

Just before the intravaginal fingers are withdrawn, the woman is asked to tighten her vagina around the fingers as much as she can. If the muscle response is weak, the woman is assessed for her knowledge about Kegel exercises.

**Rectovaginal palpation**

To prevent contamination of the rectum from organisms in the vagina (e.g., *N. gonorrhoeae*) it is necessary to change gloves, add fresh lubricant, and then reinsert the index finger into the vagina and the middle finger into the rectum (Fig. 4-15). Insertion is facilitated if the woman strains down. The maneuvers of the abdominovaginal examination are repeated. The rectovaginal examination permits assessment of the rectovaginal septum, the posterior surface of the uterus, and the region behind the cervix and the adnexa. The vaginal finger is removed and folded into the palm, leaving the middle finger free to rotate 360 degrees. The rectum is palpated for rectal tenderness and masses.

After the rectal examination, the woman is assisted into a sitting position, given tissues or wipes to cleanse herself, and given privacy to dress. The woman often returns to the examiner’s office for a discussion of findings, prescriptions for therapy, and counseling.

Pelvic examination during pregnancy is discussed in Chapter 9.

**Laboratory and Diagnostic Procedures**

The following laboratory and diagnostic procedures are ordered at the discretion of the clinician: complete blood count or hemoglobin and hematocrit, total blood cholesterol, fasting plasma glucose, urinalysis for bacteria, syphilis serology (Venereal Disease Research Laboratory [VDRL] test or rapid plasma reagin test [RPR]) and other screening tests for STIs, mammogram, tuberculin skin test, hearing test, electrocardiogram, chest x-ray film, fecal occult blood, and bone mineral density. HIV and drug screening may be offered or encouraged with informed consent, especially in high risk populations. Results of tests usually are reported by phone call or letter.

**ANTICIPATORY GUIDANCE FOR HEALTH PROMOTION AND PREVENTION**

Knowledge alone is not enough to bring about healthy behaviors. The woman must be convinced that she has some control over her life and that healthy life habits, including periodic health examinations, are a sound investment. She must believe in the efficacy of prevention, early detection, and therapy and in her ability to perform self-care practices, such as BSE. The model illustrated in Fig. 4-16 incorporates the major aspects to be included when counseling women.
Nutrition
To maintain good nutrition, women should be counseled to eat a variety of foods. Foods low in saturated fat and cholesterol, moderate sodium and sugar intake, whole grain products, and a variety of fruits and vegetables should be selected. At least four to six glasses of water in addition to other fluids such as juices should be included in the diet daily. Coffee, tea, soft drinks, and alcoholic beverages should be used in moderation (U.S. Department of Health and Human Services & Department of Agriculture, 2005). Red meats and processed meats as well as refined grains should be limited (ACS, 2005).

Most women do not recognize the importance of calcium to health, and their diets are insufficient in calcium. Women who are unlikely to get enough calcium in the diet may need calcium supplements in the form of calcium carbonate, which contains more elemental calcium than other preparations.

Exercise
Physical activity and exercise counseling for persons of all ages should be undertaken at schools, work sites, and primary care settings. The nurse should stress the importance of daily exercise throughout life for weight management and health promotion, suggesting exercises that are enjoyable to the individual (Figs. 4-17 and 4-18).

Kegel exercises
Kegel exercises, or pelvic muscle exercises, were developed to strengthen the supportive pelvic floor muscles to control or reduce incontinent urine loss. These exercises are also beneficial during pregnancy and postpartum. They strengthen the muscles of the pelvic floor, providing support for the pelvic organs and control of the muscles surrounding the vagina and urethra.

The Association of Women’s Health, Obstetric and Neonatal Nurses conducted a research utilization project focused on continence for women (Sampselle et al., 2000). Educational strategies for teaching women how to perform Kegel exercises that were compiled by nurse researchers involved in the project are described in the Teaching Guidelines box.

Stress Management
Because it is neither possible nor desirable to avoid all stress, women need to learn how to manage stress. The nurse should assess each woman for signs of stress, using therapeutic communication skills to determine risk factors and the woman’s ability to function.
**TEACHING GUIDELINES**

### Kegel Exercises

**DESCRIPTION AND RATIONALE**
- Kegel exercise, or pelvic muscle exercise, is a technique used to strengthen the muscles that support the pelvic floor. This exercise involves regularly tightening (contracting) and relaxing the muscles that support the bladder and urethra. By strengthening these pelvic muscles, a woman can prevent or reduce accidental urine loss.

**TECHNIQUE**
- The woman needs to learn how to target the muscles for training and how to contract them correctly. One suggestion for teaching is to have the woman pretend she is trying to prevent the passage of intestinal gas. Have her use this tightening motion on the muscles around her vagina and the upper pelvis. She should feel these muscles drawing inward and upward. Other suggested techniques are to have the woman pretend she is trying to stop the flow of urine in midstream or to have her think about how her vagina is able to contract around and move up the length of the penis during intercourse.

The woman should avoid straining or bearing-down motions while performing the exercise. She should be taught how bearing down feels by having her take a breath, hold it, and push down with her abdominal muscles as though she were trying to have a bowel movement. Then the woman can be taught how to avoid straining down by exhaling gently and keeping her mouth open each time she contracts her pelvic muscles.

**SPECIFIC INSTRUCTIONS**
1. Each contraction should be as intense as possible without contracting the abdomen, thighs, or buttocks.
2. Contraction should be held for at least 10 seconds. The woman may have to start with as little as 2 seconds per contraction until her muscles get stronger.
3. The woman should rest for 10 seconds or more between contractions, so that the muscles have time to recover and each contraction can be as strong as the woman can make it.
4. The woman should feel the pulling up over the three muscle layers so that the contraction reaches the highest level of her pelvis.

**OTHER SUGGESTIONS FOR IMPLEMENTATION**
1. At first the woman should set aside about 15 minutes a day to do the Kegel exercises.
2. The woman may want to put up reminders, such as notes on her bathroom mirror, her refrigerator, her television, or her calendar, to do the exercises.
3. Guidelines for practicing Kegel exercises suggest performing between 24 and 100 contractions a day; however, positive results can be achieved with only 24 to 45 a day.
4. The best position for learning how to do Kegel exercises is to lie supine with the knees bent. Another position to use is on the hands and knees. Once the woman learns the proper technique, she can perform the exercises in other positions such as standing or sitting.


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Some women must be referred for counseling or other mental health therapy. Women are almost twice as likely as men to suffer from depression, anxiety, or panic attacks (National Women’s Health Resource Center, 2003). Nurses need to be alert to the symptoms of serious mental disorders, such as depression and anxiety, and make referrals to mental health practitioners when necessary. Women experiencing major life changes, such as divorce and separation, bereavement, serious illness, and unemployment, also need special attention.

For many women the nurse is able to provide comfort, reassurance, and advice concerning helping resources, such as support groups. Many centers offer support groups to help women prevent or manage stress. The nurse can help them become more aware of the relationship between good nutrition, rest, relaxation, and exercise or diversion and their ability to deal with stress. In the case of role overload, determining what needs immediate attention and what can wait is important. Practical advice includes regular breaks, taking time for friends, developing interests outside of work or the home, setting realistic goals, and learning self-acceptance. Anticipatory guidance for developmental or expected situational crises can help women plan strategies for dealing with potentially stressful events.

Role-playing, relaxation techniques, biofeedback, meditation, desensitization, imagery, assertiveness training, yoga, diet, exercise, and weight control are techniques nurses can include in their repertoire of helping skills. Insufficient time prevents one-on-one assistance in many situations, but the more nurses know about these resources, the better able they are to intervene, counsel, and direct women to appropriate resources. Careful follow-up of all women experiencing difficulty in dealing with stress is important.

### Substance Use Cessation

All women at all ages will receive substantial and immediate benefits from smoking cessation. However, this is not easy, and most people stop several times before they accomplish their goal (Box 4-2). Many are never able to do so. Those who wish to stop smoking can be referred to a smoking cessation program where individualized methods can be implemented. At the very least, individuals should be guided to self-help materials available from the March of Dimes Birth Defects Foundation, American Lung Association, and ACS. During pregnancy, women seem to be highly motivated to stop or at least to limit smoking to 10 or fewer cigarettes per day. Insult to the fetus can be
reduced or even avoided if this is done by the end of the first trimester.

Counseling women who appear to be drinking excessively or using drugs may include strategies to increase self-esteem and teaching new coping skills to resist and maintain resistance to alcohol abuse and drug use. Appropriate referrals should be made, with the health care provider arranging the contact and then following up to be sure that appointments are kept. General referral to sources of support should also be provided. National groups that provide information and support for those who are chemically dependent are listed in the Resources section at the end of the chapter. Many of these organizations have local branches or contacts that are listed in the telephone book.

Safer Sexual Practices

Prevention of STIs is predicated on the reduction of high risk behaviors by educating toward a behavioral change. Behaviors of concern include multiple and casual sexual partners and unsafe sexual practices. The abuse of alcohol and drugs is also a high risk behavior resulting in impaired judgment and thoughtless acts. Specific self-care measures for "safer sex" are described in Chapter 5.

In addition to information about the prevention of STIs, women of childbearing years need information regarding contraception and family planning (see Chapter 6).

Health Screening Schedule

Periodic health screening includes history, physical examination, education, counseling, and selected diagnostic and laboratory tests. This regimen provides the basis for overall health promotion, prevention of illness, early diagnosis of problems, and referral for appropriate management. Such screening should be customized according to a woman’s age and risk factors. In most instances, it is completed in health care offices, clinics, or hospitals; however, portions of the screening are now being carried out at events such as Community Health Fairs. An overview of health screening recommendations for women older than 18 years of age is found in Table 4-2.

Health Risk Prevention

Often, simple safety factors are forgotten or perceived not to be important; yet injuries continue to have a major impact on health status among all age groups. Being aware of hazards and implementing safety guidelines will reduce risks. The nurse should frequently reinforce commonsense concepts that will protect the individual, such as wearing seat belts at all times in a moving vehicle and protecting the skin from ultraviolet light with sunscreen and clothing.

Health Protection

Nurses can make a difference in stopping violence against women and preventing further injury. Educating women that abuse is a violation of their rights and facilitating their access to protective and legal services constitute a first step. Also, encouraging health care institutions to implement appropriate IPV assessment and intervention programs is needed (Dienemann, Campbell, Wiederhorn, Laughon, & Jordan, 2003). Other helpful measures for women to discourage their fall into abusive relationships are promoting assertiveness and self-defense courses; suggesting support and self-help groups that encourage positive self-regard, confidence, and empowerment; and recommending educational and skills development classes that will enhance independence or at least the ability to take care of oneself.

Numerous national and local organizations provide information and assistance for women experiencing abusive situations. Nurses and victims may find these resources helpful. National resources and hotlines are listed at the end of this chapter. All nurses who work in women’s health care should become familiar with local services and legal options.

<table>
<thead>
<tr>
<th>BOX 4-2</th>
<th>Interventions for Smoking Cessation: The Four A’s</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ASK</strong></td>
<td>• What was her age when she started smoking? How many cigarettes does she smoke a day? When was her last cigarette? Has she tried to quit? Does she want to quit?</td>
</tr>
<tr>
<td><strong>ASSESS</strong></td>
<td>• What were her reasons for not being able to quit before, or what made her start again? Does she have anyone who can help her? Does anyone else smoke at home? Does she have friends or family who have quit successfully?</td>
</tr>
<tr>
<td><strong>ADVISE</strong></td>
<td>• Give her information about the effects of smoking on pregnancy and her fetus, on her own future health, and on the members of her household.</td>
</tr>
<tr>
<td><strong>ASSIST</strong></td>
<td>• Provide support; give self-help materials. Encourage her to set a quit date. Refer to a smoking cessation program or provide information about nicotine replacement products (not recommended during pregnancy) if she is interested. Teach and encourage use of stress reduction activities. Provide for follow-up with a phone call, letter, or clinic visit.</td>
</tr>
</tbody>
</table>

# Table 4.2

## Health Screening Recommendations for Women Aged 18 Years and Older

<table>
<thead>
<tr>
<th>INTERVENTION</th>
<th>RECOMMENDATION*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PHYSICAL EXAMINATION</strong></td>
<td></td>
</tr>
<tr>
<td>Blood pressure</td>
<td>Every visit, but at least every 2 years</td>
</tr>
<tr>
<td>Height and weight</td>
<td>Every visit, but at least every 2 years</td>
</tr>
<tr>
<td>Pelvic examination</td>
<td>Annually until age 70; recommended for any woman who has ever been sexually active</td>
</tr>
<tr>
<td>Breast examination</td>
<td>Initiated or taught at time of first pelvic examination; done monthly at end of menarche</td>
</tr>
<tr>
<td>Self-examination</td>
<td>Every 3 years, ages 20 to 39; annually after age 40</td>
</tr>
<tr>
<td>Clinical examination†</td>
<td>Annually after age 18 with history of premenopausal breast cancer in first-degree relative</td>
</tr>
<tr>
<td>Risk groups</td>
<td>At least annually:</td>
</tr>
<tr>
<td>Skin examination</td>
<td>Family history of skin cancer or increased exposure to sunlight after age 40; every 3 years between ages 20 to 40; monthly self-examinations also recommended</td>
</tr>
<tr>
<td>Oral cavity examination</td>
<td>Mouth lesion or exposure to tobacco or excessive alcohol</td>
</tr>
<tr>
<td><strong>LABORATORY AND DIAGNOSTIC TESTS</strong></td>
<td></td>
</tr>
<tr>
<td>Blood cholesterol (fasting lipoprotein analysis)</td>
<td>Every 5 years</td>
</tr>
<tr>
<td>Papanicolaou test†</td>
<td>Initially, 3 years after becoming sexually active but no later than age 21; yearly with conventional Pap test or every 2 years with liquid-based Pap tests. After age 30 and after three normal test results in a row, every 2 to 3 years; after age 70 and no abnormal test results in 10 years, screening may be stopped</td>
</tr>
<tr>
<td>Mammography‡</td>
<td>Annually over age 50</td>
</tr>
<tr>
<td>Colon cancer screening</td>
<td>Every 1 to 2 years between ages 40 and 49 and annually thereafter</td>
</tr>
<tr>
<td>Risk groups</td>
<td>Fecal occult blood test annually and flexible sigmoidoscopy every 5 years after age 50; more often if family history of colon cancer or polyps</td>
</tr>
<tr>
<td>Fasting blood sugar</td>
<td>Annually with family history of diabetes or gestational diabetes or if significantly obese; every 3 to 5 years for all women older than 45 years of age</td>
</tr>
<tr>
<td>Hearing screen</td>
<td>Annually with exposure to excessive noise or when loss is suspected</td>
</tr>
<tr>
<td>Sexually transmitted infection screen</td>
<td>As needed with multiple sexual partners</td>
</tr>
<tr>
<td>Tuberculin skin test</td>
<td>Annually with exposure to persons with tuberculosis or in risk categories for close contact with the disease</td>
</tr>
<tr>
<td>Endometrial biopsy</td>
<td>At menopause for women at risk for endometrial cancer</td>
</tr>
<tr>
<td>Vision</td>
<td>Every 2 years between ages 40 and 64; annually after age 65</td>
</tr>
<tr>
<td>Bone mineral density testing</td>
<td>All women age 65 and older; younger women with risk for osteoporosis may need periodic screenings</td>
</tr>
<tr>
<td><strong>IMMUNIZATIONS</strong></td>
<td></td>
</tr>
<tr>
<td>Tetanus-diphtheria</td>
<td>Booster is given every 10 years after primary series</td>
</tr>
<tr>
<td>Measles, mumps, rubella</td>
<td>Once if born after 1956 and no evidence of immunity</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>Primary series of three for all who are in risk categories; annual booster if at risk for chronic disease, immunosuppression, renal dysfunction</td>
</tr>
<tr>
<td>Influenza</td>
<td></td>
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</tbody>
</table>


*Unless otherwise noted, the recommended intervention should be performed routinely every 1 to 3 years. |


‡Note: There is no consensus regarding mammograms for women between 40 and 49 years of age; therefore various recommendations are listed. Women are urged to discuss circumstances with their health care providers.
Assumptions include the following:

1. Yes, there is sufficient evidence that preconception counseling is needed.
2. Assumptions include the following:
   a. Assessing for risk factors that can affect pregnancy is an important component of preconception care. Areas that should be assessed include a medical history including illnesses, medical conditions (e.g., diabetes, hypertension, asthma, medication use; a family history including genetic conditions and birth defects; a reproductive history including contraception, gynecologic problems, STDs, and obstetric history; psychosocial history including support system, history of depression, victims of IVP; and environmental history including home and work conditions.
   b. Health promotion activities before pregnancy can prevent or decrease the chances of maternal and fetal complications. These include taking folic acid supplements, exercising and getting sufficient rest, maintaining an appropriate weight, not smoking or abusing drugs, engaging in safer sex practices, obtaining immunizations, getting routine physical examinations, and having existing medical conditions well controlled.
3. The implication for care is to build on Margo’s motivation as evidenced by her questions. Priorities include assessing her health status, particularly in relation to nutrition (e.g., folic acid intake) and exercise, substance use, and stress management; and assessing for risk factors in the medical history, including medications, reproductive history, family history including genetic conditions, psychosocial history, environmental exposure.
4. The critical period of organogenesis is week 3 to week 8 (days 17 to 56 after conception) when all major organs are being formed. Exposure to teratogens (substances or conditions that can cause abnormal development and birth defects) during this period pose a great risk to the developing embryo and can occur because pregnancy often is not confirmed until after an exposure.
5. The woman who is over the age of 35 is at risk for certain conditions that can affect pregnancy. For example, the risk for certain genetic anomalies (e.g., Down syndrome) increases with the age of the woman. Chronic diseases such as cardiac disease or hypertension may increase in severity over time. Older women are at risk for certain pregnancy-related conditions, as well (e.g., gestational hypertension, placental problems, infertility).

Key Points

- The female reproductive system consists of external and internal structures.
- Normal feedback regulation of the menstrual cycle depends on an intact hypothalamic-pituitary-gonadal mechanism.
- The female’s reproductive tract structures and breasts respond predictably to changing levels of sex steroids across her life span.
- The myometrium of the uterus is uniquely designed to expel the fetus and promote hemostasis after birth.
- Prostaglandins play an important role in reproductive functions by their effect on smooth muscle contractility and modulation of hormones.
- Culture, religion, socioeconomic status, personal circumstances, the uniqueness of the individual, and stage of development are among the factors that influence a person’s recognition of need for care and response to the health care system and therapy.
- The changing status and roles of women affect their health, needs, and ability to cope with problems.

COMMUNITY ACTIVITY

Identify and visit resources in your community appropriate for referring the following women. Evaluate the resource in terms of access, costs (insurance, health maintenance organization, Medicaid coverage), confidentiality, and follow-up service. Develop a resource file for each woman’s needs.

| a. A 30-year-old woman who is wheelchair bound who needs a Pap test |
| b. A Spanish-speaking woman who is a victim of IVP (husband) |
| c. A 40-year-old woman who is requesting a mammogram |

Answer Guidelines to Critical Thinking Exercise

Preconception Counseling

1. Yes, there is sufficient evidence that preconception counseling is needed.
2. Assumptions include the following:
   a. Assessing for risk factors that can affect pregnancy is an important component of preconception care. Areas that should be assessed include a medical history including illnesses, medical conditions (e.g., diabetes, hypertension, asthma, medication use; a family history including genetic conditions and birth defects; a reproductive history including contraception, gynecologic problems, STDs, and obstetric history; psychosocial history including support system, history of depression, victims of IVP; and environmental history including home and work conditions.
   b. Health promotion activities before pregnancy can prevent or decrease the chances of maternal and fetal complications. These include taking folic acid supplements, exercising and getting sufficient rest, maintaining an appropriate weight, not smoking or abusing drugs, engaging in safer sex practices, obtaining immunizations, getting routine physical examinations, and having existing medical conditions well controlled.
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history, and support system. After assessment and identification of any problem areas, provide anticipatory guidance, treatment for existing conditions, and referrals if needed.

4. Yes, there is evidence to support providing preconception care (e.g., March of Dimes [folic acid], Healthy People 2010, Association of Women’s Health, Obstetric and Neonatal Nurses).

5. There is a move to provide health promotion and disease prevention information to all women of childbearing age at each health encounter rather than providing preconception care in isolation or as a separate program or clinic. In this case Margo would have holistic care and be better prepared for a desired pregnancy as well as lifelong wellness.

Resources

- Alcoholics Anonymous (for individuals who are alcohol dependent)
  P.O. Box 459
  Grand Central Station
  New York, NY 10163
  212-476-3400
  www.alcoholics-anonymous.org

- Al-Anon (for families of alcoholics); Alateen (for teenage children of alcoholics)
  www.al-anon.org

- Anorexia Nervosa and Related Eating Disorders, Inc.
  www.anred.com

- COCAINE Hotline
  800-COCAINE

- Harvard Eating Disorders Center
  550 Boylston St.
  Boston, MA 02116
  888-826-1188
  www.hedic.org

- Institute for Women’s Policy Research
  1012 E. St., NW, Suite 750
  Washington, DC 20036
  202-786-5100
  www.iwpr.org

- Narcotics Anonymous (for drug abusers)
  888-336-4066

- National Cancer Institute Cancer Information Service
  800-4-CANCER

- National Clearinghouse for Alcohol and Drug Abuse Information
  P.O. Box 1645
  Rockville, MD 20847
  800-729-6686
  www.health.org

- National Coalition Against Domestic Violence
  P.O. Box 34103
  Washington, DC 20043-4301
  202-348-0838
  800-333-SAFE (7233) (hotline)
  (Many states have local coalitions against domestic violence.)

- National Coalition Against Sexual Assault
  912 North 2nd St.
  Harrisburg, PA 17102
  717-232-6771

- National Domestic Violence and Abuse Hotline
  800-799-SAFE

- National Organization for Women (NOW)
  Legal Defense and Education Fund
  99 Hudson St.
  New York, NY 10013-2871
  212-925-6655

- National Ovarian Cancer Coalition
  2335 East Atlantic Blvd., #401
  Pompano Beach, FL 33062
  888-884-7426
  www.ovarian.org

- National Resource Center for Domestic Violence
  800-537-2338

- National Women’s Health Resource Center
  120 Albany St., Suite 420
  New Brunswick, NJ 08901
  973-986-9472
  www.health2women.org

- National Women’s Health Information Center
  The Office on Women’s Health
  Department of Health and Human Resources
  800-994-9662
  www.iowoman.gov

- National Alcohol and Drug Abuse Hotline
  800-222-6813

- The National Center on Women and Family Law
  799 Broadway, Room 402
  New York, NY 10003
  212-674-6220
  (Legal Information)

- Office of Minority Health Resource Center
  P.O. Box 37337
  Washington, DC 20033-7337
  301-587-1938

- Society for Women’s Health Research
  1828 L St., NW, Suite 625
  Washington, DC 20036
  202-232-6224
  www.womens-health.org

- Women’s Cancer Network
  c/o Gynecologic Cancer Foundation
  401 N. Michigan Ave.
  Chicago, IL 60611
  312-644-6610
  www.wcn.org


