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Human Sexuality

Introduction

This section of the **Time Out! For Me** manual is designed to assist you in preparing to present information and lead discussions about sexual and reproductive health issues of concern to women. In addition to the information contained here, you may also want to do further reading. A few references are listed in Appendix A. Most libraries and bookstores will have general textbooks on human sexuality that you may find helpful.

Sessions Four and Five of the **Time Out!** module deal with sexuality and safer sex issues. You may prefer to invite a guest speaker to help you lead these sessions, using the manual as a guide. The following organizations may be able to provide guest speakers or other assistance. Check your telephone book for offices or chapters that serve your area:

- Planned Parenthood or other family planning clinics
- City/County Public Health Departments
- Medical Societies or Physicians Associations
- Nurses Associations
- Hospital Education Departments
- AIDS/HIV Resource and Service Agencies

This Appendix contains a brief, general discussion of women's reproductive health concerns, including information about anatomy, the menstrual cycle and menstrual problems, the Pap test, breast self-examination, vaginal and urinary tract infections, sexually transmitted diseases (STDs), and pregnancy and prenatal care. In the following section, Appendix C, there is additional information about reproduction, stages of prenatal development, human sexual response, birth control, STDs, and a glossary of sexual terminology.

In order to fully control their lives, women must understand their bodies. The rationale behind presenting this material is to help women gain knowledge and appreciation for their bodies as a first step toward improving health and self-esteem.

Reproductive and Sexual Anatomy

A woman's reproductive and sexual anatomy is fascinating and complex. The internal organs are small in size and located below the navel. The **uterus** or **womb** is about the size and shape of a small pear (about the size of a woman's closed fist.) The uterus is lined with a layer of tissue called the **endometrium**, (sometimes called the **endometrial lining**.) The uterus resembles a hollow muscle, lined with the spongy, blood-rich tissue of the endometrium. The function of the uterus is to contain the developing fetus until birth. The endometrium sustains the fertilized egg. After an egg has been fertilized by male sperm it will implant itself in the endometrium and begin to grow.

Extending from either side of the uterus are two hollow, tube-like structures called the **fallopian tubes**. Directly below these tubes are the **ovaries**, which are held in place on either side of the uterus by bands of ligaments. The ovaries have two primary functions: 1) they produce the female hormones **estrogen** and **progesterone**, and 2) they produce and release the female egg cells called **ova**. When the ovary releases an egg, it is collected by the adjacent fallopian tube. The fallopian tube holds an egg cell during fertilization. The egg cell lives about 24 - 48 hours, during which time it may be fertilized by sperm in the fallopian tube. If it is not fertilized, the egg cell simply dissolves.

The lower end of the uterus is called the **cervix**. The cervix is located at the upper back portion of the **vagina**, the elastic, muscular passage that leads to the outer body. The cervix is like the "door" of the uterus. Through the **cervical opening**, sperm pass during intercourse. The menstrual flow leaves the uterus through this opening. Also, during childbirth, the cervical opening stretches to allow a full term infant to pass. The vagina serves to hold the male penis during intercourse so that sperm will be deposited at the opening of the cervix. During childbirth, the vagina becomes the birth canal and stretches to allow the infant to pass through.

The **vaginal opening** is centered within two folds of tissue. The innermost folds are called **minor labia**; the outermost folds are called **major labia**. These "lips," as they are sometimes called, serve a protective function. Directly above the vaginal opening is the **urethral** or **urinary opening** through which a woman empties her bladder. Directly above the urinary opening is the **clitoris**, which is surrounded by a tiny fold of skin called the **clitoral hood**. The clitoris is the center of sexual sensations for the woman. It contains many nerve endings and blood vessels. It is made of the same type of tissue as the male penis. During sexual excitement it fills with blood and swells, much like a tiny penis. The clitoral hood is the equivalent of the male's foreskin.

The Menstrual Cycle

The onset of **menstruation** signals the beginning of reproductive maturity in the female (but not necessarily psycho-social maturity.) Women are born with about 400,000 immature egg cells, called **follicles**, in their ovaries. As a woman enters puberty, her **pituitary gland** increases production of special hormones that influence the ovaries to produce **estrogen and progesterone**. This process usually begins between ages 9 to 15; the actual age is determined primarily by heredity.

As estrogen and progesterone are produced, some of the follicle egg cells in each ovary begin to mature. The lining of the uterus, the **endometrium**, begins to thicken and become rich with blood vessels. When hormone production peaks, an egg cell is released by the ovary and enters the fallopian tube. The release of the egg cell is called **ovulation**. Ovulation is most likely to occur at the midway point in a woman's cycle. If this egg cell isn't fertilized within 24 to 48 hours, it dissolves. Several days later, hormones begin to slow and the endometrium breaks down. Approximately two weeks after ovulation has occurred, this endometrial lining is completely destroyed and is pushed from the uterus, along with blood and other secretions. This is the **menstrual flow**, which can vary from 3 to 7 days in duration. The first day of flow (bleeding) is considered the **first day of the cycle**. Over the next 25 to 35 days, depending on the woman, the cycle will repeat itself. This cycle of increased hormone production, build-up of the endometrial lining, ovulation, decreased hormone production and shedding of the endometrium will continue until a woman reaches **menopause**.

For most women, **menopause**, or the end of menstruation, occurs between age 45 and 55. Menopause is part of the natural aging process for women and is brought on by reduced estrogen production in the ovaries. The exact age that a woman will experience menopause is usually based on heredity. Menopause is a gradual process that may begin in the early forties with a decline in ovulation and estrogen production. The first symptoms are usually irregular periods that become less and less frequent. Eventually menstruation stops altogether and estrogen production diminishes. Estrogen will continue to be naturally produced in a woman's body throughout the remainder of her life in smaller quantities.

These changes in hormones are responsible for many of the physical and psychological symptoms that some women experience during menopause. The most common symptoms include hot flashes, insomnia, depression, and vaginal dryness. The majority of women have only mild symptoms during menopause that cause few or no problems. Some women are helped with estrogen replacement therapy; others choose not to use synthetic hormones. A woman's physician is the best source for information about hormone replacement.

Common Menstrual Problems

Cramping

Many women experience menstrual cramps, which are painful muscle spasms caused by high levels of hormones called **prostaglandins**. Cramping is most common during the first two days of bleeding. A few women may experience cramps that are very intense, causing back pain, dizziness, and nausea. Other women have never experienced menstrual cramping. For the majority of women, cramping is moderate and easily treated with **antiprostaglandin drugs**, such as aspirin or ibuprofen (Advil, Motrin, Nuprin). These are most effective if taken before cramps begin. A doctor should be consulted if menstrual cramping is severe and doesn't respond to treatment with over-the-counter medicines.

PMS (Premenstrual Syndrome)

There are a variety of symptoms that women may experience before their periods. These symptoms may begin one to fourteen days before the first day of bleeding. PMS is usually diagnosed by asking a woman to keep a menstrual calendar for several months. If her symptoms are constant throughout the month, PMS is ruled out. If the symptoms stop on the first day of her period, then PMS is a possibility.

PMS is believed to be caused by hormone fluctuations. Symptoms include weight gain, pain and swelling in the breasts, legs or lower abdomen, food cravings, irritability, tension, headache, moodiness, and depression. In most women, PMS symptoms are mild. Some, however, may experience a combination of severe symptoms.

In most cases, PMS is managed with diet, exercise, and relaxation techniques. It is important for women to recognize that PMS is not “all in your head.” It is equally important to understand that women can take control of their PMS symptoms and manage them. PMS is not a sign of women's frailty, physical inferiority, or inability to perform well in certain jobs. Nor is it an excuse for antisocial behavior. The following suggestions have been shown to relieve PMS symptoms in most women within a few months if strictly adhered to.

Relieving PMS Symptoms

1. Begin and maintain a moderate exercise program (30 minutes of exercise, three times per week.)
2. Avoid salt, caffeine, nicotine, and alcohol.
3. Eat foods that are rich in potassium and B-vitamins, such as bananas, leafy green vegetables, fresh fruits. A daily B-complex vitamin supplement is sometimes recommended.
4. Get plenty of rest. Find ways to reduce stress through relaxation, hobbies, or other enjoyable activities.
5. Drink plenty of water. Six to eight 8 oz. glasses a day is recommended.

Endometriosis

Endometriosis is a condition that is not completely understood. It is caused by tiny patches of the endometrium (the lining of the uterus) that implant outside of the uterus. The exact reason why this happens in some women is not known.

Patches of endometriosis may begin to grow on the ovaries, the fallopian tubes, the outside wall of the uterus, the bowel, or other locations in the abdominal cavity. This tissue behaves exactly like the lining of the uterus — under the influence of hormones it thickens and bleeds each month. Over time, these patches form scar tissue and adhesions. Endometriosis may cause infertility in some women. It also may cause abdominal pain, severe cramping, pain during intercourse, and cysts on the ovaries.

Endometriosis requires diagnosis and treatment by a physician. Treatment may involve hormones or surgery. In hormonal treatment, a woman is given special hormones that stop the normal functioning of the ovaries for several months. This treatment causes temporary menopause, during which time normal hormone production slows down. Because endometriosis is sustained by the menstrual cycle, this temporary menopause gives the patches time to shrink and dissolve. Once the hormone treatment is finished, a woman will return to her normal hormonal functioning and the “menopause” symptoms will end. Another treatment involves surgery to remove the patches and scar tissues. Today, newer techniques such as laser surgery are sometimes used. Unfortunately, with both treatments, endometriosis is likely to reoccur. If the condition becomes severe, a hysterectomy is sometimes recommended.

Reproductive and Sexual Health

Women's reproductive organs are internal (inside the body) and complex, and therefore require specific types of health care. Physicians and clinicians who specialize in women's health are good sources of information and care.

Pap Test

Women should have a **pelvic examination and Pap test** at least once a year. During a pelvic examination, the clinician checks the reproductive organs for irregularities by feeling the size and position of the uterus, fallopian tubes, and ovaries. This examination can help locate cysts or other growths on the reproductive organs. The Pap test, usually performed as part of a pelvic examination, involves taking a sample of cells from the **cervix** and **vagina** for examination under a microscope. The Pap test can detect small changes in cell structure that may be a very early indication of cancer risk. Today's technology allows for some of these **precancerous** conditions to be treated in a physician's office before they become a problem. The Pap test may also help detect infections of the cervix (such as **cervicitis**, which may be caused by a number of different types of bacteria or viruses.)

Infections

There are two common infections that women are prone to develop — **urinary tract infections (bladder infections) and monilia/candida (yeast infections.)** A bladder infection, sometimes called **cystitis**, is caused by bacteria. Because a woman's **urethra** (the tube that lead from the bladder) is only about two inches long, it is easy for bacteria to colonize in the bladder. Symptoms include abdominal pain, a sense of needing to urinate frequently, and a sensation of deep burning or stinging after urination. The urine may be cloudy and tinged with blood.

Often, a woman can treat herself by drinking large quantities of water and fruit juices. If symptoms continue for more than 48 hours, a physician should be consulted. Antibiotics will usually clear the problem within a few days. It is very important to seek treatment because, in some cases, the infection may spread to the kidneys. Women can help avoid urinary infections by drinking plenty of water everyday, urinating after intercourse to push out any bacteria that may have entered the bladder, and by always wiping from front to back after using the toilet. (This helps prevent bacteria from the rectum from being pushed into the urinary opening.)

Yeast infections are caused by a yeast-like fungus that is normally present in small amounts in the mouth and vagina. A small amount of yeast in the vagina is healthy. However, under some conditions, the yeast begins to overgrow. This may cause itching, burning, and redness around the vagina and labia. There may also be a thick, white discharge that resembles cottage cheese. Fortunately, there are now several creams that are sold over-the-counter to treat yeast infections. A pharmacist can provide information.

Yeast infections may be caused by a number of factors, and generally have nothing to do with hygiene. Birth control pills, pregnancy, diabetes, exhaustion, stress, and taking certain antibiotics can all lead to yeast infections in some women. Almost anything that has an impact on body chemistry can precipitate a yeast infection. Treatment aims to reduce the amount of yeast in the vagina, but not eliminate it altogether. Women who have persistent yeast infections should consult a physician.

Sexually Transmitted Diseases

Sexually transmitted diseases (STDs) are very common in the United States, affecting an estimated 25 million people a year. One out of four adults between ages 15 and 55 is infected with some type of STD.

The recent widespread concern over HIV and AIDS seems to have diminished concern about other STDs. Women are especially vulnerable to certain STDs such as gonorrhea and chlamydia, because in 80-percent of women these diseases cause no symptoms. Over a million women a year suffer from **pelvic inflammatory disease** or **PID**, a painful and sometimes life threatening infection of the uterus, fallopian tubes, and ovaries. PID is most frequently caused by untreated gonorrhea or chlamydia. PID can result in sterility, chronic pelvic pain, and other health problems. Treatment involves massive doses of antibiotics and may necessitate hospitalization or surgery.

Sexually active women with more than one sexual partner should be encouraged to request STD screenings when they have their annual Pap test. Women with multiple partners, such as women in the sex trade, would benefit from more frequent screening. Many women mistakenly assume that their doctor or clinician can detect STDs without tests. This is not true. Each STD requires a specific test to check for its presence. Fortunately, many of these diseases can be treated with antibiotics.

People often react to STDs with fear and shame, based on the belief that these diseases mark a person as being “dirty,” or “unclean.” In reality, these diseases are no more “dirty” than any others. The organisms that cause most STDs require a warm, moist environment in order to survive. The genital tract in human beings simply provides the correct environment for these organisms. The mode of transmission involves direct contact, therefore sexual activity becomes the mode of transmission. Our society’s discomfort with STDs is most likely reflecting its discomfort with sexuality.

Most STDs are spread by people who have no idea that they are infected. Many STDs cause no symptoms for months or sometimes years. In other cases, the symptoms are vague and mild and don’t arouse suspicion. It is important to help people get beyond fear and shame and to seek treatment if they suspect exposure to any STD. It is important to discuss STDs with clients in a matter-of-fact style that is nonjudgmental. Given the epidemic of STDs in this country, it is obvious that people from all walks of life are affected. A recent study found 25% of college women using the school’s health center tested positive for chlamydia. Often just hearing the statistics and understanding the widespread prevalence of STDs may help women seek testing and treatment.

Condoms, including the new “female condom,” are an effective way to lower the risk of STDs, including HIV/AIDS. In addition, reducing the number of sexual contacts can help reduce the chance of exposure to an STD. Information about symptoms and treatment for the most common STDs is contained in Appendix C of this manual.

Pregnancy and Prenatal Care

Pregnancy occurs when a fertilized egg **implants** in the **endometrium** (lining) of the uterus and begins to grow. When an egg cell is released by the ovary, it may be fertilized in the **fallopian tube** by a sperm cell. The release of the woman’s egg usually happens mid-cycle (3-15 days after her last period and about 14 days before her next period.) If the egg is fertilized it travels down the fallopian tube into the uterus, a journey that takes about five days. Once **implantation** has occurred, the woman’s body will begin producing increased amounts of hormones to sustain the pregnancy.

Most **pregnancy tests** available today are able to accurately detect pregnancy within a week of a missed period. Pregnancy tests are based on the presence of special hormones that are produced once the embryo has implanted. These hormones can be detected in a woman's blood and urine. If a sexually active woman who is able to conceive misses her period, a pregnancy test should be considered. There are many things that may cause a woman to have a missed or delayed period. However, since the early stages of pregnancy are extremely critical for the developing fetus, a pregnancy test is recommended so that a woman can begin prenatal care if she chooses to continue the pregnancy.

After implantation has occurred, the **placenta** begins to form. This is specialized tissue that is filled with blood vessels and serves to connect the fetus to the mother via the **umbilical cord**. Through these structures the fetus gets nutrition and oxygen from the mother, and wastes from its body are removed. The placenta grows as the fetus develops. After an infant is born, the placenta is expelled and is usually referred to as "afterbirth."

The first 12 weeks of pregnancy are a critical time for the development of the brain and other organs. During this time, drugs, alcohol, and diseases such as German Measles are most likely to seriously damage the fetus.

A pregnant woman should be concerned about over-the-counter medications, in addition to illegal or street drugs. The best advice is to consult a physician before taking any drug, even aspirin, when pregnant. Some women believe that the fetus is naturally protected from drugs and other substances that the mother might take. This isn't true. The function of the placenta is limited, and many drugs, including alcohol, can reach the fetus and cause damage at any stage of pregnancy. Smoking cigarettes also has an impact on the fetus and may retard its growth. Babies born to women who smoke may weigh less than babies born to women who don't smoke. Cigarettes also seem to increase the chances of miscarriage, and for women with high blood pressure, the chances of having a stroke during delivery.

Babies born to women addicted to heroin or methadone will also be addicted and must go through withdrawal. Cocaine and amphetamines may increase the mother's blood pressure and may cause brain or cardiovascular damage to the fetus. In addition, for women who inject drugs, there is the added risk of contracting the AIDS virus (HIV) which can be fatal to both mother and infant.

Breast Health and Breast Care

For women, breast cancer is a leading cause of death. One in nine American women will develop breast cancer. Each year, over 150,000 women are diagnosed with the disease and 45,000 die. Men can also develop breast cancer, although it is considered rare. Each year about 300 men die from the disease.

Given these statistics, it is important for women to learn and to practice monthly **breast self-examination (BSE)**. This technique involves looking at and feeling the breasts and underarm areas in a systematic manner. Ninety percent of breast lumps are discovered by women themselves. A doctor or clinician may examine a woman's breasts once a year, but this is no guarantee that a problem will be discovered. The monthly breast exam helps a woman be in control of her own health. It is important to remember that not all lumps are cancerous. In fact, only one in five lumps turn out to be malignant. Most breast lumps are caused by **fibrocystic disease**, inflamed milk ducts or scar tissues. Fibrocystic disease is very common. It is caused by small cysts in the breast that become swollen and tender, especially right before menstruation. Many women with fibrocystic disease get relief by avoiding caffeine.

There are three steps to breast self-examination:

1. Visual inspection of the breasts and surrounding tissue in the mirror while standing;
2. Manual examination while standing; and
3. Manual examination while reclining.

While performing these manual and visual inspections, a woman is looking for any of the following symptoms:

- ❖ Lumps, or areas that feel thickened or hard
- ❖ Unusual shape or contour of the breast
- ❖ Increase in size of one breast
- ❖ A dimpling, scaling, or puckering in the breast or nipple
- ❖ Any change in the skin or skin texture of the nipple
- ❖ A sore on the nipple; bleeding or discharge from the nipple
- ❖ Swelling in the upper arm or the lymph nodes under the arm

Monthly Breast Examination

The following is a recommended procedure for monthly breast examination. Women should be encouraged to find the routine that is most comfortable for them, and to practice it every month about five or six days **after** the menstrual period. (Breasts are often too tender and swollen right before menstruation for proper examination.) Women who no longer menstruate should establish an easily remembered day (such as the first of each month) as their breast exam day. During the examination, women should be looking for the symptoms discussed previously.

Instructions

1

Stand in front of a mirror undressed from the waist up. Let your arms hang at your sides and look carefully at your breasts. Raise your arms above your head and study the breasts again. You are looking for any change in size, shape, or angle of the breast, along with any unusual skin texture, dimples, puckers, or sores. Place your hands on your hips and tighten your chest muscles; continue to inspect for changes.

2

Raise one arm and place it behind your head. Using the opposite hand, gently examine the breast. (For example, use the left hand to examine the right breast and the right hand to examine the left breast.) Many women prefer to do this step in the shower. Use the flat part of the middle three fingers to do the examinations, and keep the fingers straight. Avoid pushing or punching with the fingertips; instead, concentrate on using the fingers to create a wide, flat surface. Imagine the breast area to be a pie. Divide it in fourths, and carefully examine each segment, using a gentle, circular motion. Go over the breasts twice; first using a light superficial pressure to examine the tissue just beneath the skin, and then using a deep, firm pressure to examine the inner tissues all the way to the ribs. Examine the entire area, from the collarbone to the bottom of the breast, extending down under the armpit and upper arm area. You are feeling for lumps, thickenings, or hardened areas. Gently squeeze the nipple and surrounding tissues to check for any unusual discharge. Repeat this procedure for the other breast.

3

Lie down and repeat the procedure described above, making sure to examine all areas with both light and deep pressure. It is helpful to place a pillow or rolled towel under the shoulder of the breast that is being examined. Pay attention to the armpit and collarbone areas.

Women should be encouraged to consult a physician if they discover a lump, hardened area, discharge, or change in skin texture. The odds are favorable that the problem is not cancerous, but it should be checked immediately.

For some lumps or hardened areas it is routine for the physician to order a **biopsy**, which involves removing a small amount of the lump or irregular area for a microscopic examination. In addition, doctors may also order a **mammogram**, or breast X-ray to help with diagnosis. **Mammography or mammograms** are low-dose X-rays that are quick and fairly simple to perform. They can detect tiny changes in the breast tissue, often detecting lumps that are too small to be felt.

The American Cancer Society recommends that women have a baseline mammogram at age 35, and beginning at age 40, mammograms every 1 to 2 years. After age 50, mammograms are recommended annually.

Breast cancer treatment may involve surgery, radiation, chemotherapy, and/or hormone therapy. Usually two or more types of treatment are used together, depending on the type and location of the tumor, and whether it has **metastasized**, or spread to other parts of the body. Breast tumors that are found early and that have not spread have the greatest chance of being treated successfully. For this reason, monthly breast self-examination and mammography are important healthcare considerations for all women.

