ALTERED MALE REPRODUCTION

Many issues that come with altered male reproduction can profoundly affect both functional ability and the psychological state of the client. The concepts of client education, counseling, and therapeutic communication are essential nursing tools for promoting the health and optimal well-being of the male client with altered reproduction.

A 55-year-old client whose father died of prostate cancer is the most appropriate client to recommend a PSA laboratory test for.

After turning 50 years old, men have a higher risk of benign prostatic hyperplasia (BPH). Therefore, screening is recommended for men over 50 years old with a family history of BPH, who are obese and lack physical activity.

A client who just had their prostate removed would not be at risk.

Those with testicular cancer would not require a prostate assessment.

A circumcised penis does have a reduced incidence of prostate cancer by about 18%, but it is not a greater risk than a male client over 50 years old with a family history of BPH.

Before prescribing medication, **current medications must be taken into consideration** in order to examine drug interactions and risks/benefits.

Once the medication is deemed safe, the nurse can discuss the additional sexual history and then review potential side effects. Without collecting additional history, the nurse cannot state that the client is not a candidate.

Prostate specific antigen (PSA) testing typically begins with male clients around 50 years old.

Blood in the urine and increased urinary frequency can be a sign of prostate issues. Upon reaching puberty, testicular exams should be started. Not every client around 50 years old has erectile dysfunction (ED), so offering a prescription would not be a standard unless additional information is collected during the visit.

ANALYZING CUES: WHERE TO START

There are different factors that can impact a male client's reproductivity. Medications, disease processes, and aging can all create changes to the client's reproductive functionality. A comprehensive assessment and recommended testing may identify either an acute or chronic process that impacts their overall well-being including reproductivity.

When discussing the concept of altered male reproductivity with the client, other concepts like pain, libido problems, erectile dysfunction (ED), or psychosocial concerns need to be included. Consider the specific risk factors below, which place a client at risk for this dysfunction.

PAST MEDICAL HISTORY:

- prostate cancer
- testicular cancer
- infections (prostatitis)
- priapism
- sexually transmitted infections
- diabetes
- hypertension
- obesity
- cardiovascular disease

DRUGS OR MEDICATIONS:

- antihypertensives
- tricyclic antidepressants
- alcohol abuse
- illicit drug use

PSYCHOSOCIAL CONCERNS:

- depression
- anxiety
- stress

In addition, there are common barriers for men to receive care or education on male reproductive health for dysfunction due to the negative stigma associated with male sexuality and reproduction. Many men delay seeking treatment due to this concern, or they do not feel comfortable discussing their problems. Remind the client that confidentiality will be maintained.

Use therapeutic communication techniques, being mindful not to belittle or “feel sorry” for the client. The interprofessional care team should provide a support system and accurate information, so the client can make a well-informed decision about their care and outcomes. Nurses should also assess their own comfort in discussing these topics, so their own biases are not displaced onto the client.

DIAGNOSTICS AND VACCINATIONS

There are many different screening agents used to help decipher issues or concerns in relation to male reproductive health. Let’s explore some of the most common diagnostics and vaccinations, and why they are so important to this population.

Testicular Self-Exam (TSE)
Monthly TSEs are the most reliable method for the early detection of testicular cancer. Clients should be educated to examine their testicles monthly for any changes in size, shape, or consistency. The American Cancer Society (2018) recommends that men should start to include TSE in their monthly routines after

puberty. The best time for the client to perform the self-exam is during or after a bath or shower when the skin of the scrotum is relaxed.

A good rule of thumb to help clients not forget? Perform the TSE on the same numerical date of their birthday to keep consistent. (So, if the client's birthday is February 17th, perform the TSE on the 17th of every month.)

Prostate-Specific Antigen (PSA)

A blood test drawn to screen for prostate cancer. This value may also be elevated in clients who have benign prostatic hypertrophy (BPH) because PSA is released into the bloodstream by both benign and malignant prostate cells.

According to the American Cancer Society (2020), discussions about prostate cancer screenings should occur at:

- age 50 for men who are at average risk of developing prostate cancer
- age 45 for men who are at high risk of developing prostate cancer (African Americans, men who have a first-degree relative diagnosed with prostate cancer under 65 years old)
- age 40 for men at an even higher risk of developing prostate cancer (those who have more than one first-degree relative diagnosed with prostate cancer before the age of 65)

Digital Rectal Exam (DRE)

A physical exam completed by the healthcare provider to estimate the size, symmetry, and consistency of the prostate. Abnormalities will be seen in disease processes such as prostate cancer or benign prostatic hypertrophy (BPH) as the prostate will be enlarged, rubbery, and smooth.

Transrectal Ultrasound (TRUS)

Generally used to diagnose prostate tumors, a transrectal ultrasound (TRUS) allows for accurate assessment of prostate size and can help distinguish benign prostatic hypertrophy (BPH) from prostate cancer.

Human Papilloma Virus (HPV) Vaccine Series

The human papilloma virus (HPV) vaccine is a series recommended for everyone through the age of 26 to protect against HPV-related infections and cancers (CDC, 2020).

Recommendation	Client	Reason
Human Papilloma Virus (HPV) Vaccine Series	16-year-old male client at a yearly wellness visit	The HPV vaccine should be started before a client becomes sexually active, to minimize the

Recommendation	Client	Reason
		spread of HPV.
Testicular Self-Exam (TSE)	13-year-old male client just starting puberty	Testicular exams should be started right after puberty since testicular cancer is the most common cancer found in young male clients.
Prostate-Specific Antigen (PSA)	40-year-old African American male client with a family history of prostate cancer	African American men are at higher risk of prostate cancer at an early age, especially when a family history is present.
Digital Rectal Exam (DRE)	50-year-old male client with a slow urine stream	A DRE can help screen for prostate cancer and also provide information on prostate size for conditions like benign prostatic hypertrophy.
Transrectal Ultrasound (TRUS)	65-year-old male client with an unexplained PSA elevation	A transrectal ultrasound is best used as a secondary screening exam on a client with suspicions of prostate cancer.

PREVENTATIVE CARE

We know that with aging comes changes to different body systems and functionality. Changes occur with advanced age, including decreases in testosterone levels and sperm production, and an increase in prostate size. However, not all dysfunction is related to nonmodifiable risk factors. There is a correlation between men's reproductive health and modifiable risk factors.

What are some of the modifiable risk factors?

MODIFIABLE RISK FACTORS FOR MEN’S REPRODUCTIVE HEALTH:

- obesity
- smoking
- alcohol/illicit drug use
- hypertension
- cardiovascular disease

As you can see, these modifiable risk factors can be managed and need to be taught to the client. Providing physical assessments and encouraging clients to have their yearly visits with healthcare providers will allow opportunities to counsel clients about preventative healthcare, which helps decrease the risk of developing altered reproduction.

While sexual health and function is not a topic that is comfortable for everyone to discuss, it is still an important part of overall client well-being. Having trusting relationships between the client and the healthcare team can increase the chances of positive outcomes. It would also be prudent to discuss safe sex practices with clients, including condom usage, to decrease their risk of developing a sexually transmitted disease (STD).

ANALYZING CUES: ERECTILE DYSFUNCTION

Let's take a closer look at a common alteration in male reproduction. Erectile dysfunction (ED), or the inability to attain or maintain an erection, is significant. More than 10 million men in the United States are thought to have ED. Understanding this, it is imperative for nursing staff to be willing and able to address ED. While sexual function is sometimes a topic that is uncomfortable for people to discuss, it could be an indication of other growing health concerns. It is common for younger men who seek care for their ED to be diagnosed with diabetes, hypertension, depression, or cholesterol abnormalities during their evaluation.

Common Risk Factors

- Drug-induced (alcohol, marijuana, nicotine, antihypertensives, tricyclic antidepressants)
- Endocrine concerns (obesity, diabetes)
- Previous cerebrovascular disease
- Anxiety, stress, depression
- Peripheral vascular disease (PVD)
- Aging
- Renal failure
- Post radical prostatectomy

Impact to Male Health

- Cause great distress in his interpersonal relationships
- May interfere with his concept of himself as a man
- Potentially affect relationship with his partner
- May lead to depression, anger, or anxiety

Interprofessional Care

- Goal of erectile dysfunction (ED) therapy is for the client and their partner to achieve a satisfying sexual relationship
- Treat the underlying cause of ED
- Clients with ED need a great deal of emotional support for both him and his partner

- Medication therapy
    - Erectogenic drugs (such as sildenafil) cause smooth muscle relaxation and increased blood flow into the corpus cavernosum, promoting penile erection.
    - Taken orally before sexual activity
    - Remind client to not take nitrates along with erectogenic medications as they can increase the hypotensive effects

- **Vasoactive drugs along with intraurethral devices enhance blood flow into the penile arteries.**
- Vasoactive medications are given as a topical gel, injection, or a pellet into the urethra. Some examples include papaverine, alprostadil, and phentolamine.
- Erectile dysfunction is common in men with diabetes. It causes early and severe hardening of the arteries. Problems with the nerves controlling erections are also often seen in men with diabetes.
- **Discuss stress levels and relationship status.** Some clients have performance anxiety, which is often caused by stress, so assessing for mental health needs should be part of the teaching plan.
- A drainage device is not part of a treatment plan.
- Erectile dysfunction will not resolve on its own.

TAKING ACTION

Review the common cues seen in clients with altered male reproductivity and consider what types of nursing diagnoses and actions can help drive care for the client's overall well-being.

IMPAIRED SEXUAL FUNCTIONING:

Nursing Actions

- Identify current stress factors.
- Establish a therapeutic client/nurse relationship to foster trust.
- Provide information to promote informed decision-making.
- Assist the client or their partner to identify alternative ways of sexual expression.

ACUTE PAIN:

Nursing Actions

- Obtain an accurate assessment of the client's pain including duration, location, quality, and intensity.
- Encourage the use of diversional activities (e.g., watching television, music, etc.) and provide comfort measures as appropriate.
- Review procedures or expectations to decrease fear of the unknown and potential muscle tension.
- Accept the client's description of their pain.

ANXIETY:

Nursing Actions

- Review medications (both prescribed or over-the-counter) as some can heighten the feeling or sense of anxiety.
- Be available to listen to the client.
- Acknowledge anxiety or fear, and do not provide false hope or reassurance that "everything will be okay."
- Provide nonpharmacologic comfort measures.

SITUATIONAL LOW SELF-ESTEEM:

Nursing Actions

- Identify and create support systems.
- Assess negative attitudes or self-talk.
- Use active listening skills to understand the client's concerns without judgment.
- Help the client problem-solve and develop a plan of action to enhance commitment to a follow-up plan.

DISTURBED BODY IMAGE:

Nursing Actions

- Encourage the client and their partner to communicate feelings to each other .
- Acknowledge the client's feelings of grief, hostility, and anxiety.
- Assist in the treatment of the underlying problem if applicable.

Nursing Actions	Nursing Diagnosis
The nurse will assist the client and their partner to find alternative activities for sexual expression.	impaired sexual function
The nurse will acknowledge the client's fears and suggest stress-reduction strategies, including mindfulness, meditation, and decreased environmental stimuli.	anxiety
The nurse will recommend pharmacologic and non-pharmacologic pain relief techniques, including warm baths, loose-fitting clothes, and over-the-counter or prescription analgesics.	acute pain
The nurse will review and acknowledge the client's strengths and accomplishments.	situational low self-esteem
The nurse will encourage the client to openly communicate and acknowledge their grief, hostility, or anxiety.	disturbed body image

SEXUALLY TRANSMITTED INFECTIONS IN MALE REPRODUCTIVE HEALTH

There are several different types of infections that can be transmitted by sexual intercourse or, in some cases, sexual contact. The best prevention of these infections is condom use for any type of sex including vaginal, oral, or anal sex. Below are some common infections that clients can avoid.

Gonorrhea: This is a common infection spread by sexual intercourse. Cues in a male client include pustular drainage from the penis and dysuria.

Chlamydia: This condition is commonly seen alongside clients with gonorrhea but can also be an isolated infection. In men, the most common cues of this infection include dysuria. Untreated chlamydia can lead to infertility.

Syphilis: This is transmitted by sexual contact. The most common cues of syphilis is a painless sore on the shaft of the penis. Inspection for this sore aids in early detection, and condom use is a preventive strategy to avoid this infection.

Human immunodeficiency virus (HIV): There are no cues or assessment findings that indicate HIV infection. This is spread through sexual contact or blood- to-blood contact anywhere on the body. Because anal intercourse may cause more bleeding or there may be open sores inside the mouth, there is an increased risk of HIV transmission. Using protective barriers including condoms is essential to prevention of spread.

Human papillomavirus (HPV): This virus is invisible on male genitalia; however, it is the prime cause of cervical cancer in women. Men can carry and spread this condition unless they are vaccinated before getting the virus. This is why early vaccination before the first sexual encounter is important.

Herpes simplex virus type 1 (HSV-1) and Herpes simplex virus type 2 (HSV-2): Although HSV-1 is more often transmitted orally and HSV-2 by sexual contact, either virus can cause infection where contact with skin or mucous membranes occurs. For this reason, people with active HSV-1 or HSV-2 infections should avoid direct contact of active lesions with other areas of their bodies and other people. For example, a condom should be worn during oral sex to prevent transmission of both strains of HSV. Cues that someone has an active HSV infection include a "cold" sore that is extremely painful and appears on mucous membranes including the lip, mouth, penis, or vagina.

In men, **human papillomavirus (HPV) is usually not symptomatic** but can be spread with each sexual encounter.

It is therefore important to wear a condom with any type of sexual encounter to reduce the risk of sexually transmitted infection transmission. Alcohol and stress can reduce the possibility of an erection. Doing testicular self-exams is essential for any male after puberty.

COMMON MALE REPRODUCTIVE HEALTH CONDITIONS

There are different types of male reproductive health conditions that need to be addressed in a healthcare setting. Here are a few of them.

PROSTATITIS:

This is an inflammation of the prostate caused by irritation or infection. Cues on assessment include pain from sitting or having a bowel movement.

Often, antibiotics may be required for treatment, which can sometimes last more than a month.

EPIDIDYMITIS:

Inflammation of the epididymis can appear as a red or swollen scrotum with testicular pain or tenderness, usually on one side. Pain from urination, discharge from the penis, or blood in the semen can be symptoms as well. It is not uncommon for ejaculation to be painful.

TESTICULAR TORSION:

This is an emergent condition where the spermatic cord is twisted above the testicle, causing almost immediate severe pain and swelling. Because the testicle has a reduced or no blood supply when testicular torsion occurs, without immediate treatment, it could result in the death of the testicular tissue. Treatment is immediate surgery.

PARAPHIMOSIS AND PHIMOSIS:

It occurs when the foreskin in an uncircumcised male is neither retractable (phimosis) nor retracted (paraphimosis) and not movable. Both paraphimosis and phimosis cause a painful decrease in circulation of the glans penis and may require surgical intervention in some cases. Cues include penile pain in an uncircumcised male client.

Tobacco use, increased stress, and **hypertension** are common risk factors leading to erectile dysfunction.

Weight loss and increased physical activity may help decrease erectile dysfunction.

Important assessment findings include **round red lesions** on the glans penis, **a pain level of 6**, being **sexually active**, and **giving/receiving oral sex** with **multiple partners**.

The gender of Joe’s partners and the circumcised penis are not important findings. Vital signs are within normal limits.

The client is most likely experiencing a **viral** infection caused by **herpes simplex virus** and **unprotected oral sex** with multiple partners. The human simplex virus can cause painful genital lesions.

Fungal and allergic infections do not create painful genital lesions. No cues or assessment findings indicate HPV, HIV, allergic, or fungal infections.

Uncontrolled blood glucose levels do not apply as the client does not have a history of diabetes mellitus. The client also does not have anxiety per history.

- Failure to protect tissues from injury or infection could lead to complications in the client's reproductive health, so **altered tissue integrity is the top priority**.
- **Acute pain** is important but will need to be addressed after tissue integrity.
- The **risk for infection** is high, due to the client's assessment findings.
- There is no indication from assessment findings that the client is anxious or has a disturbed body image.

Potential Prescription	Anticipated	Not Anticipated	Rationale
Acyclovir 400 mg po three times a day for 10 days	X		Antiviral medication; safe dose and route. Antiviral therapy relieves an exacerbation of genital herpes or prevents them from getting worse.
Acetaminophen 500mg po every 4-6 hours PRN pain	X		Analgesic; safe dose and route for pain management.
Administer ceftriaxone 500mg IM single dose		X	Ceftriaxone is an antibiotic used to treat sexually transmitted bacterial infections (e.g., gonorrhea), not viruses.
Apply hot compresses once daily to reduce swelling		X	Heat can exacerbate pain and inflammation.
Administer fluconazole cream twice a day to the genital area		X	Fluconazole, an antifungal, is used to treat fungal infections (e.g., yeast infections), not viral infections.

A: For altered tissue integrity, teaching the client to keep the lesion covered is part of infection control measures.

B: For acute pain, using pharmacologic and non-pharmacologic interventions will help decrease acute pain.

D: Abstaining from sexual activity until the sore is gone will reduce the risk of infection.

- Condom use and abstaining from sexual activity until the sore is gone will reduce the risk of infection.
- The nurse would teach the client condom use during any sexual activity, not specific to oral intercourse. There is no evidence to suggest the client is grieving, hostile, or anxious.

The sore is completely gone on assessment. Joe is currently using proper infection control measures. Pain assessment shows a decreased intensity from 6 to 2 on the pain scale. Joe is taking his prescribed medication and has abstained from sexual relations. **All three goals have been met.**

The dosage of Acyclovir should be at least **400mg**. No other errors were noted.

The nurse must be accepting, empathetic, and non-judgmental to clients who disclose concerns regarding sexuality. This can happen only when the nurse has reconciled and accepted their feelings and beliefs related to sexuality.

Content knowledge and experience can increase sensitivity. Nurses who can communicate effectively and teach using appropriate terminology with clients demonstrate sensitivity.

The nurse should never share their personal opinions about sexuality.

ALTERED FEMALE REPRODUCTION

Female reproductive health focuses on health promotion and disease prevention, and requires a holistic approach. Systematic assessments and recommended screenings may prevent both acute and chronic conditions. The role of a nurse includes anticipatory guidance and client teaching.

To gain a deeper understanding of altered female reproduction, students need to review normal female reproductive anatomy and the menstrual cycle, including associated female hormones.

Screening Procedure	Purpose	Reason
Mammography	To detect breast lumps before they become palpable	Mammograms identify early signs of breast cancer.
Breast self-exam	To assess breasts so that women become comfortable with their normal appearance and feel	Breast self-examination involves women examining their own breasts to learn about the normal appearance and feeling of breast tissue so that abnormalities may be detected early.
Pelvic exam	To confirm that no reproductive disease exists or for early detection of any	Pelvic examinations are performed by healthcare providers to assess for abnormalities of the vulva, vagina, cervix, fallopian tubes, ovaries, and

Screening Procedure	Purpose	Reason
	reproductive disease	uterus.
Bone density scan	To detect bone-related health problems in women at risk for osteoporosis	Bone density scans estimate the density of the bones, specifically the hips and spine, using a central dual energy X-Ray absorptiometry (DXA) machine to diagnose osteoporosis.
Clinical breast exam	To detect concerning abnormalities through physically examining the breast by a healthcare provider	Clinical breast examinations are conducted by a healthcare provider to detect early signs of breast cancer.
Papanicolaou (Pap) Test	To detect cancerous cervical cells	Pap testing is conducted by a healthcare provider to screen for cervical cancer.

Menopause, or the end of menstruation, is characterized by declining levels of estrogen. In response to declining estrogen, the labia becomes thin and pale (**decreased skin elasticity**), vaginal mucosa atrophies, and vaginal tissue loses lubrication. Sexual intercourse may become painful, and the vaginal mucosa is more susceptible to bacterial invasion.

Additionally, the absence of estrogen is associated with increased low-density lipoprotein (LDL) cholesterol levels, decreased high-density lipoprotein (HDL) cholesterol levels, and more bone resorption (**decreased bone density**) than formation. As estrogen levels decline, follicle-stimulating hormone (FSH) increases as the body attempts to correct the problem.

According to American Cancer Society (2020), women ages 40–44 may begin annual mammography if they desire, but they should at least have had one baseline mammogram performed. Women ages 45–54 should have an annual mammogram. **Women ages 55 and older should have a mammogram at least every other year** but can continue yearly screening if they desire. Screening per the recommendations should continue if the woman is in good health and is expected to live 10 years or longer.

REPRODUCTIVE HEALTH GOALS

Menopause is the most common cause of osteoporosis in women. Approximately 14% of women ages 50 to 59 years experience low bone density, increasing steadily to a rate of 70% of women ages 80 years or older (Bellantoni, n.d.).

Healthy People 2030 (Office of Disease Prevention and Health Promotion, n.d.) includes several goals that address women's health, including goals to decrease breast cancer deaths, reduce the incidence of gonorrhea, chlamydia and syphilis infections, and prevent fractures and disabilities related to osteoporosis.

BARRIERS TO FEMALE REPRODUCTIVE CARE

Access to quality healthcare varies greatly. Barriers to female reproductive care include, but are not limited to, the following:

- **Inability to pay** is the leading reason that women do not seek medical services.
- Many women do not seek care due to a **lack of trust**.
- **Cultural differences** must be addressed with sensitivity and respect. Healthcare providers are in an excellent position to provide culturally competent care.
- **Language barriers** further distance clients from providers of care, and even with the use of a translator, misinformation can still occur.
- **Religious practices** must be considered in the plan of care, such as with the use of birth control and medical treatments like blood transfusions.
- **Gender issues and sexual orientation** create barriers.
    - Many women prefer a female healthcare provider to address reproductive health concerns.
    - Members of sexual- and gender-minority groups may feel stigmatized and reluctant to seek health services or disclose their sexual orientation. Healthcare providers must attempt to understand the client's specific health needs and issues related to their sexual orientation, without assuming that all clients are heterosexual.

REPRODUCTIVE HEALTH ACROSS THE LIFESPAN

Maintaining optimal health is a goal for all women. When considering a holistic approach to care, physical, mental, emotional, social, and spiritual health must be considered. Age-specific assessment and screening with teaching that emphasizes maintenance and enhancement of wellness are crucial. As the female progresses through the life span, many conditions are age-related. Considering the leading causes of death in women, prevention of cardiovascular disease, cancer, and other diseases, as well as promotion of mental health are important components of women's healthcare.

Reproductive Health Across the Lifespan

During the **childbearing years**, conditions that increase a woman's health risks may also affect a fetus during pregnancy. Prenatal care is an example of illness

prevention that is practiced during conception. Still, it is important to remember that optimal health should be achieved before conception to reduce risks.

Adolescents strive to establish identity and sexual orientation, while emancipating from family. Their progressively changing and developing body can cause emotional stress, and the nurse must be sensitive to the needs of a teenage girl. Most young girls enter the health care system for contraception or due to a reproductive concern. Gynecologic problems are often associated with the menses (dysmenorrhea and irregular bleeding), sexually transmitted infections, or pregnancy. Many teenager girls do not seek routine screening.

Women ages 20 to 40 seek medical care for contraception, routine screening, and pregnancy. Dealing with family, home, and career responsibilities can result in increased stress-related conditions. Routine screening as well a healthy lifestyle are essential to maintain wellness. Common problems include urinary tract infections, menstrual cycle problems, sexual intercourse related issues, obesity, and pregnancy. Pregnancy beyond the age of 35 years poses increased risk.

Menopause occurs naturally between the **ages of 40 and 60**, averaging around age 51 (CDC, 2017). Divorce rates are high in this age group and children leaving home can result in increased levels of depression. Chronic disease becomes more apparent, and most problems are associated with perimenopause. Routine screening continues to be important as breast disease and ovarian cancer are more prevalent during this age range.

ROUTINE FEMALE REPRODUCTIVE HEALTH SCREENING

To promote wellness and prevent illness, women should adhere to specific screening guidelines to ensure early detection of conditions. Let’s discuss some common routine screenings.

Routine Reproductive Health Screening

Women ages 40 to 44 should have the choice to begin annual **mammogram screening**. They should get at least one mammogram during this time to provide baseline information. Women ages 45 to 54 should receive annual mammogram screening. Women ages 55 and older should have a mammogram every 1 to 2 years (American Cancer Society, 2020).

Women ages 25 to 65 should have **cervical cancer screening** every three years using the Papanicolaou (Pap) test. Screening can stop after age 65 years as long as previous results have been normal for at least 10 years. Human papillomavirus infection (HPV) vaccination is recommended (ACS, 2020).

Research does not show a clear benefit of **regular breast exams** done by either a healthcare provider or self-examination. Although clinical breast exams are still performed and clients are encouraged to perform monthly breast self-exam, little evidence exists that these tests aid in early detection of breast cancer. Therefore, nurses must teach clients that these exams are not a substitute for mammography screening (ACS, 2020).