antipsychotics that may affect sexual function. Nonpharmacologic therapies include counseling, lifestyle changes to decrease stress and anxiety, physical therapy for vaginismus and pelvic floor dysfunction, and lubricants and vaginal moisturizers for dyspareunia caused by vaginal dryness. For some women, vaginal lubricants and moisturizers may be sufficient and are the first-line therapy.

Pharmacologic therapy for sexual dysfunction has primarily focused on hormonal therapy. In the WHI, hormone therapy did not have a beneficial effect on sexual dysfunction, but a Cochrane review examined hormone therapy for sexual function and found a small to moderate benefit in perimenopausal or early postmenopausal women. Topical vaginal estrogen results in little systemic absorption and is very effective in relieving the symptoms of vaginal atrophy.

Genitourinary Symptoms

Urinary incontinence rates increase with age. Urinary incontinence is common after menopause, with about 25% of women affected. The cause is often multifactorial. The endothelium of the urethra and bladder becomes more fragile and less elastic with menopause. Urethral tone also decreases with age. Uterine prolapse, cystoceles, and rectoceles increase the risk of incontinence. Risk also increases as body weight increases due to increased pressure on the bladder. Urinary incontinence and its behavioral and pharmacologic treatment options are discussed in Chapter 26, "Incontinence," in *Goldman-Cecil Medicine,* 25th Edition.

MEDICAL PROBLEMS WITH UNIQUE CONSIDERATIONS FOR WOMEN

Obesity, Metabolic Syndrome, Polycystic Ovary Syndrome, and Diabetes

Rates of obesity have increased steadily in recent decades, and more than one third of U.S. adults are obese (BMI >30). Overall, obesity appears to affect men and women equally, although women of lower SES are disproportionately affected. Obesity increases the risk for many diseases, including CAD, which is the leading cause of death for men and women. In women, central obesity (waist-hip ratio >0.9) predicts the risk of CAD. The risk of many cancers (e.g., endometrial cancer) is increased for obese individuals. Obesity has specific implications for women during pregnancy. It increases the risk of numerous pregnancy-related complications, including gestational diabetes mellitus, fetal macrosomia, hypertension, shoulder dystocia, and cesarean delivery, and contributes postpartum complications such as thrombosis and infection. Obesity is also associated with irregular menses and higher rates of anovulation.

Metabolic effects related to obesity have been elucidated. The risk of cardiovascular disease related to the metabolic syndrome appears to have a stronger correlation in women. The National Cholesterol Education Program/Adult Treatment Panel III defines metabolic syndrome as the presence of three or more of five risk factors that increase the chance of developing heart disease or stroke: central obesity, elevated triglyceride levels, low levels of high-density lipoprotein (HDL) cholesterol, hypertension, and impaired fasting glucose values. Metabolic syndrome significantly increases the risk of type 2 diabetes and cardiovascular disease, and these patients should be targeted for aggressive lifestyle modification to reduce contributory risk factors.

Polycystic ovary syndrome (PCOS) is an endocrine disorder primarily of androgen excess that affects approximately 5% to 10% of women worldwide. Reproductive and metabolic effects include anovulation, infertility, acne, hirsutism, obesity, and metabolic syndrome. Increased insulin resistance is a significant consequence of the syndrome, increasing the risk of type 2 diabetes, particularly in obese women. Women with PCOS are at increased risk for endometrial and ovarian cancers.

The risk of type 2 diabetes mellitus increases with obesity, and like obesity, the incidence of diabetes has been on the rise in the United States. More than 10% of adult Americans carry the diagnosis of diabetes, and many remain undiagnosed. Rates of diabetes are highest in black, Hispanic, and Native American groups. The increased cardiovascular disease risk conferred by diabetes is greater for women than for men, and women with diabetes have lower survival rates and quality of life after a cardiovascular event than their male counterparts. Women also have higher rates of blindness associated with diabetes. Identifying women with impaired fasting glucose values (i.e., prediabetes) can help to identify women likely to develop diabetes in the future. In addition to reviewing traditional risk factors for diabetes, a history of gestational diabetes and infant birth weight greater than 9 pounds should be considered when evaluating female patients for the risk of diabetes.

Breast Pain, Discharge, and Masses

Breast symptoms are common in practice and cause significant anxiety to patients. Although most breast complaints are about benign conditions, it is important to evaluate breast symptoms thoroughly to ensure that breast cancers are not being missed. Initial evaluation starts with obtaining a history and asking when symptoms began and how they evolved. For instance, a mass that is prominent premenstrually and then decreases in size in the follicular phase of menses is likely a benign cyst.

Breast pain is a common, nonspecific symptom that is usually benign. Localized breast pain is the only symptom in 10% to 15% of women with newly diagnosed breast cancer. Breast pain has cyclical and noncyclical patterns. Approximately two thirds of breast pain is cyclical in nature and related to the normal hormonal variations in the menstrual cycle. Noncyclical breast pain does not follow the usual menstrual pattern and is usually unilateral. Causes of noncyclical breast pain include large breasts, diet and lifestyle factors (e.g., caffeine, nicotine), inflammatory breast cancer, and various medications, including oral contraceptives, antidepressants, and antibiotics. In women older than 35 years of age, diagnostic mammography should be completed. If mammography and the physical examination are normal, reassurance can be provided. In women younger than 35 years of age, normal examination results can obviate the need for further testing.

Breast discharge is an uncommon sign of malignancy. About 5% of women with breast cancer have discharge as a symptom. Concern for malignancy is increased if the discharge occurs without provocation, is persistent, and is unilateral; if the discharge is serous, serosanguineous, or bloody; if it occurs in an older patient; or if it is associated with a mass or lump. The most