In any given year, 10 to 14 million people experience a clinical depression; women 18 to 45 years of age account for the largest proportion of this group. Clinical depression is a serious medical illness that is much more than temporarily feeling sad or blue. It involves disturbances in mood, concentration, sleep, activity level, interests, appetite, and social behavior. Clinical depression can develop in anyone, regardless of race, culture, social class, age, or gender. However, across virtually all cultures and socioeconomic classes, women are more likely than men are to experience depression. Although depression is highly treatable, it is frequently a life-long condition in which periods of wellness alternate with recurrences of illness. Sixty percent of depressed individuals will experience at least a second episode of depression. Of these individuals, 75% to 80% will experience recurrent depression. With each subsequent episode, recurrence risk increases and probability of full remission decreases. Clinical depression affects two to three times as many women as men, both in the U.S. and in many societies around the world. It is estimated that one out of every eight women will suffer from clinical depression in her lifetime. Women also experience higher rates of seasonal affective disorder and dysthymia (chronic depression) than men. While the rate of bipolar disorder (manic depression) is similar in men and women, women have higher rates of the depressed phase of manic depression and women are three times more likely to experience rapid-cycling bipolar disorder.

What causes the higher rate of depression in women?
The explanation for the gender gap in susceptibility to depression most probably lies in a combination of biological, genetic, psychological, and social factors.

Biological factors
There appear to be important links between mood changes and reproductive health events. Gender differences in rates of depression emerge when females enter puberty and remain high throughout the childbearing years and into late middle age. Hormonal factors seem to play a role in some of the mood disturbance experienced by women. Twenty to 40 percent of menstruating women experience premenstrual mood and behavioral changes. Approximately 2 to 10 percent of women experience Premenstrual Dysphoric Disorder, a severe form of premenstrual syndrome that is characterized by severely impairing behavior and mood changes. As many as 10 percent to 15 percent of women experience a clinical depression during pregnancy or after the birth of a baby. There also appears to be an increase in depression during the perimenopausal period, but after menopause, this does not appear to be the case. Differences in thyroid function between men and women may also contribute to the gender difference in the prevalence of mood disorders. Another biological factor that may contribute to gender differences in depression can be linked to circadian rhythm patterns, the complex system that regulates sleep and activity over each 24-hour period. Depressed women report more hypersomnia (excessive sleeping) than do men. Gender differences in the activity of neurotransmitters including serotonin and the effects of estrogen on these neurotransmitters may also be linked to the gender disparity in rates of depression.

Genetic factors
Some forms of depression run in families. There is a 25 percent rate of depression in the first-degree relatives (mother, father, siblings) of people with depression and greater prevalence of the illness in first-degree and second-degree female relatives. But depression also occurs in people who have no family history of the disease. The genetic contribution to risk for depression is not something specific to women. Men and women from families with depression are both at greater risk than those who come from families with no depression.
Psychosocial factors
Psychosocial factors that may contribute to women’s increased vulnerability to depression include the stress of multiple work and family responsibilities, sexual and physical abuse, sexual discrimination, lack of social supports, traumatic life experiences, and poverty. Several studies of depression among college students and within the Amish community of eastern Pennsylvania have shown no gender difference in the rates of depression, suggesting that greater social equality may lead to more equal rates of depression in men and women. Psychological make-up plays an important role in one’s vulnerability to depression as well. Thus, individuals with low self-esteem, pessimistic views, and tendencies towards stress are prone to clinical depression. Studies also indicate that sexual and physical abuse are major risk factors for depression. Women are twice as likely as men to have experienced sexual abuse. A recent study found that three out of five of the women diagnosed with depressive illnesses had been victims of abuse. In one major study, 100 percent of women who had experienced severe childhood sexual abuse developed depression later in life.

Does pregnancy influence depression?
Although it once was thought that women experienced low rates of mental illness during pregnancy, recent research reveals that over 10% of pregnant women and approximately 15% of postpartum women experience depression. As many as 80 percent of women experience the "postpartum blues," a brief period of mood symptoms that is considered normal following childbirth. However, the related hormonal and biological changes associated with pregnancy or giving birth may initiate a clinical depression. Or, the changes in lifestyle associated with caring for a young infant may constitute a set of stressors that have mental health consequences for the mother. There is a three-fold increase in risk for depression during or following a pregnancy among women with a history of mood disorders. Once a woman has experienced a postpartum depression, her risk of having another reaches 70 percent. One woman in a thousand experiences a postpartum psychosis—a medical emergency in which the woman may inflict harm upon herself and/or her baby. The first episode of bipolar disorder in women frequently occurs following the birth of a child.

Are there gender differences in the course of a depression?
According to one large national study completed about a decade ago, there are no differences between men and women in the course of major depression. Although men and women generally exhibit similar symptoms of depression, women report more atypical symptoms including anxiety, somatization (the physical expression of mental processes such as aches and pains with no physiological cause), increases in weight and appetite, oversleeping, and expressed anger and hostility.

How about gender differences in the response to treatment of depression?
1. **Psychotherapy.** Psychotherapy is an effective treatment for depression. Studies have shown that interpersonal therapy and cognitive/behavioral therapy can be very effective for the treatment of mild to moderate depression. Women and men appear to respond equally well to these to forms of depression-specific psychotherapy. Psychotherapy may be particularly useful for women patients when they are trying to conceive, during pregnancy or while nursing because it allows the woman to avoid possible effects of the medication on the developing fetus or nursing infant.

2. **Antidepressant medications.** There is no clear evidence of gender differences in the effectiveness of antidepressant medications; although, women experience more adverse side effects than do men. Selective serotonin reuptake inhibitors (SSRIs) such as Prozac, Zoloft, Paxil, Luvox and Lexapro have fewer side effects and have been found to be particularly useful and effective in women patients. Some doctors suggest increasing doses of antidepressant drugs premenstrually, as the menstrual cycle may alter drug-absorption rates.

3. **Bright light therapy.** Bright light therapy has been used successfully for seasonal affective disorder, but there is as yet no evidence that it is useful for other forms of depression.

4. **Alternative treatments.** Other treatments such as acupuncture and nutritional supplements (omega-3-fatty acids) may be helpful in specific circumstances. Women should always talk to their primary care provider or mental health specialist before beginning any treatment for their depressive symptoms.
Is it safe to take antidepressants during pregnancy?
Because of the potential risk to the developing fetus or newborn, the costs and benefits of the use of antidepressants must be weighed carefully for women who are pregnant, breast-feeding, or trying to conceive. Most large-scale studies have not shown any significant increase in birth defects in children of women using either tricyclic antidepressants (Anafranil, Elavil, and Pamelor) or SSRIs (Prozac, Zoloft, Paxil, Luvox, Lexapro) during pregnancy. Like all treatments for depression, this is something that each woman should discuss with her physician, weighing the possible risks and benefits of various approaches to treating her depression.
MAOIs (Nardil, Parnate) may adversely affect the developing fetus and lead to complications during delivery. Lithium (commonly prescribed for bipolar disorder) has been linked to an increased incidence of birth defects; however, many healthy babies have been born to mothers using this medication. Doctors should choose the lowest effective dose of medication and select drugs with the least sedative and anticholinergic (rapid heartbeat, high blood pressure, slow digestion, dry mouth, constipation, and urinary retention) potency because of possible adverse effects on the newborn. In patients with severe depression, doctors must weigh the risks and benefits in both the mother and the infant of medication as compared to not administering drug therapy.

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