

Sex and Gender Differences

DEPRESSION



Depression is a common but serious mood disorder causing severe symptoms that affect how a person feels, thinks, and handles daily activities.

	FEMALE	ALL	MALE
Risk Factors	<ul style="list-style-type: none"> Menses, pregnancy, and menopause-related hormonal changes Premenstrual Dysphoric Disorder (PMDD) Lower socio-economic status More likely to have experienced abuse Greater genetic vulnerability 	<ul style="list-style-type: none"> Adverse childhood events Family history Substance use Poor diet 	
Prevalence	<ul style="list-style-type: none"> 2x more common in women than men starting at 12 years old 	<ul style="list-style-type: none"> 1 in 3 adults in America Most common in ages 18-29 	<ul style="list-style-type: none"> Likely underdiagnosed
Presentation	<ul style="list-style-type: none"> Greater symptom severity More likely to present with <ul style="list-style-type: none"> increased appetite, weight gain, hypersomnia somatic symptoms (e.g. GI pain) anxiety or eating disorders More likely to be chronic/recurrent Episodic events may be triggered by hormonal changes <ul style="list-style-type: none"> PMDD Peripartum/postpartum depression Greater risk for cardiovascular disease than males Suicide attempts more common 	<ul style="list-style-type: none"> Emotional symptoms: feelings of worthlessness or guilt, self-blame, hindered decision-making and concentration, loss of interest in activities, suicidal ideation. Physical symptoms: lack of energy, sleep disturbances, weight changes, pain, appetite changes Co-morbidities such as cardiovascular disease 	<ul style="list-style-type: none"> Less likely to seek help More likely to present with <ul style="list-style-type: none"> Suicidal ideation Melancholic features such as decreased appetite and sleep Violence, aggression Emotional suppression Substance use disorders Higher number of completed suicides and increased use of lethal means
Pathophysiology	<ul style="list-style-type: none"> Linked to changes in expression of glutamate and serotonin receptors Decrease in serotonin transmission compared to males may contribute to symptom severity 	<ul style="list-style-type: none"> Change in interaction between neurotransmitter availability & receptor regulation <ul style="list-style-type: none"> Disturbance in serotonin, norepinephrine, dopamine, glutamate, and brain-derived neurotrophic factor (BDNF) activity Vascular lesions may disrupt neural networks involved in emotion regulation 	<ul style="list-style-type: none"> Linked to changes in gene expression for brain-derived neurotrophic factor (BDNF) dependent genes
Diagnostics/Screening	<ul style="list-style-type: none"> Peripartum/postpartum depression <ul style="list-style-type: none"> Screening: Edinburg Postnatal Depression Scale PMDD <ul style="list-style-type: none"> Screening: Premenstrual Symptoms Tool DSM-5 Criteria for PMDD overlap partially with DSM-5 Criteria for Depression 	<ul style="list-style-type: none"> Screening: Patient Health Questionnaires (PHQ-2 and PHQ-9) DSM-5 Diagnostic criteria: <ul style="list-style-type: none"> Symptoms daily for at least 2 weeks 5+ symptoms, at least one being depressed mood or loss of interest in activities previously enjoyed (anhedonia) Must cause significant distress or interference with functioning Symptoms not related to medications, substances, or other medical conditions 	<ul style="list-style-type: none"> Men less likely to be diagnosed: <ul style="list-style-type: none"> decreased self-report of symptoms influenced by societal expectations of masculinity Certain screening tools may not include symptoms frequently seen in males: <ul style="list-style-type: none"> substance abuse violence and aggression stress perception and emotional suppression
Treatment	<ul style="list-style-type: none"> More likely to respond to selective-serotonin re-uptake inhibitors (SSRIs) than males Premenopausal females respond less to TCAs than postmenopausal women 	<ul style="list-style-type: none"> 1st line therapy: cognitive behavioral therapy 1st line medication: selective-serotonin re-uptake inhibitors (SSRIs) Alternative medications: tricyclic antidepressants (TCAs), serotonin-norepinephrine re-uptake inhibitors (SNRIs), norepinephrine-dopamine re-uptake inhibitors (NDRIs), and others 	<ul style="list-style-type: none"> Less likely to receive treatment Currently there are no treatments aimed at BDNF

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Definitions & Disclaimers

References

