

Major Depressive Disorder and Suicide Risk

A plain-English guide for you and your family

WHAT IS HAPPENING

When the brain is healthy, chemical messengers like serotonin (which steadies mood and sleep) and norepinephrine (which powers energy and focus) flow in balance. The prefrontal cortex (the front part of the brain that plans ahead and pumps the brakes on impulses) works with the hippocampus (the memory center) to keep thoughts realistic and hopeful. The amygdala (the brain's alarm center) stays calm unless real danger appears. In major depression, this system breaks. Chronic stress, genes, trauma, or medical illness damage these circuits. Serotonin and norepinephrine drop too low. The prefrontal cortex weakens, so the person can't see a future or stop dark thoughts. The amygdala fires too much, flooding the person with fear and hopelessness. When depression gets severe, the brain starts whispering that suicide is the only way to stop the pain. If the person also has access to pills, guns, or other deadly means, and if a fresh crisis (a breakup, job loss, or humiliation) just landed, the risk of death shoots up. Every symptom—the crushing sadness, the belief that nothing will get better, the plan to die—is the broken circuit screaming for help. We step in by removing access to deadly things, rebalancing brain chemistry with medicine, teaching new ways to handle pain, and fixing the life problems that fed the crisis. Safety comes first, always.

What you might feel

- Persistent sad, empty, or hopeless mood lasting most of the day, nearly every day for at least two weeks
- Loss of interest or pleasure in nearly all activities, even things the person used to love
- Significant weight change (loss or gain of more than 5% in a month) or change in appetite nearly every day
- Insomnia (trouble falling or staying asleep) or hypersomnia (sleeping too much) nearly every day
- Psychomotor agitation (restless, can't sit still) or retardation (moving and thinking in slow motion) nearly every day, noticeable to others

- Fatigue or loss of energy nearly every day
- Feelings of worthlessness or excessive, inappropriate guilt nearly every day
- Trouble thinking, concentrating, or making decisions nearly every day
- Recurrent thoughts of death, recurrent suicidal thoughts without a specific plan, or a suicide attempt or specific plan for committing suicide
- Expressing a specific suicide plan, especially one that is detailed and uses highly lethal means (firearm, hanging, jumping from height)

Call the doctor right away if...

- Any mention of a suicide plan, especially if the person has access to firearms, large amounts of pills, or other lethal means
- Recent suicide attempt or self-harm, or a history of past attempts (each prior attempt raises future risk)
- Severe hopelessness, saying things like 'everyone would be better off without me' or 'there's no point in going on'
- Sudden calm or improvement after a long depression—sometimes means the person has decided on suicide and feels relief that the pain will end
- Giving away prized possessions, writing goodbye notes, or putting affairs in order

What the care team will do

- Complete suicide risk assessment using the Columbia Suicide Severity Rating Scale (C-SSRS) within the first 15 minutes of contact, and remove all lethal means from the environment immediately
- Establish one-to-one observation (a staff member within arm's reach at all times) if the patient endorses a plan plus intent, or use 15-minute safety checks if lower risk
- Administer prescribed SSRI or SNRI at the same time every day, and educate the patient that the medication takes four to six weeks to work fully but side effects start immediately
- Screen for akathisia (inner restlessness and inability to sit still) at every shift if the patient is on an SSRI, especially in the first two weeks
- Monitor weight, appetite, and sleep every day, and report any increase in insomnia or continued weight loss to the provider
- Facilitate referral to outpatient psychotherapy (CBT or interpersonal therapy) and schedule the first appointment before discharge or within 72 hours of starting treatment
- Arrange daily phone or in-person contact for the first two weeks after the patient leaves your care, using a safety plan card that lists warning signs and crisis numbers

- Educate family members to lock up all firearms outside the home, store medications in a lockbox controlled by another adult, and avoid leaving the patient alone for long periods

Medicines you may be given — and why

Sertraline (Zoloft), Escitalopram (Lexapro), Fluoxetine (Prozac)

These medicines slow down the brain's clean-up crew that normally sweeps away serotonin (a messenger chemical that steadies mood, sleep, and thinking). By slowing the clean-up, more serotonin stays in the tiny gaps between brain cells, so the signals that lift mood and calm anxiety can keep going.

Venlafaxine (Effexor XR), Duloxetine (Cymbalta)

These medicines block the clean-up of two messenger chemicals—serotonin (which steadies mood) and norepinephrine (which boosts energy and focus). More of both stay in the gaps between brain cells, so signals that lift mood and push back fatigue keep firing.

Bupropion (Wellbutrin)

This medicine blocks the clean-up of norepinephrine (which boosts energy and focus) and dopamine (which drives motivation and pleasure). More of both stay in the gaps between brain cells, so the signals that wake you up, sharpen your mind, and make things feel rewarding keep going.

Mirtazapine (Remeron)

This medicine blocks certain brake pedals (alpha-2 receptors) on the nerve cells that release norepinephrine and serotonin, so more of both chemicals pour out. It also blocks histamine receptors (which makes you sleepy and hungry) and certain serotonin receptors that cause nausea and anxiety.

Esketamine (Spravato nasal spray)

This medicine blocks NMDA receptors (docking stations for glutamate, the brain's main 'go' signal). Blocking these receptors in certain brain circuits triggers a burst of new connections (synapses) in the prefrontal cortex (the thinking and emotional-control center), which can rapidly lift mood and quiet suicidal thoughts—sometimes within hours to days.

Electroconvulsive Therapy (ECT)

A brief, controlled electrical pulse is sent through the brain (while the patient is asleep under anesthesia) to trigger a seizure lasting about 30–60 seconds. This seizure resets overactive and underactive brain circuits, boosts the release of BDNF (the growth protein that helps nerve

cells rebuild connections), and rebalances neurotransmitters (serotonin, norepinephrine, dopamine). Mood often lifts after 6–12 treatments over 2–4 weeks.

Where this information comes from

- APA Practice Guideline for the Treatment of Patients with Major Depressive Disorder (2010, updated 2020)
- U.S. Preventive Services Task Force (USPSTF) Depression Screening Recommendation 2023
- VA/DoD Clinical Practice Guideline for Assessment and Management of Patients at Risk for Suicide 2019
- The Columbia Lighthouse Project (Columbia Suicide Severity Rating Scale, C-SSRS)

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