

Dementia

Dementia means the brain loses its ability to remember, think, and solve problems over time. Figure out which type, slow the slide when you can, and support the person and family through every stage.

THE ONE-LINE TRUTH

Dementia is lasting brain decline that steals memory, thinking, and independence — and Alzheimer disease causes most cases.

The chain — how it unfolds

1. Abnormal proteins pile up and neurons start dying — usually in the hippocampus first. — why: In Alzheimer disease, amyloid-beta clumps form outside neurons and tau tangles twist inside them; in Lewy body dementia, alpha-synuclein builds up; in frontotemporal dementia, tau or TDP-43 damages frontal and temporal lobes first. These proteins are toxic — they clog up the cell's machinery, block signals, and eventually kill the neuron. Once a neuron dies, it is gone forever; the brain cannot make new ones to replace it.
2. Memory fades — recent memories vanish first, then older ones. — why: The hippocampus (the brain's memory-filing system) is where Alzheimer damage hits first and hardest, so new memories never get filed and recent ones disappear. The person repeats questions, forgets conversations from an hour ago, and loses track of appointments. Older memories — filed decades ago — last longer because they are stored in wider networks, so the person may remember childhood clearly while forgetting what they ate for breakfast.
3. Thinking slows, planning gets hard, and judgment fails. — why: As the damage spreads to the frontal lobes (the brain's planning and decision-making center), the person loses executive function — the ability to think ahead, organize steps, solve problems, and control impulses. They cannot manage money, follow a recipe, or figure out what to do when something goes wrong. They may make risky decisions (giving money to strangers, driving when unsafe) because the brake on impulses is gone.

4. Language breaks down — finding words gets hard, then understanding speech, then speaking at all. — why: The temporal lobes (which handle language) lose neurons, so the person hunts for words, calls things by the wrong name, repeats phrases, or stops talking altogether. In frontotemporal dementia, language loss can be the first and most obvious sign. In Alzheimer, it comes later but is still devastating — it cuts the person off from connection and makes it impossible to tell you what they need.
5. Personality changes, behavior gets odd or impulsive, and emotions swing wild. — why: The frontal lobes also control personality, social behavior, and emotional regulation — so when those networks die, the person may become apathetic (no interest in anything), disinhibited (rude, sexually inappropriate, or impulsive), or emotionally labile (crying or laughing for no clear reason). In frontotemporal dementia, these changes come early and can be mistaken for a psychiatric illness.
6. The person gets lost, cannot recognize familiar places or faces, and loses the ability to do daily tasks. — why: The parietal lobes (which handle spatial reasoning and navigation) die, so the person cannot find their way home, recognize their own house, or remember how to dress, use a fork, or work a lock. Even loved ones' faces may look unfamiliar. Every learned skill — how to cook, clean, drive, read — vanishes as the networks that stored those skills disappear.
7. Eventually the person cannot eat, walk, or control their bladder and bowels — and they need total care. — why: In the final stage, the damage reaches the deeper brain regions that control basic survival functions — swallowing, balance, bladder and bowel control. The person is bedbound, silent, cannot swallow safely (so pneumonia from inhaling food or saliva is common), and needs help with every single task. Death usually comes from infection (pneumonia or urinary tract infection) or the brain simply losing the ability to tell the body to breathe.
8. None of this is random — it follows the anatomy of the disease, one broken network at a time. — why: Each type of dementia has a signature pattern: Alzheimer hits memory first because it starts in the hippocampus; frontotemporal dementia hits personality and language first because it starts in the frontal and temporal lobes; Lewy body dementia brings hallucinations and stiff movement because it hits visual and motor networks early. Trace the symptoms back to the anatomy, and you will know which type you are dealing with — and what is coming next.

Spot it — what you see, and why

- Memory loss that disrupts daily life: Brain cells in the hippocampus (the brain's memory recorder) and nearby areas are damaged or dying, so the person can't hold onto new information or recall recent events — though old memories often stay longer because those pathways were built years ago and are stored more widely.

- Trouble planning or solving problems: The prefrontal cortex (the brain's planning and problem-solving center at the front) is not working well, so tasks that need steps — like following a recipe, paying bills, or balancing a checkbook — become confusing or impossible.
- Difficulty completing familiar tasks: The brain can't organize the sequence of actions anymore, so even everyday routines like driving to a known place, cooking a familiar meal, or playing a card game feel new and hard.
- Confusion with time or place: The parts of the brain that track dates, seasons, and locations are damaged, so the person loses track of where they are, what day it is, or how they got there — sometimes thinking it's decades ago or not recognizing their own home.
- Problems understanding visual images and spatial relationships: Damage to the occipital and parietal lobes (the brain's visual-processing areas in the back and sides) makes it hard to judge distance, read, recognize faces, or see contrast — even though the eyes themselves work fine.
- New problems with words in speaking or writing: Language centers in the left side of the brain (Broca's area for speaking and Wernicke's area for understanding words) are failing, so finding the right word becomes a struggle — people may stop mid-sentence, repeat themselves, or call things by the wrong name.

Red flags — act now

- Rapid decline in memory or thinking over days to weeks (suggests delirium from infection, medication, or stroke rather than typical dementia)
- New weakness, numbness, or trouble speaking on one side of the body (may mean a stroke is happening now and needs emergency imaging)
- Severe confusion with fever, stiff neck, or bad headache (could be meningitis or encephalitis, which need emergency treatment)
- Sudden inability to recognize family, complete loss of awareness, or seizures (points to a serious brain event that needs urgent imaging and care)
- Signs of neglect, weight loss, bruises, or unsafe living conditions (the person may not be able to care for themselves safely and needs immediate help and protection)

Treat it — in this order

1. Rule out and treat reversible causes first — thyroid disease, B12 deficiency, normal pressure hydrocephalus, depression, medication side effects (anticholinergics, benzodiazepines, opioids) → Fixes memory loss completely if one of these reversible problems is the real cause. Treating hypothyroidism or B12 deficiency stops the decline cold and can restore thinking.

2. Cholinesterase inhibitor — donepezil, rivastigmine, or galantamine — for mild to moderate Alzheimer disease or Lewy body dementia → Blocks the enzyme that breaks down acetylcholine (a brain messenger chemical needed for memory and attention), so more acetylcholine stays around longer. This slows memory decline by a few months and may help thinking and daily function.
3. Memantine for moderate to severe Alzheimer disease → Blocks excess glutamate (a brain chemical that kills nerve cells when too much is around) from overstimulating NMDA receptors (the receiving docks on neurons). Protects cells from further damage and may slow decline, especially when combined with a cholinesterase inhibitor.
4. Anti-amyloid monoclonal antibody — lecanemab or donanemab — for early Alzheimer disease with confirmed amyloid buildup on PET or CSF testing → Binds to amyloid-beta plaques in the brain and flags them for removal by immune cells (microglia), slowing cognitive decline by about 25-35% over 18 months in early disease. This targets the root protein problem, not just symptoms.
5. Non-drug approach first for agitation and behavior problems (called BPSD) — keep a calm routine, use familiar faces and objects, play favorite music, offer simple tasks, avoid arguing or correcting → Reduces agitation, anxiety, and confusion by keeping the damaged brain in a predictable, gentle world. A broken memory system cannot handle chaos, so removing chaos calms the storm.

Your top priorities at the bedside

1. Check and trend vital signs every 4 to 8 hours, looking especially for fever above 100.4°F (38°C) or blood pressure changes — why: Fever signals infection like urinary tract infection or pneumonia which triggers delirium (sudden confused state) on top of baseline dementia and needs antibiotics; blood pressure spikes can mean stroke or medication problem
2. Assess mental status using a structured tool like the Mini-Cog or MMSE (Mini-Mental State Exam) and document exact score to track change over shifts — why: A numeric score lets the team see if confusion is stable dementia or worsening delirium; rapid drops over hours to days mean medical emergency like stroke, infection, or medicine toxicity that needs immediate workup
3. Screen for and remove physical restraints, bed alarms that increase agitation, and urinary catheters unless absolutely required — why: Restraints and catheters raise delirium risk by limiting movement and causing discomfort; dementia patients cannot tell you they are uncomfortable so they pull at tubes and become more confused, and catheters cause bladder infections