

Caution! These Drugs Can Cause Memory Loss

Check your medicine cabinet if you're experiencing forgetfulness, brain fog or confusion

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For a long time, doctors dismissed forgetfulness, brain fog and mental confusion as normal parts of aging. But scientists now know that memory loss as you get older is by no means inevitable. In fact, routine memory, skills and knowledge may even improve with age, according to the Centers for Disease Control and Prevention (CDC).

Most people are familiar with at least some of the things that can impair memory, including [alcohol](#) and drug abuse, heavy cigarette smoking, head injuries, [stroke](#), sleep deprivation, severe stress, [vitamin B12](#) deficiency and illnesses such as [Alzheimer's disease](#) and depression.

But what many people don't realize is that a number of commonly prescribed drugs also can interfere with memory. Here, we'll delve into seven types of drugs that may cause memory loss and explore alternative treatment options.

Short- vs. long-term memory

There are two key types of memory: short- and long-term, says Jessica Merrey, the lead clinical pharmacy specialist at Johns Hopkins Hospital in Baltimore. Short-term memory, also known as working memory, refers to anything that happened within the last 30 seconds – like forgetting what you meant to add to your grocery list after picking up your pen. In contrast, long-term memory involves anything beyond this brief window. Whether it's a recent event or a childhood memory, forgetting something after more than 30 seconds is considered long-term memory loss.

Drugs that affect short-term memory can interfere with a person's ability to focus and process information. These medications disrupt so-called messenger pathways in the brain, Merrey says, "changing the short-term memory processing." Once a person stops taking the medications, however, short-term memory improves.

Medications that can impact long-term memory interfere with neurotransmitters in the brain. These are the body's chemical messengers that help you to think, move, breathe and function generally, and when they don't work like they should, a number of problems can occur, including issues with thinking and memory.

The biggest concern with medications that mess with neurotransmitter activity "is when several are used concurrently, when they are used at high doses and when they are used for long periods of time," says Joshua Niznik, an assistant professor of medicine at the University of North Carolina School of Medicine.

Note, certain medications can affect both short- and long-term memory, while others may affect only one.

1. Antianxiety drugs (benzodiazepines)

Why they are prescribed: Benzodiazepines are used to treat a variety of anxiety disorders, agitation, seizures, and [delirium](#) and muscle spasms. Because benzodiazepines have a sedative effect, they are sometimes used to treat insomnia and the anxiety that can accompany depression.

Examples: Alprazolam (Xanax), chlordiazepoxide, clonazepam (Klonopin), diazepam (Valium), flurazepam, lorazepam (Ativan), midazolam, quazepam (Doral), temazepam (Restoril) and triazolam (Halcion).

How they can affect memory: Benzodiazepines dampen activity in key parts of the brain, including those involved in the transfer of events from short-term to long-term memory. In fact, they're used in anesthesia for this very reason.

Alternatives: Benzodiazepines should be prescribed only rarely in older adults, and then only for short periods of time. It takes older people much longer than younger people to flush these drugs out of their bodies, and the ensuing buildup puts older adults at higher risk for not just memory loss but delirium, falls, fractures and motor vehicle

accidents. Another drawback: They're addicting, says D.P. Devanand, M.D., professor of psychiatry and neurology at Columbia University Medical Center.

Talk with your doctor or other health care professional about treating your condition with other types of drugs or nondrug treatments. If you are taking these medications for insomnia, for instance, the first line of treatment is [cognitive behavioral therapy for insomnia](#) (CBT-I). And an antidepressant might be able to treat your anxiety, Devanand notes.

Be sure to consult your health care professional before stopping or reducing the dosage of any benzodiazepine. Sudden withdrawal can trigger serious side effects, so a health professional should always monitor the process.

2. Antiseizure drugs

Why they are prescribed: Long used to treat seizures, these medications can also be prescribed for nerve pain, bipolar disorder, mood disorders and mania.

Examples: Carbamazepine (Tegretol), gabapentin (Neurontin), lamotrigine (Lamictal), levetiracetam (Keppra), oxcarbazepine (Trileptal), pregabalin (Lyrica), rufinamide (Banzel), topiramate (Topamax), valproic acid (Depakote), phenobarbital (Luminal), primidone (Mysoline) and zonisamide (Zonegran).

How they can affect memory: Anticonvulsants are believed to limit seizures by dampening the flow of signals within the central nervous system (CNS). Drugs that depress signaling in the CNS can cause memory loss. One thing to note: These medications can be sedating, "and sometimes it's hard to separate what is a true cognitive decline from simple sedation," Devanand says.

Alternatives: Many patients with seizures do well on phenytoin (Dilantin), which, at lower doses, has less of an impact on memory. Patients with chronic nerve pain find that venlafaxine (Effexor) – which also spares memory – alleviates their pain.

3. Tricyclic antidepressants

Why they are prescribed: This older class of antidepressant drugs is prescribed less often these days, but some people still use tricyclics for [depression](#), anxiety disorders, obsessive-compulsive disorder and nerve-related pain.

Examples: Amitriptyline (Elavil), clomipramine (Anafranil), desipramine (Norpramin), doxepin (Silenor), imipramine (Tofranil), nortriptyline (Pamelor), protriptyline (Vivactil) and trimipramine (Surmontil).

How they can affect memory: Tricyclic antidepressants block the action of serotonin, norepinephrine and other chemical messengers in the brain, which can lead to a number of side effects, including lapses in memory.

Alternatives: Newer antidepressants like fluoxetine (Prozac), sertraline (Zoloft) and other selective serotonin reuptake inhibitors (SSRIs) don't have the same anticholinergic effects as tricyclic antidepressants and therefore don't interfere with cognition, Devanand explains. You can also talk with your health care provider about whether nondrug therapies might work just as well or better for you than a drug.

4. Narcotic painkillers (opioids)

Why they are prescribed: These medications are sometimes used to relieve moderate to severe pain from surgery or injuries. In some instances, they can also be used to treat chronic pain.

Examples: Fentanyl (available as a patch), hydrocodone (Vicodin), hydromorphone (Dilaudid, Exalgo), morphine and oxycodone (Oxycontin). These drugs come in many different forms, including tablets, solutions for injection, transdermal patches and suppositories.

How they can affect memory: These drugs work by stemming the flow of pain signals within the central nervous system and by blunting one's emotional reaction to pain. Both these actions are mediated by chemical messengers that are also involved in many aspects of cognition, so use of these drugs can interfere with long- and short-term memory, especially when used for extended periods of time. Researchers have also found a link between [opioid use and dementia](#) in older adults.

Alternatives: In patients under the age of 50 years, nonsteroidal anti-inflammatory drugs (NSAIDs) are the frontline therapy for pain. Unfortunately, NSAID therapy is [less appropriate](#) for older patients, who have a much higher risk of gastrointestinal bleeding. Research shows the risk goes up with the dosage and duration of treatment.

Acetaminophen (Tylenol) may be another option, but again, it's important to consult your doctor about risks, side effects and drug interactions for all medications.

What About Statins?

Statins appeared in an earlier version of this article, published in 2016, but more recent research is giving these cholesterol-lowering drugs the boot from the list.

“Very large studies performed in hundreds of thousands of individuals monitored very carefully do not show any increase in memory problems or anything else related to brain function,” says Donald Lloyd-Jones, M.D., chair of the Department of Preventive Medicine at Northwestern Medicine and immediate past president of the American Heart Association (AHA). A 2018 scientific statement from the AHA says there is “no convincing evidence for a causal relationship” between statins and cognitive dysfunction.

In fact, Lloyd-Jones says the data suggests that statins may be protective against cognitive decline, since they are effective at preventing strokes.

If you have concerns about potential [side effects from statins](#) – or any drug – talk to your doctor. “Any medication can cause any number of different types of side effects. And those vary from individual to individual,” Lloyd-Jones says.

5. Sleeping aids (nonbenzodiazepine sedative-hypnotics)

Why they are prescribed: Sometimes called the “Z” drugs, these medications can be used to treat insomnia and other sleep problems. They also are prescribed for mild anxiety.

Examples: Eszopiclone (Lunesta), zaleplon (Sonata) and zolpidem (Ambien).

How they can affect memory: Although these are molecularly distinct from benzodiazepines (see No. 1, above), they act on many of the same brain pathways and chemical messengers, producing similar side effects and problems with addiction and withdrawal. The “Z” drugs also can cause amnesia and sometimes trigger dangerous or strange behaviors, such as cooking a meal or driving a car with no recollection of the event upon awakening.

Alternatives: There are alternative drug and nondrug treatments for [insomnia](#) and anxiety, so talk with your health care professional about options. [Melatonin](#), for instance, can help to reestablish healthy sleep patterns. And cognitive behavioral therapy for insomnia (CBT-I) is the first-line treatment for the sleep disorder.

Before stopping or reducing the dosage of these sleeping aids, be sure to consult your health care provider. Sudden withdrawal can cause serious side effects, so a health professional should always monitor the process.

6. Incontinence drugs (anticholinergics)

Why they are prescribed: These medications are used to relieve symptoms of overactive bladder and reduce episodes of urge incontinence, an urge to urinate so sudden and strong that you often can't get to a bathroom in time.

Examples: Darifenacin (Enablex), oxybutynin (Ditropan XL), solifenacin (Vesicare), tolterodine (Detrol) and trospium (Sanctura). Another oxybutynin product, Oxytrol for Women, is sold over the counter.

How they can affect memory: Patients who take anticholinergics can have complications with their long-term memory, says Merrey. These medications have been associated with an increased risk of dementia, and that heightened risk can persist even after the medication has been discontinued.

That's because these drugs block the action of acetylcholine, a neurotransmitter that mediates all sorts of functions in the body. In the bladder, anticholinergics prevent involuntary contractions of the muscles that control urine flow. In the brain, they inhibit activity in the memory and learning centers. The risk of memory loss is heightened when the drugs are taken for more than a short time or used with other anticholinergic drugs.

Older adults are particularly vulnerable to the other adverse effects of anticholinergic drugs, including constipation (which, in turn, can cause urinary incontinence), blurred vision, dizziness, anxiety, depression and hallucinations.

Alternatives: As a first step, it's important to make sure that you have been properly diagnosed. Check with your doctor or other health professional to see if your urinary incontinence symptoms might stem from another condition (such as a bladder infection or another form of incontinence) or a medication (such as a blood pressure drug, diuretic or muscle relaxant).

Once these are ruled out, try some simple lifestyle changes, such as cutting back on caffeinated and alcoholic beverages, drinking less before bedtime and [doing exercises to strengthen the pelvic muscles](#) that help control urination.

Some urologists are treating overactive bladder with Botox injections to help the muscle relax. Solutions beyond the medicine aisle can also come in handy. "I've been really thrilled with the improvements in protective [undergarment] items. They've really come a long way," says K. Ashley Garling-Nañez, clinical assistant professor at the University of Texas at Austin College of Pharmacy. "There are a lot more options for active adults."

7. Antihistamines (first generation)

Why they are prescribed: These medications are used to relieve or prevent allergy symptoms or symptoms of the common cold. Some antihistamines are also used to prevent motion sickness, nausea, vomiting and dizziness, and to treat anxiety or insomnia.

Examples: Brompheniramine (Dimetane), chlorpheniramine (Chlor-Trimeton), clemastine (Tavist), diphenhydramine (Benadryl), promethazine (Phenergan) and hydroxyzine (Vistaril).

How they can affect memory: These medications (prescription and over-the-counter) inhibit the action of acetylcholine, a chemical messenger that mediates a wide range of functions in the body. In the brain, they inhibit activity in the memory and learning centers.

Alternatives: Newer-generation antihistamines such as loratadine (Claritin) and cetirizine (Zyrtec) are better tolerated by older patients and do not present the same risks to memory and cognition.

Other medications worth noting

Corticosteroids: These anti-inflammatory drugs, which are used to treat rheumatoid arthritis, lupus and other conditions, can cause confusion and memory loss in patients on high doses, Devanand says. They can also trigger depression.

Heartburn medications: Some recent studies, [including one](#) from 2022 published in *BMC Medicine*, have found a link between medications commonly used to treat gastroesophageal reflux disease (GERD), heartburn and peptic ulcers with an increased risk of dementia. If you take an over-the-counter proton-pump inhibitor, Garling-Nañez says it's important to use the medication in moderation and for short amounts of time. "Anything over the counter, try not to use it for more than two weeks at a time is typically what we recommend," she says.

Cannabinoids: Access to cannabis and use of the drug have grown in recent years. Mounting research shows that cannabis may have an effect on our cognition. A [study](#) published in *The American Journal of Psychiatry* in March 2022 followed approximately 1,000 individuals and found that long-term cannabis users showed cognitive deficits, as well as memory and attention problems.

Concerns? What to do

Worried medications could be messing with your memory? Start by asking others closest to you if they've noticed any issues. And don't hesitate to talk to your doctor.

Know that the number of drugs you're taking could be affecting your memory as well. Taking multiple medications — a practice known as [polypharmacy](#) — has been [linked to lower memory function](#) in older adults, as well as an increased risk for delirium.

A [report](#) from the Lown Institute shows that 42 percent of older adults take five or more prescription medications. If you're concerned about the number of pills crammed into your pillbox, Garling-Nañez suggests asking your doctor if every single one of them is still necessary or if there are any you can stop taking.

This process, known as deprescribing, involves reducing the dose, gradually tapering off, or eliminating drugs that may contribute to memory loss. Another approach is switching to a different class of medication with fewer potential complications.

Ask your provider if you're on the lowest effective dose to manage your condition. Higher doses of certain medications can increase the risk of memory loss, so it's essential to find the right balance.

“As a pharmacist, I do a lot of work with the provider or the family to replace the medication with healthy lifestyles,” says Merrey. “There’s lots of non-pharmacologic recommendations to do and add those in as you’re tapering down certain medications.”

In any case, if you want to lower the dosage of a drug or stop taking a medication, be sure to do so under the supervision of your doctor – don’t do it on your own.

Medications, dementia and sundowning

Although [sundowning syndrome](#) – a state of confusion or agitation that occurs late in the afternoon and stretches into evening – is typically linked to Alzheimer’s, it can occur with any type of dementia. And medications like anticholinergics, tricyclic antidepressants, antihistamines and anti-Parkinson’s drugs can trigger or worsen its symptoms. Other substances – alcohol and nicotine, for example – can also cause sundowning, says Merrey.

Beta-Blockers and Your Memory

While there is no evidence that beta-blockers – prescribed for heart failure, angina, certain heart rhythm disorders and sometimes [high blood pressure](#) – contribute to long-term cognitive decline or dementia, they can make some people feel “fatigued,” “foggy” and “not their sharpest,” Lloyd-Jones says.

If you experience these effects, don’t stop taking your medication. Talk to your doctor about switching to a different beta-blocker with a slightly different chemical composition, Lloyd-Jones suggests.

Editor’s note: This story, originally published Feb. 9, 2016, has been updated to include new information.

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