8 Types of Drugs That Can Cause Leg Cramps

Pain may be a sign of an underlying medical problem

by Dr. Armon B. Neel Jr., AARP, January 10, 2013

En Español I The older you are, the more likely you are to get nighttime leg cramps — sudden jolts of pain that can last from just a few seconds to 15 or more minutes. Some studies, in fact, suggest that more than two-thirds of older people have experienced these painful cramps.

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Are you having painful leg cramps? You may want to change your prescription meds. — Norbert Schaefer/Corbis

Nighttime leg cramps typically affect the calf muscles, but you can also get them in the feet or thighs. They may be caused by sitting — or standing on hard surfaces — for too long; wearing uncomfortable shoes or shoes with elevated heels; dehydration (which can deplete electrolytes that are key to proper muscle function); some medical conditions, such as diabetes or edema; and, finally, certain medications.
Here are the eight types of drugs that most frequently cause nighttime leg cramps. If you're taking any of them and experiencing cramps, you should consult with your doctor or other health care professional about the possibility of adjusting the dosage or changing to another type of medication or treatment.

And even if you aren't taking one of these drugs, it's still wise to consult with your doctor if you often cramp up at night. In most cases, leg cramps are harmless. But they can signal an underlying medical problem, especially if you also have muscle weakness, swelling, or numbness or pain that just won't go away.

1. Short-acting loop diuretics

Why they're prescribed: Diuretics (also called water pills) are used to treat high blood pressure, congestive heart failure and edema, among other conditions. Diuretics help the body get rid of excess fluid by moving it into the urine.

Short-acting loop diuretics, so named because they are rapidly eliminated from the body, include bumetanide (Bumex) and furosemide (Lasix, Puresis).

How they can cause leg cramps: Diuretics increase the body's excretion of some electrolytes — including sodium, chloride and potassium — through the urine. Low levels of these can cause extreme fatigue and muscle weakness, as well as achy joints, bones and muscles.
Alternatives: A low dose of a long-acting loop diuretic, such as torsemide (Demadex), can reduce the risk of electrolyte loss. It may also be helpful to cut back on dietary salt, exercise more and control your fluid intake. Be careful with salt substitutes, however, as most contain potassium chloride and can also cause electrolyte imbalances. And be sure to consult a health care professional before beginning a new exercise regimen.

2. Thiazide diuretics

Why they’re prescribed: Thiazide diuretics are most commonly used to treat high blood pressure, although they are also used to treat congestive heart failure, edema and other conditions.

Examples of thiazide diuretics include chlorothiazide (Diuril), hydrochlorothiazide (Microzide), indapamide (Lozol) and metolazone (Zaroxolyn).

How they can cause leg cramps: Like short-acting loop diuretics (see above), thiazide diuretics can deplete key electrolytes, causing leg cramps and other serious muscle problems.

Alternatives: Talk with your health care provider about the advisability of switching to a low dose of a long-acting loop diuretic, such as torsemide (Demadex), which can significantly reduce the risk of electrolyte loss, or to another hypertension medication. It may also be helpful to cut back on dietary salt, exercise more and control your fluid intake. Be careful with salt substitutes, however; most contain potassium chloride and can also cause electrolyte imbalances. And consult a health care professional before beginning a new exercise regimen.

Next page: Beta-blockers. »
3. Beta-blockers

Why they're prescribed: Beta-blockers are typically prescribed to treat high blood pressure (hypertension) and arrhythmias (abnormal heart rhythms). These drugs slow the heart rate and lower blood pressure by blocking the effect of the hormone adrenaline. Beta-blockers are also used to treat angina, migraines, tremors and, in eyedrop form, certain kinds of glaucoma.

Examples: atenolol (Tenormin), carvedilol (Coreg), metoprolol (Lopressor, Toprol), propranolol (Inderal), sotalol (Betapace), timolol (Timoptic) and some other drugs whose chemical names end with "-olol."

How they can cause leg cramps: Researchers have known for more than 20 years that beta-blockers can induce leg cramps, but they haven't yet determined why. Studies have shown that beta-blockers cause the arteries in the legs and arms to narrow, which in turn causes less blood to flow through the limbs. That's why some people who take beta-blockers have cold hands and feet, a condition known as peripheral vasoconstriction. (Should you experience this side effect, it's important to let your physician know as soon as possible.) Because there's often a delay between starting on a beta-blocker and the appearance of leg cramps — anywhere from a few months to more than two years) — patients typically don't suspect a connection between the two.

Alternatives: For older people, benzothiazepine calcium channel blockers, another type of blood pressure medication, are often safer and more effective than beta-blockers.

4. Statins and fibrates
Why they're prescribed: Statins and fibrates are used to treat high cholesterol. The top-selling statins are atorvastatin (Lipitor), rosuvastatin (Crestor) and simvastatin (Zocor); the top-selling fibrate is fenofibrate (Tricor).

How they can cause leg cramps: Studies show that statins can inhibit the production of satellite cells in the muscle, interfering with muscle growth. Some researchers have also suggested that statins work, at the cellular level, to sap energy. Muscle weakness and aches throughout the body can be symptoms of statin-induced rhabdomyolysis, a breakdown of skeletal muscle that causes muscle fibers to be released into the bloodstream, sometimes harming the kidneys. Additionally, older adults who take these drugs are at greater risk of developing sarcopenia, or the wasting away of skeletal muscle and strength that's associated with aging.

Alternatives: If you're among the many millions of older Americans who don't have known heart disease but are taking these drugs to lower their slightly elevated cholesterol, ask your doctor or other health care provider about trying to lower your cholesterol by changing your diet. You also might try lowering your blood levels of homocysteine — which is linked to high cholesterol — by taking a combination of sublingual (under-the-tongue) vitamin B12 (1,000 mcg daily), folic acid (800 mcg daily) and vitamin B6 (200 mg daily).

Next page: Beta2-agonists. »

5. Beta2-agonists

Why they're prescribed: Beta2-agonists are bronchodilators — drugs that relax the smooth muscles surrounding the bronchial tubes, making it easier to breathe. They're frequently
prescribed to relieve the symptoms of **chronic obstructive pulmonary disease (COPD)**.

**Beta2-agonists** are typically given through an inhaler, which delivers a measured dose of the drug as a fine mist. They're also sometimes given in pill or injectable form to patients who can't use inhalers.

**Beta2-agonists** include albuterol (Proventil, Ventolin), formoterol (Symbicort), levalbuterol (Xopenex), metaproterenol, pirbuterol (Maxair), salmeterol (Advair) and terbutaline.

**How they can cause leg cramps:** Researchers don't yet know why beta2-agonists can cause leg cramps.

**Alternatives:** If you're using a beta2-agonist for a condition other than pulmonary disease, talk with your doctor or other health care provider about possibly switching medications or types of treatment. Systematic reviews of studies have found that beta2-agonists do not provide significant relief to non-COPD patients with acute bronchitis or cough.

If you do have pulmonary disease, I'd suggest talking with your physician about switching to tiotropium bromide (Spiriva), a different type of long-acting bronchodilator, used once a day. Spirova has been shown to outperform beta2-agonists at improving the overall health status of people with COPD.

**6. ACE inhibitors**

**Why they're prescribed:** Angiotensin-converting enzyme (ACE) inhibitors are used to treat high blood pressure, congestive heart failure and other conditions. These drugs help relax blood vessels by preventing the body from producing angiotensin II, a hormone that causes blood vessels to narrow and, in turn, blood pressure to rise.
Examples of ACE inhibitors include: benazepril (Lotensin), captopril (Capoten), enalapril (Vasotec), fosinopril, lisinopril (Prinivil, Zestril), moexipril (Univasc), perindopril (Aceon), quinapril (Accupril), ramipril (Altace) and trandolapril (Mavik).

How they can cause leg cramps: ACE inhibitors can cause potassium to build up in the body (another type of electrolyte imbalance), which can lead to leg cramps and achy joints, bones and muscles.

Alternatives: If you're taking an ACE inhibitor for a cardiovascular problem, talk with your doctor about possibly switching to a benzothiazepine calcium channel blocker, another form of blood-pressure medication that is often better tolerated by older adults. This is especially important for African Americans and Asian Americans, who because of differences in their renin-angiotensin systems, have much higher incidences of adverse effects.

If your condition is accompanied by fluid retention, your doctor may consider adding a low dose of a long-acting loop diuretic such as torsemide.

Next page: Angiotensin II-receptor blockers (ARBs).

7. Angiotensin II-receptor blockers (ARBs)

Why they're prescribed: ARBs are often used to treat coronary artery disease or heart failure in patients who can't tolerate ACE inhibitors or who have type 2 diabetes or kidney disease from diabetes. Instead of blocking the body's production of angiotensin II, ARBs prevent it from exerting its blood vessel-constricting effects.
Examples of ARBs include: candesartan (Atacand), irbesartan (Avapro), losartan (Cozaar), telmisartan (Micardis) and valsartan (Diovan).

How they can cause leg cramps: Like ACE inhibitors, ARBs frequently lead to potassium overload in the body, which can cause leg cramps and achy joints, bones and muscles.

Alternatives: As with ACE inhibitors, I'd recommend you consult with your health care provider about the advisability of switching to a benzothiazepine calcium channel blocker, which is often better tolerated by older adults. This is especially important for African Americans and Asian Americans, who because of differences in their renin-angiotensin systems, have much higher incidences of adverse effects.

A low dose of a long-acting loop diuretic such as torsemide may also be desirable.

8. Antipsychotics

Why they're prescribed: Antipsychotics are used to treat schizophrenia, bipolar disorder and other serious psychiatric conditions. Antipsychotic drugs also are often prescribed "off label" to treat agitation and depression, among other conditions.

Commonly prescribed antipsychotics include aripiprazole (Abilify), chlorpromazine (Thorazine), haloperidol (Haldol), olanzapine (Zyprexa), risperidone (Risperdal) and ziprasidone (Geodon).

How they can cause leg cramps: Antipsychotics are powerful central nervous system depressants. In studies, their side effects include fatigue, lethargy and weakness. All of these drugs also lower dopamine levels, which can cause drowsiness and sleepiness, and lead to muscle stiffness and muscle
cramping. Serious dopamine deficits caused by the continued use of antipsychotics can cause muscle rigidity and often irreversible movement disorders such as akathisia (an urge to keep moving around) and tardive dyskinesia (a syndrome characterized by involuntary, repetitive body movements).

**Alternatives:** Talk with your doctor or other health care provider about the advisability of reducing the dosage or switching to another medication, especially if you have been prescribed an antipsychotic drug for problems with sleeping, anxiety or depression.

"Ask the Pharmacist" is written by Armon B. Neel Jr., PharmD, CGP, in collaboration with journalist Bill Hogan. They are coauthors of Are Your Prescriptions Killing You? (Atria Books).