

Men with heart disease can safely mix their nitrates with erectile dysfunction drugs

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Doctors have long thought it dangerous to prescribe erectile dysfunction

drugs like Viagra alongside chest pain pills containing nitrates.

"It's always been a big red line," said Dr. John Osborne, director of State of the Heart Cardiology in Grapevine, Texas. "You do not mix. Don't go there."

But sex remains important among men with [heart problems](#)—so much so that co-prescription of ED drugs and nitrate pills increased 20-fold between 2000 and 2018 in Denmark, said Dr. Anders Holt of the cardiology department at the University of Copenhagen.

Now, a new study indicates there might be little to no potential risk in co-prescribing the two types of drugs.

Men are not more likely to suffer a [heart attack](#), stroke or [cardiac arrest](#) if they've been prescribed both an ED drug and a nitrate medication, according to a study led by Holt and published April 18 in the *Annals of Internal Medicine*.

"No increased risk following co-prescription was found, suggesting that in our selected cohort of patients, co-prescription could be safe," Holt said.

[Nitrates](#) often are prescribed to men with heart problems and clogged arteries. In the movies, nitrates are the little pills that guys pop under their tongues when they think they might be having a heart attack.

Nitrates ease chest pain and prevent heart attack by causing [blood vessels](#) to relax and widen, improving [blood flow](#) and allowing more oxygen-rich [blood](#) to reach the heart muscle.

ED drugs like Viagra and Cialis—called [PDE5 inhibitors](#)—produce the same effect, even though they operate in a completely different manner.

They also widen blood vessels, in their case to allow more blood to reach the penis and promote easier erections.

The concern, which has stretched back as far as Viagra's approval in 1998, is that taking the two drugs together could cause a person's blood pressure to dip to dangerously low levels.

At the very least, the patient could suffer from dizziness or lightheadedness, Osborne said. At worst, the drop in blood pressure might lead to a heart attack or stroke.

Since men are being prescribed both drugs anyway, Holt and his team set out to see if these guys are putting themselves at risk for the sake of good sex.

They pulled up the [medical records](#) of nearly 250,000 Danish men with heart disease, focusing on 42,000 who were prescribed nitrates between 2000 and 2018.

The number of [nitrate](#) users who had also been prescribed an ED drug rose dramatically during that period, from 0.9 prescriptions per 100 patients in 2000 to 19.5 per 100 in 2018.

But researchers found no statistically significant association between any worrisome or dangerous [heart](#)-related outcomes and co-prescription of the two types of drugs.

They speculated this is probably because men are not taking the two medications at the same time, even though both sets of drugs are in their medicine cabinets.

That could simply be a matter of timing, Osborne said.

"The [nitrates](#) are usually taken in the morning and the ED drugs you usually take in the evening, time enough that that drug interaction is not relevant," he said.

Or it could be that patients are heeding doctors' warnings to space out the drugs, said Dr. George Abraham, president of the American College of Physicians.

"A number of us physicians would warn them that as long as they don't take them together so that they both come to a peak at the same time, that if you stagger the two, then that way it should be less of an issue," Abraham said. "I think the study has just borne out of what we have sort of suspected all along, at least in clinical practice."

Either way, Osborne and Abraham maintain that men should still take care not to mix the two types of drugs, particularly since ED medications have become longer-lasting.

"The moral of the story would be that this still doesn't eliminate the risk," Abraham said. "Viagra has about a four-hour window, but Cialis is a 24-hour medication. If they've taken an ED [drug](#) and if they were to pop one or two nitros because of [chest pain](#), they still stand the risk of potentially having some concomitant effect together and can drop their blood pressure."

At the same time, the study findings provide some relief for cardiologists whose patients want to take ED drugs, Osborne said.

"I think we should still be cautious, but it is very reassuring to see that we're not detecting any signal of major harm in patients who have prescriptions for both of those drugs," Osborne said. "There's the potential for [drug interaction](#), but we're not seeing real-world harm."

A separate study published last year yielded similar results.

More information: The American Heart Association has more about [heart medications](#).

Anders Holt et al, Adverse Events Associated With Coprescription of Phosphodiesterase Type 5 Inhibitors and Oral Organic Nitrates in Male Patients With Ischemic Heart Disease, *Annals of Internal Medicine* (2022). [DOI: 10.7326/M21-3445](https://doi.org/10.7326/M21-3445)

Anthony P. Nunes et al, Cardiovascular Outcome Risks in Patients With Erectile Dysfunction Co-Prescribed a Phosphodiesterase Type 5 Inhibitor (PDE5i) and a Nitrate: A Retrospective Observational Study Using Electronic Health Record Data in the United States, *The Journal of Sexual Medicine* (2021). [DOI: 10.1016/j.jsxm.2021.06.010](https://doi.org/10.1016/j.jsxm.2021.06.010)

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