

Wyoming Drug Utilization Review

Antidepressant associated sexual adverse effects

WRITTEN BY MERCEDES GROVE, PHARM D CANDIDATE 2022

Antidepressant associated adverse sexual effects occur in approximately 28-53% of antidepressant users (1). These effects include loss of erectile or ejaculatory function in men and loss of libido and anorgasmia in both men and women (1). Serotonin, noradrenaline, dopamine and acetylcholine have an effect on the brain and genitalia; however, serotonin is the main neurotransmitter thought to be associated with antidepressant induced sexual dysfunction. Dopamine and noradrenaline are thought to increase libido and arousal (2). It is important to determine if sexual dysfunction is being contributed to by other causes, such as depression, alcohol abuse, cardiac disease, diabetes, or nervous system conditions. It is also important to rule out sexual dysfunction caused by other medications (2).

Figure 1 identifies the likelihood of sexual dysfunction of each antidepressant. Overall, sexual dysfunction may be more common with selective serotonin reuptake inhibitors (SSRIs) (1,3). Tricyclic antidepressants (TCAs), SSRIs and serotonin/norepinephrine reuptake inhibitors (SNRIs) have been associated with loss of libido and erectile dysfunction (4). TCAs, SSRIs, venlafaxine, desvenlafaxine, and monoamine oxidase inhibitors (MAOIs) are all associated with orgasm dysfunction. Trazodone has been associated with priapism (4).

Management of sexual dysfunction secondary to antidepressant use is dependent on the response to the antidepressant and severity of the sexual dysfunction. Initial treatment includes watchful waiting for two to eight weeks. If the sexual dysfunction persists, studies support decreasing the antidepressant dose but maintaining a dose within therapeutic range (2,5). Some sources recommend planning sexual activity at times when drug levels would be at their lowest, such as right before or immediately after a dose (2). For a patient who is experiencing ongoing depression with partial or no response to the antidepressant, or has a response to the antidepressant and severe sexual adverse effects, data supports changing the antidepressant to a non-SSRI with a goal of decreasing depressive symptoms while minimizing sexual adverse effects. If the patient is experiencing improved depression and mild to moderate sexual adverse effects, guidelines recommend

WY-DUR Manager
Aimee Lewis, PharmD, MBA

WY-DUR Board Members
Chris Mosier, RPh, Chair
Robert Monger, MD Vice Chair
Hoo Feng Choo, MD
Scott Johnston, MD
Garrett Needham, RPh
Patrick Yost, MD
Kristen Lovas, PharmD
Melinda Carroll, PharmD
Danae Stampfli, MD
Evan Crump, PharmD
Layne Lash, FNPC
Tracie Caller, MD

WY-DUR Board Ex-Officios
Patrick Johnson, PharmD, MPH
James Bush, MD
Cori Cooper, PharmD
Melissa Hunter, PharmD

WY-DUR Program Assistant
Karly Bentz

WY-DUR
University of Wyoming
School of Pharmacy
Dept. 3375
1000 E. University Ave
Laramie, WY 82071
307-766-6750
www.uwyo.edu/DUR

Edited by
Aimee Lewis, PharmD, MBA
Karly Bentz

augmenting with a second medication (2,5). The “Practice guideline for the treatment of patients with major depressive disorder” (4) recommends treating decreased libido, erectile dysfunction, and orgasm dysfunction by augmenting with sildenafil, tadalafil, buspirone, or bupropion (4). One review found that bupropion 150 mg twice daily has the potential to decrease sexual dysfunction in women, while sildenafil and tadalafil are the most promising adjunct medications in men (6). Priapism caused by trazodone is considered a medical emergency (4).

Figure 1: Comparison of Sexual Dysfunction Associated with Antidepressants^{2,3}

Drug	<u>Likelihood of Sexual Dysfunction</u>	Drug	<u>Likelihood of Sexual Dysfunction</u>
Tricyclic Antidepressants and Related Compounds		Selective Serotonin Reuptake Inhibitors	
Amitriptyline	Low	Citalopram	Moderate to High
Amoxapine	Low	Escitalopram	Moderate to High
Clomipramine	Moderate to High	Fluoxetine	Moderate to High
Desipramine	Low	Fluvoxamine	Moderate to High
Doxepin	Moderate	Paroxetine	Moderate to High
Imipramine	Low	Sertraline	Moderate to High
Maprotiline	Low	Vilazodone	None
Nortriptyline	Low	Serotonin/Norepinephrine Reuptake Inhibitors	
Protriptyline	Low	Desvenlafaxine	Low
Trimipramine	Low	Duloxetine	Low
Dopamine-Reuptake Blocking Compounds		Levomilnacipran	Moderate to High
Bupropion	None	Milnacipran	Moderate
5-HT₂ Receptor Antagonist Properties		Venlafaxine	Moderate to High
Nefazodone	None	Monoamine Oxidase Inhibitors	
Trazodone	Moderate	Isocarboxazid	Low
5-HT₃ Receptor Antagonist Properties		Phenelzine	Moderate
Vortioxetine	Moderate to High	Selegiline	None
Noradrenergic Antagonist		Tranylcypromine	Low
Mirtazapine	Low to Medium		

Many patients taking antidepressants will experience antidepressant associated sexual dysfunction. Sexual dysfunction is most commonly associated with medications that modulate serotonin such as SSRIs. Management of sexual dysfunction has several steps including watchful waiting, decreasing the antidepressant dose, planning sexual activity at the time of the next scheduled dose, changing the antidepressant, or adding an augmenting agent.

References

1. Heimberg C, Ehrlich A. Adverse effects of antidepressant medication. In: Dynamed [database online]. Ipswich (MA): EBSCO Industries, Inc.; 2021. Available from: <http://www.dynamed.com/>. Accessed: October 18, 2021.
2. Rothmore J. Antidepressant-induced sexual dysfunction. Med J Aust. 2020;212:329-334.
3. Comparison of antidepressant adverse effects. Lexi-Comp Online. Hudson (OH): UpToDate, Inc.; 2021. Available from: <http://www.online.lexi.com/>. Accessed: October 18, 2021.
4. Gelenberg AJ, Freeman MP, Markowitz JC, et al. Practice guideline for the treatment of patients with major depressive disorder: 3rd ed. American Psychiatric Association; 2010. Available from: https://psychiatryonline.org/pb/assets/raw/sitewide/practice_guidelines/guidelines/mdd.pdf. Accessed: October 18, 2021.
5. Hirsch M, Birnbaum RJ, Roy-Byrne PP, Solomon D. Sexual dysfunction caused by selective serotonin reuptake inhibitors (SSRIs): management. UpToDate [database online]. Waltham (MA): UpToDate, Inc.; 2021. Available from: <https://www.uptodate-com/>. Accessed: October 18, 2021.
6. Taylor MJ, Ruskin L, Bullemor-Day P, et al. Strategies for managing sexual dysfunction induced by antidepressant medication. Cochrane Database Syst Rev. 2013;5:CD003382.

The P&T Committee met for its quarterly business meeting on August 10, 2023

Highlights of this meeting include:

Dr. Robert Monger, rheumatologist from Cheyenne, has replaced Dr. Paul Bongat on the P&T Committee. Chris Mosier, RPh is the new Chair and Dr. Monger is Vice Chair.

The Wyoming Board of Pharmacy rules have been updated including a change in the number of continuing education credit hours required for pharmacist and pharmacy technician licensure. Please visit the Board of Pharmacy website at <https://pharmacyboard.wyo.gov> for more information.

Rexulti will be approved for the diagnosis of Alzheimer's agitation.

Dificid will no longer require prior authorization.

Vowst, Inpefa, Vyjuvek and Leqembi were reviewed. All were limited to indication. Sogroya, Veozah, and Zavzpret were reviewed with no evidence of a significant difference in safety or efficacy versus the existing classes of products.

All were referred to the Department of Health for cost analysis and Preferred Drug List placement.

All prior authorization criteria are open for public comment. Comments can be sent by email to alewis13@uwyo.edu.

All comments should be received by September 15, 2023. The next P&T Committee meeting will be held November 9, 2023 in Cheyenne. An agenda will be posted approximately two weeks prior to the meeting.

Wyoming Drug Utilization Review
University of Wyoming
School of Pharmacy
Dept. 3375
1000 E. University Avenue
Laramie, WY 82071

September 2023
In This Issue

Antidepressant associated sexual adverse effects
P&T Committee Meeting Update

Please contact WY-DUR at 307-766-6750 to have your name added or removed from our mailing list, or if you need to update your address. The WY-DUR newsletter is also available online at www.uwyo.edu/DUR/newsletters.