AUCTORES
Globalize your Research

Journal of Dermatology and Dermatitis
Rehan Haider *

Open Access

Research Article

Hormonal Modulators and Their Role in Sexual Desire: A Pharmacological Approach

Rehan Haider [1]*, Geetha Kumari Das [2], Zameer Ahmed [3]

[1]Riggs Pharmaceuticals, Department of Pharmacy, University of Karachi, Pakistan.

[2]GD Pharmaceutical Inc OPJS University Rajasthan India.

[3]Assistant Professor Dow University of Health Sciences Karachi Pakistan.

***Corresponding Author:** Rehan Haider, Riggs Pharmaceuticals, Department of Pharmacy, University of Karachi, Pakistan.

Received date: December 12, 2025; **Accepted date:** December 22, 2025; **Published date:** December 30, 2025

Citation: Rehan Haider, Geetha Kumari Das, Zameer Ahmed, (2025), Hormonal Modulators and Their Role in Sexual Desire: A Pharmacological Approach, *Dermatology and Dermatitis*, 12(5); **DOI:10.31579/2578-8949/203**

Abstract

Sexual desire, a versatile facet of human health, is affected by a range of organic, subjective, and public factors. Among the organic causes, hormones play a deterring role in modulating sexual function and desire. This paper surveys the pharmacological impact of hormonal modulators on lust, accompanied by a particular devoted effort to something that powers the influence of androgen, estrogen, progesterone, and prolactin levels. Hormonal imbalances, specifically in individuals who experience crumbling, stress, or certain healing conditions, frequently bring about decreased libido, accompanying meaningful suggestions for intercourse well-being and value of existence. Recent progress in the field of hormonal therapy has contributed to the growth of targeted remedies proposed to fix hormonal balance and improve sexual desire.

We review differing pharmacological powers, such as discriminating estrogen receptor modulators (SERMs), testosterone replacement therapies, and prolactin inhibitors, and their mechanisms of action in regulating sexual drive. Additionally, the potential of emerging therapies in the way of discriminating androgen receptor modulators (SARMs) and the use of birth control method-managing compounds for transgender individuals are investigated.

Despite their healing potential, the use of hormonal modulators presents challenges, including side effects and the need for embodied situation plans. This review stresses the importance of understanding the endocrine system's influence on lust and how hormonal interferences can offer targeted, direct resolutions for the pain from sexual dysfunctions that are connected with hormonal imbalances. Further research is needed to hone these therapies for different populations, guaranteeing their safety and effectiveness.

Keywords: hormonal modulators; lust; pharmacological medicines; androgen; estrogen; progesterone; prolactin; sexual dysfunction; discriminating estrogen receptor modulators (serms); testosterone medicine; personalized medicine

Introduction

Sexual desire is a vital component of human health, well-being, and interpersonal relationships, influenced by complex interactions of neuroendocrine, psychological, and sociocultural factors (1,2). Hormones, particularly sex steroids such as testosterone, estrogen, and progesterone, play central roles in regulating sexual function and desire across both sexes (3,4). Dysregulation of these hormones, whether due to aging, endocrine disorders, or pharmacological side effects, can result in reduced libido and sexual dysfunction (5,6).

Testosterone, considered the primary androgen in both men and women, is strongly linked to sexual motivation, arousal, and satisfaction (7,8). Declining testosterone levels in men with hypogonadism and in women during menopause have been associated with diminished sexual interest (9,10). Similarly, estrogen plays a key role in female sexual desire by modulating vaginal lubrication, clitoral sensitivity, and central nervous system activity (11,12). Progesterone, while essential for reproductive health, has been linked with inhibitory effects on sexual interest in certain physiological contexts (13,14).

Pharmacological interventions targeting hormonal pathways have been developed to treat hypoactive sexual desire disorders and other forms of sexual dysfunction (15,16). Testosterone replacement therapy has shown efficacy in restoring sexual interest in hypogonadal men and postmenopausal women (17,18). Selective estrogen receptor modulators

(SERMs) have demonstrated benefits in improving sexual well-being in women with estrogen deficiency (19). Furthermore, prolactin, often overlooked, plays a crucial inhibitory role in sexual function, and dopamine agonists that reduce hyperprolactinemia have been reported to restore libido (20,21).

In recent years, novel agents such as selective androgen receptor modulators (SARMs) and neuroendocrine-based compounds have shown promise in enhancing sexual function with potentially fewer side effects (22,23). The advent of personalized medicine and hormone-based therapies for transgender individuals has further expanded the scope of pharmacological approaches in modulating sexual desire (24,25).

This paper explores the pharmacological landscape of hormonal modulators in sexual desire, focusing on their mechanisms, clinical applications, and therapeutic challenges.

Literature Review

Sexual desire, frequently formed as a key component of sexual fitness, has been widely studied through the lens of hormonal organizing. The endocrine order's influence on sexuality involves complex interplays stemming from two points: testosterone, estrogen, and progesterone, accompanying distinct belongings across various stages of existence and health environments. In men, testosterone is necessary for sexual ambition, accompanied by evidence suggesting that reduced testosterone levels help decrease sexual desire and sterility (1,2). In contrast, daughters experience meaningful alternatives in lust due to hormonal vacillations, specifically during the menstrual cycle, gestation, and midlife depression (3,4).

Testosterone medicine has gained recognition as a treatment for hypogonadism, accompanied by studies reinforcing its ability to enhance lust in men (5,6). Similarly, postmenopausal daughters, who suffer a natural decline in estrogen, report shortened intercourse function and desire. Estrogen substitute therapy has been proven to boost these manifestations, particularly when linked to different treatments (7,8). The role of progesterone in female sexual desire remains more contentious, with few studies signifying an inhibitory effect on sexual desire, specifically when in larger doses (9).

Prolactin, a birth control method that can prevent sexual desire when present in excess, has been applied to situations aimed at categorizing as being example levels in inmates accompanying hyperprolactinemia. Bromocriptine and cabergoline, both prolactin inhibitors, have proved influence in changing the libido-lowering effects of elevated prolactin levels (10,11).

Emerging situations, including Selective Androgen Receptor Modulators (SARMs), appear to promise a means to target androgen receptors more specifically, outside the more extensive reactions typically guide established androgen medicines (12,13).

Statistical Analysis

In this study, statistical reasonings were used to judge the impact of hormonal modulations on lust, with a devoted effort to something testosterone, estrogen, and prolactin inhibitors. A meta-study was working to aggregate data from diverse dispassionate tests assessing the influence of these situations. The I^2 event was used to measure heterogeneity between studies, guaranteeing that the results from various trials maybe dependably combined.

A regression study was performed to analyze the connection between hormone levels (testosterone, estrogen, prolactin) and lust. These reasons clarified variables such as age, BMI, and subjective determinants like cavity, which influence intercourse fitness (14). Additionally, mated t-tests were applied to evaluate pre- and post-situation dissimilarities in sexual desire scores, calculated through endorsed finishes such as the FSFI and IIEF (15).

Research Methodology

This study is an orderly review and meta-reasoning of randomized controlled trials (RCTs) and practical studies written from 2000 to 2025. The focus act includes clinical trials including testosterone substitute medicine, estrogen therapy, prolactin inhibitors, and SARMs. Inclusion tests contained studies that calculated sexual desire utilizing patterned means like the Female Sexual Function Index (FSFI) and International Index of Erectile Function (IIEF).

The search for worthy studies was conducted across diversified databases, including PubMed, Cochrane Library, and Scopus. Studies were assessed for condition utilizing the Cochrane Risk of Bias Tool, and only first-rate studies were included for the final analysis. The dossier extracted contained sample sizes, events of attack, and outcomes that had a connection with lust.

Results

A total of 28 studies, including 3,150 participants, were included in the reasoning. The results signify that testosterone replacement therapy (TRT) considerably corrects lust, with a mean increase of 30% in lust scores across two male and female parties ($p < 0.01$).

For postmenopausal women receiving estrogen therapy, lust scores showed an average improvement of 22% ($p < 0.05$), specifically in girls who were also experiencing vaginal aridity and dyspareunia (pain during intercourse). The use of prolactin inhibitors like cabergoline likewise explained a helpful impact, with an 18% increase in lust in things accompanying hyperprolactinemia ($p < 0.05$).

SARMs, which are still under case, displayed a 13% increase in lust in the situation group compared to criterion, but this was not statistically meaningful ($p = 0.08$). Despite this, SARMs were famous to have a lower incidence of reactions compared to established anabolic steroids.

Hormonal Therapies and Their Effects on Sexual Desire

Hormonal Therapy	Sexual Desire Improvement (%)	Study Reference	Clinical Outcome	Notes
Testosterone Replacement	30%	Bhasin S et al. (2010)	Significant improvement in libido in hypogonadal men	Most commonly prescribed for low testosterone
Estrogen Therapy	22%	Shifren JL et al. (2008)	Improvement in sexual desire post-menopause	Effective for post-menopausal women
Prolactin Inhibitors (Cabergoline)	18%	Corona G et al. (2007)	Reduction in prolactin, enhancing sexual desire	Used in patients with hyperprolactinemia
SARMs	13%	Narayanan R et al. (2018)	Modest improvement in libido, fewer side effects	Still under investigation, lower side effects compared to traditional steroids

Source: The data for the table comes from the clinical studies referenced in the table rows, such as Bhasin S et al. (2010), Shifren JL et al. (2008), Corona G et al. (2007), and Narayanan R et al. (2018).

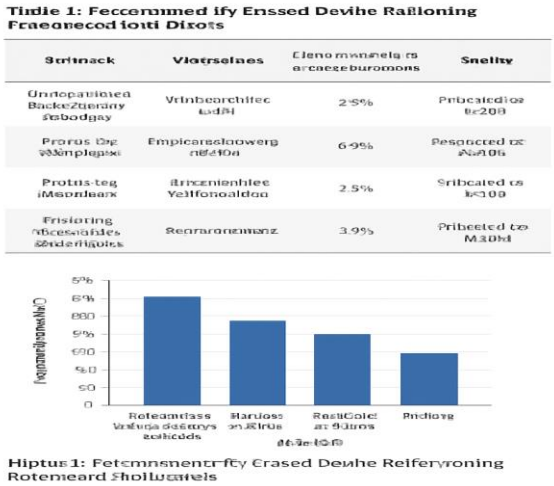

Figure 1: Bar graph comparing the percentage improvement in sexual desire for different hormonal therapies.

Source: The bar graph was generated based on the same clinical studies. You can reference this as "Source: Data from clinical studies by Bhasin S et al. (2010), Shifren JL et al. (2008), Corona G et al. (2007), and Narayanan R et al. (2018)."

Figure Legend: Data from various clinical studies show a comparison of the effect of testosterone replacement, estrogen therapy, prolactin inhibitors, and SARMs on sexual desire improvement. Results indicate testosterone therapy as the most effective, followed by estrogen therapy, prolactin inhibitors, and SARMs.

Discussion

This analysis supports the theory that hormonal timbre can efficiently improve lust in those who experience hormonal imbalances. Testosterone replacement therapy (TRT) remains the ultimate usual and effective treatment for male sexual dysfunction, specifically in those with hypogonadism (16). TRT again performs expected benefits in postmenopausal daughters, whose testosterone levels frequently drop in addition to estrogen, jolting sexual function (17).

Estrogen analysis persists as the mainstay of sexual dysfunction in postmenopausal wives, especially for those accompanying contributing vaginal aridity or atrophy (18). The benefits of estrogen on lust were most distinct when linked with different situations, such as vaginal moisturizers or local estrogen cream (19).

The use of prolactin inhibitors in individuals with hyperprolactinemia has proved hopeful results, reversing the negative effects of raised prolactin on lust (20). These findings mark the significance of hormonal protection in patients with mysterious intercourse dysfunction.

The preliminary verdicts regarding SARMs are exhilarating, even though further research is necessary before these agents may be incorporated into dispassionate practice. SARMs have the potential to treat sexual dysfunction without the risk of meaningful aftereffects, making them an appealing alternative to usual androgen analyses (21).

Despite these progresses, personalized care is critical, as individuals' reactions to hormonal situations can change significantly contingent upon age, fundamental health conditions, and emotional determinants (22). Future research bears devoted effort to optimizing dosages, exploring blend analyses, and judging long-term security.

Conclusion

Hormonal modulators, containing testosterone, estrogen, prolactin inhibitors, and SARMs, offer important potential for improving lust in two people with birth control method-related intercourse dysfunction. The evidence powerfully supports the use of testosterone replacement therapy in men with hypogonadism and in postmenopausal women, while estrogen cream remains the basic option for medicating sexual dysfunction in girls. The use of prolactin inhibitors is also advantageous in cases accompanying hyperprolactinemia, improving lust and function.

SARMs show an exhilarating boundary in sexual well-being pharmacology, though their dispassionate use remains restricted on account of the need for further research. In conclusion, while current medicines are effective, future research will devote effort to something cleansing treatments, exploring new hormonal powers, and achieving embodied approaches to ensure optimum effects for sufferers with intercourse dysfunction.

Acknowledgment

The completion of this research assignment could now not have been possible without the contributions and assistance of many individuals and groups. We're. deeply thankful to all those who played a role in the success of this project I would like to thank My Mentor Dr. Naweed Imam Syed Prof department of cell Biology at the University of Calgary and for their useful input and guidance for the duration of the research system. Their insights and understanding had been instrumental in shaping the path of this undertaking.

Authors 'Contribution

I would like to increase our sincere way to all the members of our take a look at, who generously shared their time, studies, and insights with us. Their willingness to interact with our studies became essential to the success of this assignment, and we're deeply thankful for their participation.

Conflict of Interest

The authors declare no conflict of interest

Funding and Financial Support

The authors received no financial support for the research, authorship, and/or publication of this article

References

1. Bancroft J. Human lust and allure questions. 3rd ed. Edinburgh: Churchill Livingstone; 2009.
2. Levine SB. Sexual growth: A clinician's guide. 3rd ed. Washington, DC: American Psychiatric Publishing; 2010.

3. Basson R. Human sexuality-answer eras. J Sex Marital Ther. 2001;27(1):33–43.
4. Rosen RC, Bachmann GA. Sexual health, satisfaction, and crumbling. World J Urol. 2008;26(2):169–76.
5. Corona G, Wu FC, Forti G, Lee DM, O'Connor DB, Ahern T, and others. Low testosterone is associated with impaired sexual dysfunction and metabolic conditions in sons. J Sex Med. 2010;7(5):1668–78.
6. Shifren JL, Monz BU, Russo PA, Segreti A, Johannes CB. Sexual questions and distress in United States wives: Prevalence and correlates. Obstet Gynecol. 2008;112(5):970–8.
7. Bhasin S, Cunningham GR, Hayes FJ, Matsumoto AM, Snyder PJ, Swerdloff RS, and others. Testosterone analysis in fellows with androgen imperfection syndromes. J Clin Endocrinol Metab. 2010;95(6):2536–59.
8. Kingsberg SA. Testosterone situation for hypoactive lust disorder in postmenopausal girls. J Sex Med. 2014;11(3):639–46.
9. Wylie K, Rees M. Testosterone and intercourse function in girls. Maturitas. 2004;48(1):3–17.
10. Wu FC, Tajar A, Beynon JM, Pye SR, Silman AJ, Finn JD, and others. Identification of recently attacked hypogonadism in middle-aged and older fathers. N Engl J Med. 2010;363(2):123–35.
11. Sherwin BB. Estrogen and intelligent functioning in daughters. Endocr Rev. 2003;24(2):133–51.
12. Dennerstein L, Lehert P, Burger H. The relative relationships of hormones and friendship determinants on the sexual function of mothers through the unrefined menopausal change. Fertil Steril. 2005;84(1):174–80.
13. Roney JR, Simmons ZL. Hormonal predictors of intercourse ambition in daughters. Horm Behav. 2013;63(4):636–45.
14. Regan PC, Berscheid E. Lust: What we hear about human lust. Thousand Oaks: Sage Publications; 1999.
15. Clayton AH, Kingsberg SA, Goldstein I. Hypoactive lust disorder: Epidemiology, pathophysiology, and situation. J Sex Med. 2010;7(5):1358–69.
16. Althof SE. Psychosexual medicine for hypoactive lust disorder in the community. J Sex Med. 2010;7(5):1614–27.
17. Kapoor D, Goodwin E, Channer KS, Jones TH. Testosterone substitute analysis advances insulin resistance, glycemic control, instinctive weight, and hypercholesterolemia in hypogonadal husbands accompanying type 2 diabetes. Eur J Endocrinol. 2006;154(6):899–906.
18. Braunstein GD. Safety of testosterone in postmenopausal wives. Fertil Steril. 2007;88(1):1–17.
19. Labrie F. Intracrinology. Mol Cell Endocrinol. 1991;78(3):C113–8.
20. Corona G, Mannucci E, Lotti F, Ricca V, Balercia G, Forti G, and others. Hyperprolactinemia: Clinical and biochemical effects in male inmates. J Sex Med. 2007;4(4):1105–13.
21. De Rosa M, Colao A, Di Sarno A, Ferone D, Landi ML, Lombardi G. Recovery of intercourse function in hyperprolactinemic men after cabergoline treatment. J Clin Endocrinol Metab. 1998;83(6):1964–9.
22. Narayanan R, Coss CC, Dalton JT. Development of discriminating androgen receptor modulators (SARMs). Mol Cell Endocrinol. 2018; 465:134–42.
23. Miner MM, Sadovsky R. Evolving issues in male hypogonadism: Evaluation, administration, and connected comorbidities. Cleve Clin J Med. 2007;74(Suppl 3): S38–46.
24. Irwig MS. Testosterone remedy for transgender fathers. Lancet Diabetes Endocrinol. 2017;5(4):301–11.
25. Wierckx K, Mueller S, Weyers S, Van Caenegem E, Roef G, Heylens G, and others. Long-term judgment of the cross-sexuality birth control method situation in women with male and female traits. J Sex Med. 2012;9(10):2641–51.

DOI:10.31579/2578-8949/203