



**Share-Net
Jordan**
The Knowledge Platform on
Sexual and Reproductive Health
and Reproductive Rights



Sexual Enhancement Drug Utilization in Jordan

Insights and Risks

2024



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Introduction

Throughout history, aphrodisiacs have held a significant place in human culture, stemming from the reverence for Aphrodite, the Greek goddess embodying love, sex, and beauty. Sexuality has always been a vital aspect of human existence, cherished by both genders. When faced with impediments to healthy sexual function, individuals seek remedies they believe can alleviate their concerns. In contemporary times, aphrodisiacs have gained widespread popularity, promoted as aids to augment sexual desire, performance, and satisfaction for both men and women. Whether to invigorate intimacy or address issues like erectile dysfunction, premature ejaculation, or diminished libido.

The Signet Medical Dictionary¹ defines aphrodisiacs as "agents purported to enhance sexual performance or desire." Saban Kotta² characterizes them as food or drugs stimulating sex drive, igniting desire, and intensifying pleasure and performance. Similarly, M. T. Yakubu³ describes aphrodisiacs as substances that amplify sexual motivation, pleasure, or libido.

Dr. Salah Al-Azemi⁴ identifies aphrodisiacs as substances provoking arousal, lust, or enhancing sexual response. These enhancers encompass a spectrum, ranging from specific foods, nutrients,

beverages, and medications to herbal remedies and even fragrances with sexually stimulating properties.

Arousal and sexual motivation are intricate phenomena influenced by both physical and psychological elements. Within the body, a cascade of chemical and biological processes culminates in sexual arousal. However, the presence of sound mental health is essential for sexual motivation to manifest. Psychological conditions like stress and depression can dampen both sexual desire and arousal. Furthermore, societal and cultural influences play a significant role in shaping arousal and sexual motivation. Social norms and expectations surrounding sexuality can induce stress and anxiety, ultimately exerting a detrimental effect on one's sexual well-being.

Hence, the presence of either a physical, psychological or a combination of both types of issues can culminate in sexual dysfunction among individuals of both genders. In men⁵, signs of sexual dysfunction may encompass difficulties attaining or sustaining an erection, as well as a reduction in sexual desire. Similarly, in women⁶, manifestations of sexual dysfunction may entail diminished sexual desire or arousal disorders, such as challenges with arousal or an inability to

¹ <https://medical-dictionary.thefreedictionary.com/sexual+stimulant>

² Sabna Kotta, Shahid H. Ansari¹, Javed Ali, Exploring scientifically proven herbal aphrodisiacs, *Pharmacognosy Reviews*, 2013, Vol 7, Issue 13.

³ M. T. Yakubu, M. A. Akanji, A. T. Oladiji, Aphrodisiac potentials of the aqueous extract of *Fadogia agrestis* (Schweinf. Ex Hiern) stem in male albino rats, *Asian J Androl* 2005; 7 (4): 399–404.

⁴ Al-Azemi, Salah Khalid. "Stances of Islamic Jurisprudence on the Use of Sexual Stimulants." *Journal of Arabic Studies* 42, no. 5 (2020): 2289-2324. https://dram.journals.ekb.eg/article_161542.html

⁵ <https://www.mayoclinic.org/ar/diseases-conditions/erectile-dysfunction/symptoms-causes/syc-20355776>

⁶ <https://www.mayoclinic.org/ar/diseases-conditions/female-sexual-dysfunction/symptoms-causes/syc-20372549>

experience or sustain arousal during sexual activity), or orgasmic disorder (i.e., experiencing persistent or recurrent difficulty in achieving orgasm following sufficient sexual arousal or continuous stimulation), or sexual pain disorder (i.e., experiencing pain associated with sexual arousal or vaginal intercourse).

Studies^{7,8}, indicate that sexual dysfunction affects both men and women across various age groups, starting from the age of marriage (18 years and older), with a higher prevalence among older individuals. This underscores the importance of addressing the sexual and reproductive health needs of this segment of the population.

One study⁹ concluded that men in Jordan tend to avoid discussing their sexual problems with doctors and nurses, which could potentially jeopardize their overall health and well-being. Instead, they prefer utilizing alternative sources such as the internet, friends, and other men facing similar issues. They attempt to address their sexual health problems through alternative medicine and secretive treatments before seeking professional care.

A portion of individuals who use sexual enhancement drugs turn to unsafe methods to acquire them without a prescription. They resort to black market traders who deal with smuggled and

unlicensed sexual enhancement drugs due to their lower prices compared to regulated ones. This is often fueled by advertisements on social media and certain television channels, exploiting people's need for quick and discreet solutions to their problems.

The World Health Organization estimates that approximately 1 in 10 medical products in low- and middle-income countries¹⁰ are substandard or falsified. The Singapore Health Sciences Authority¹¹ warns against the consumption of sexual enhancement drugs obtained from street vendors, online sources, or dubious origins, emphasizing their potentially serious side effects, including death. Counterfeit medical products may lack active ingredients, contain incorrect active ingredients, or have incorrect amounts of the correct active ingredient.

The Jordanian Higher Population Council and Share-Net Jordan have commissioned this paper, forming a national committee comprised of practicing experts representing relevant national institutions, including the Ministry of Health, the Food and Drug Administration, the Customs Department, the Government Procurement Directorate, and the Pharmacists Syndicate. This paper aims to shed light on the use of sexual enhancement drugs in Jordan by reviewing the

⁷ IF Ghalayini, MA Al-Ghazo, R Al-Azab, I Bani-Hani, YS Matani, A-E Barham, MNA Harfeil and Y Haddad, Erectile dysfunction in a Mediterranean country: results of an epidemiological survey of a representative sample of men, *International Journal of Impotence Research* (2010) 22, 196–203. www.nature.com/ijir

⁸ Maher Elias Maaita, Basel M. Khreisat, Omar A. Tasso, Nareman Naser Otom, Bayan M. Aljaafreh, Gharam M. Abuassaf, Prevalence and associated risk factors of female sexual dysfunction among Jordanian women, *Journal of Family Medicine and Primary Care* 1489 Volume 7: Issue 6: 2018.

⁹ Muwafaq M. Al Momani, Lourance A. Al Hadid, Ahmad Haroun Al- Nawafleh, Seeking care behavior of men with sexual dysfunction in Jordan: patients' perspective, *Journal of Health, Medicine and Nursing*, Vol.42, 2017.

¹⁰ <https://www.who.int/news-room/fact-sheets/detail/substandard-and-falsified-medical-products>

¹¹ <https://www.hsa.gov.sg/consumer-safety/articles/dubious-sexual-enhancement-medicines>

the facts and challenges related to this issue. This is done to promote awareness of the importance of safe and responsible sexual health by adhering to healthy and secure practices in sexual life. Furthermore, it aims to contribute to directing health policies and sexual education toward improving sexual health care and guiding individuals and communities toward sustainable health choices.

It is expected that this paper will provide scientific evidence regarding:

- Classifications of sexual enhancement drugs and their use.
- The positive and negative aspects of sexual enhancement drug use.
- The prevalence of sexual dysfunction in Jordanian society and its relationship with psychological, physical, age, and gender-related factors.
- The use of natural sexual enhancement drugs and associated risks.
- The use of counterfeit drugs and associated risks.
- The role of national institutions in monitoring and combating the circulation, trafficking, and promotion of illegal and counterfeit sexual enhancement drugs.
- Aspects of promoting the use of sexual enhancement drugs in Jordan.
- Aspects of the proliferation of illegal sexual enhancement drugs in the markets.
- The volume of local production and imports of sexual enhancement drugs, as well as Jordan's consumption.
- The legal framework for the use of sexual enhancement drugs in Jordan.



1. The interest in researching the use of sexual enhancement drugs

The interest of the Jordanian Higher Population Council in researching the use of sexual enhancement drugs in Jordan stems from the following considerations :

- The Higher Population Council views sexual health as a determinant reflecting the overall health status at both societal and individual levels. Ensuring sexual health safety equates to overall bodily health safety, whether on a physical or psychological level. A population in good health alleviates pressure on the healthcare system and positively contributes to the country's economy by having healthy, productive citizens. Investing in sexual health is vital in this regard, through providing information, education, prevention, screening, and treatment.
- The council acknowledges that the supervised use of some sexual enhancement drugs can address sexual dysfunction in men and women of all age groups, including the elderly, who are more inclined to use these products. However, irresponsible or excessive use of some enhancers can lead to health problems and undesirable side effects.
- The council recognizes the issue of the proliferation of sexual enhancement drugs, especially counterfeit ones, and the increased promotion of their use through social media and television channels. This exacerbates irresponsible use, leading to health problems and unwanted side effects.

- The Higher Population Council is the national entity responsible for coordinating national efforts in the field of sexual and reproductive health, with active participation and a collaborative approach with all relevant national and donor agencies. It has developed, in collaboration with all national parties, the National Strategic Plan for Reproductive and Sexual Health 2020-2030 and monitors its implementation. Although the strategy does not directly address the use of sexual enhancement drugs, it aims to achieve comprehensive access to integrated reproductive and sexual health services and information to contribute to the well-being of families and individuals in Jordan at all stages of life. Within this framework, there is a need to enhance awareness of the importance of sexual health by adopting healthy and safe practices in sexual life.

- The council's interest in this topic aligns with Jordan's commitment to achieving Goal 3 of the Sustainable Development Goals 2030, "Ensure healthy lives and promote well-being for all at all ages," particularly Target 7, which aims to "ensure universal access to sexual and reproductive health-care services."



2. Classification of Sexual Enhancers and their use

There is a diverse range of sexual enhancement drugs available in Jordan, which can be classified into two categories: natural and synthetic.

- Natural Sexual Enhancement Drugs These are derived from natural ingredients such as honey, herbs, fruits, and vegetables. They are generally considered safer but may be less effective and not universally beneficial. Some individuals may require stronger doses or different types of enhancers to achieve the desired effect. Additionally, they may interact with other medications or health conditions. Therefore, consulting a health-care provider before use is important.

- Synthetic Sexual Enhancement Drugs These are manufactured in laboratories and come in various forms such as chewable tablets, gels, or topical agents applied directly to the genital organs to enhance arousal and sensitivity. They are more effective than natural enhancers but can cause serious side effects if not used properly and under medical supervision.

Sexual enhancement drugs can be further classified into male and female enhancers, each with different components and functions. Male sexual enhancement drugs typically focus on improving erection, while female sexual enhancement drugs aim to enhance sensitivity in the genital area. Some ingredients in sexual enhancement drugs can be used for both males and females, while others may be specific to one gender, such

as phosphodiesterase inhibitors suitable for males.

In Jordan, sexual enhancement drugs can be categorized into approved drugs that have been registered after the competent committee at the Food and Drug Administration ensures their safe use, efficacy, and quality. These drugs are authorized for distribution by the Director-General of the Food and Drug Administration in accordance with Article (3A) of the Drug and Pharmacy Law No. 12 of 2013. On the other hand, counterfeit sexual enhancement drugs, as defined by Article 81 of the law, are considered fake if they are manufactured outside the original company without its consent, do not contain the active ingredient, contain a different substance from that stated on the label, have a counterfeit or duplicated trade name or label, or mention a manufacturing country on the inner or outer packaging contrary to the actual manufacturing country. Such drugs are prohibited from circulation in Jordan, including free zones, economic development zones, and transit corridors, according to Article 82 of the law. This definition aligns with the World Health Organization's definition of counterfeit drugs¹² as medical products whose identity, composition, or source has been deliberately misrepresented or deceived¹³.

¹² World Health Organization, 2017, WHO member state mechanism on substandard/spurious/falsely-labelled/counterfeit (SSFFC) medical products. Working definitions. Annex A70/22. https://apps.who.int/gb/ebwha/pdf_files/WHA70/A70_23-en.pdf

¹³ In the World Health Organization's definition, the term "deliberate falsification/fraud" refers to any substitution, adulteration, or reproduction of an approved medical product, or the manufacture of a medical product that is not authorized. The term "identity" refers to the name, label, packaging, or documents supporting the authenticity of the approved medical product. The term "composition" refers to any component or ingredient of the medical product according to the applicable and officially recognized specifications. The term "source" refers to the identity of the marketing authorization holder, manufacturer, importer, exporter, distributor, or retailer, including name and address, as appropriate.

Users of sexual enhancement drugs in Jordan can be classified, according to their reasons for use, into three categories. The first category includes individuals experiencing erectile dysfunction; they use these drugs to improve their ability to achieve and maintain an erection and enhance sexual performance. The second category comprises individuals experiencing decreased sexual desire, such as elderly males and females, who use sexual enhancement drugs to increase sexual desire or stimulate sexual arousal. The third category includes individuals who use them for recreational purposes without specific sexual health issues or seeking an enhanced sexual experience to boost their pleasure. Additionally, some individuals use sexual enhancement drugs as part of the treatment for other diseases they suffer from, such as diabetes or psychological sexual problems like anxiety or depression¹⁴.



3. The positive and negative aspects of using sexual enhancement drugs

The positive and negative aspects of using sexual enhancement drugs cannot necessarily be said to enhance sexual health. The effect of sexual enhancement drugs depends on the type used and the method of administration. Some sexual enhancement drugs may be effective in improving certain aspects of sexual health, such as increasing sexual desire or enhancing sexual performance. However, it should be noted that

the irresponsible or excessive use of some drugs may lead to health problems and undesirable side effects. Below are some areas of the impact of sexual enhancement drugs on individual sexual health:

- **Stimulating sexual desire:** Some sexual enhancement drugs may increase sexual desire, contributing to improving the sexual lives of individuals experiencing low sexual desire.
- **Improving sexual performance:** Some drugs can affect sexual performance by increasing erectile strength or improving ejaculation control. However, it should be considered that irresponsible drug use may lead to health problems.

Hormonal effects: Some sexual enhancement drugs affect hormone levels in the body, such as testosterone. Modifying hormone levels may have unexpected effects on sexual and overall health.

- **Addiction:** Frequent use of sexual enhancement drugs may lead to psychological dependence on them to achieve sexual desire or performance, ultimately resulting in psychological problems and negative effects on personal relationships.
- **Health risks:** Excessive use of sexual enhancement drugs can have side effects on health, including cardiac effects and mental awareness.

It is always advisable to consult a doctor before using any type of sexual enhancement drugs to understand potential health effects and ensure safe use. A doctor can provide personalized advice based on individual health conditions and medical history. Depending on sexual enhancement

¹⁴ For example, the drug flibanserin was originally developed as an antidepressant, and the U.S. Food and Drug Administration (FDA) approved it as a treatment for decreased sexual desire in women before menopause.

drugs as the primary means to improve sexual health is not always the optimal solution, as there are often psychological and social reasons that need to be addressed to resolve issues related to sexual life.



4. Understanding Sexual Dysfunction : Causes and Treatments

The Mayo Clinic website (the world's largest nonprofit medical group) documents the causes of male sexual dysfunction¹⁵, including physical factors such as heart disease, blocked blood vessels (atherosclerosis), high cholesterol, high blood pressure, diabetes, obesity, low testosterone, tobacco use, alcoholism, and other forms of substance abuse. Additionally, prominent psychological causes include depression, anxiety, other mental health conditions, stress, relationship problems due to psychological pressure, poor communication, or other issues.

Depending on the cause and severity of sexual dysfunction and any underlying medical conditions, the doctor determines treatment options. However, before taking any medication for treatment, including dietary supplements and herbal remedies dispensed without a prescription, the approval of the treating physician is required because sexual dysfunction medications do not work for everyone and may be less effective in certain cases, such as diabetes, and some medications may also be dangerous if taken with nitrates, usually prescribed for chest pain, or if there is heart disease or severe low blood pressure.

The Mayo Clinic also documents the causes of sexual dissatisfaction and dysfunction in women¹⁶, including physical factors such as cancer, kidney failure, multiple sclerosis, heart disease, and bladder problems. Some medications reduce a woman's sexual desire and her body's ability to achieve orgasm, including blood pressure medications and chemotherapy drugs. Hormonal factors may lead to decreased blood flow in the pelvic area, necessitating more time for arousal and orgasm. Additionally, decreased sensation in the genital organs may occur, and the vaginal lining may become drier and less elastic. Furthermore, decreased sexual desire occurs when hormone levels decrease, and hormone levels also change in the body during childbirth and breastfeeding. In addition to psychological and social factors, untreated depression or anxiety can cause or contribute to sexual dysfunction, and long-term problems with a partner in sexual response can also reduce sexual desire. Since female sexual dysfunction has many symptoms, causes, and potential treatments, it is important to consult with specialists. Effective treatment of sexual dysfunction often requires addressing the underlying medical condition or hormonal changes.

The doctor may suggest changing the medication the patient is taking or prescribing a new medication. Usually, female sexual dysfunction problems are complex, so it is unlikely that the best medications will succeed in treating them if emotional or other social factors remain disturbed.

¹⁵ <https://www.mayoclinic.org/ar/diseases-conditions/erectile-dysfunction/diagnosis-treatment/drc-20355782>

¹⁶ <https://www.mayoclinic.org/ar/diseases-conditions/female-sexual-dysfunction/diagnosis-treatment/drc-20372556>



5. Sexual Dysfunction in Men and Women

Key findings from scientific evidence drawn from reviewed studies in this field include :

1. Globally, a significant portion of the population experiences sexual dysfunction. Around 40-45% of adult women and 20-30% of adult men report at least one noticeable sexual problem (often, frequently, almost always, or always)
2. In Jordan, the prevalence of female sexual dysfunction (FSD) is considerably higher than the global average, affecting approximately 64.7% of women. The most common issue is a lack of sexual desire. Age is considered a significant risk factor for FSD.
3. Several factors significantly increase the risk of FSD in Jordanian women: having more than four children, being married for over 10 years, having chronic health conditions, unemployment, and not using contraception.
4. Women with obesity are more likely to experience difficulties with arousal and orgasm.
5. A strong link exists between diabetes and FSD. A staggering 94.4% of Jordanian women with type 2 diabetes experience sexual dysfunction, and there is a significant correlation between anxiety, depression, and sexual function in this group.
6. According to the International Index of Erectile Function (IIEF), almost half (49.9%) of Jordanian men experience some degree of sexual dysfunction. The breakdown is 25% with mild dysfunction, 13.5% with moderate dysfunction,

and 11.4% with severe dysfunction.

7. Age is the biggest risk factor for male sexual dysfunction in Jordan. Other significant risk factors include low family income, lack of physical activity, obesity, smoking, high blood pressure, diabetes, and heart problems.
8. Despite experiencing sexual dysfunction, only 30% of men seek medical help. Among those who do, 39% resort to using sexual enhancers, with Sildenafil citrate (Viagra) being the most common choice (used by 70% of those treated). However, many complain about its high cost.
9. Many men with sexual dysfunction avoid seeking medical or nursing consultation. They prefer alternative sources of information and support, such as the internet, friends, or other men facing similar issues
10. Similar to women, a high percentage (62%) of men with diabetes experience sexual dysfunction. Notably, 30.3% experience severe dysfunction and the prevalence increases significantly with age, reaching a staggering 91% in men over 70.
11. While aging can decrease sexual motivation and desire, appropriate consultation and treatment can be highly beneficial for some patients. A collaborative approach involving the doctor, patient, and partner can improve care and enhance the quality of life for older adults.
12. Understanding the physical and social changes associated with aging is essential for effectively addressing sexual health concerns in older populations.



Supporting Studies

A study¹⁷ aimed at providing an overview of the definitions, incidence, and prevalence of sexual dysfunction in men and women was conducted by eight experts from five countries. The study involved a two-year review of the literature. The study concluded that the prevalence of all types of sexual dysfunction generally increases as men and women age. Overall, it indicates that approximately 40-45% of adult women and 20-30% of adult men have at least one clear sexual dysfunction (often, often, almost always, and always).

Another study titled¹⁸ "Erectile Dysfunction in a Mediterranean Country : Epidemiological Survey Results of a Representative Sample of Men" aimed to determine the prevalence of sexual dysfunction and its health-related associations in a sample of the population in Jordan. The study included 905 men aged 18 years and above. Among the most prominent findings of the study :

- 32% of the sample admitted to experiencing erectile dysfunction based on the global self-assessment question for erectile dysfunction.
- The prevalence rate of all degrees of erectile dysfunction according to the International Index of Erectile Function (IIEF) was estimated at 49.9%. In this group of men, 25% had mild dysfunction, 13.5% moderate, and 11.4% severe.

- According to age, the rates of erectile dysfunction were as follows: 18-29 (24.7%), 30-39 (41.4%), 40-49 (52.7%), 50-59 (59.5%), 60-69 (72.3%), and over 70 (89.2%).

- The prevalence rate of severe erectile dysfunction increased from 2.7% in men in their twenties to 38.6% in their sixties and 46% at the age of 70 and above.

- Age is the most important risk factor associated with erectile dysfunction in men, with other significant risk factors including low family income, physical inactivity, obesity, smoking, hypertension, diabetes, and cardiovascular problems.

- Only 30% of men diagnosed with sexual dysfunction consulted a doctor, while the remaining 70% admitted that they had never sought medical advice regarding their sexual health.

- Among all men with sexual dysfunction, 39% received sexual enhancers, with the most commonly used treatment being sildenafil citrate, which was used in 70% of those who received treatment, and most of them were bothered by the price.

A study titled¹⁹ "Prevalence of Female Sexual Dysfunction (FSD) in Jordanian Women and Associated Risk Factors" relied on the Arabic translation of the Female Sexual Function Index (FSFI) to interview a sample of 470 women who attended Hussein Medical City between

¹⁷ Ronald W. Lewis and others, Definitions/Epidemiology/Risk Factors for Sexual Dysfunction, *J Sex Med* 2010;7:1598–1607, <https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1743-6109.2010.01778.x>

¹⁸ IF Ghalayini, MA Al-Ghazo, R Al-Azab, I Bani-Hani, YS Matani, A-E Barham, MNA Harfeil and Y Haddad, Erectile dysfunction in a Mediterranean country: results of an epidemiological survey of a representative sample of men, *International Journal of Impotence Research* (2010) 22, 196–203. www.nature.com/ijir

¹⁹ Maher Elias Maaita, Basel M. Khreisat, Omar A. Tasso, Nareman Naser Otom, Bayan M. Aljaafreh, Gharam M. Abuassaf, Prevalence and associated risk factors of female sexual dysfunction among Jordanian women, *Journal of Family Medicine and Primary Care* 1489 Volume 7: Issue 6: 2018.

September 2017 and January 2018. Their ages ranged from 32.6 ± 9.6 years. Among the most prominent findings of the study :

- The prevalence of FSD in Jordan is around 64.7%.
- 49.4% of the studied women have problems with sexual desire, 31.9% have a problem with arousal, lubrication was a problem for 39.2%, and orgasm was a problem for 39.57% of the women in the study, while satisfaction was a problem for 43.82% and pain during intercourse for 19.2%.
- There was a significant positive correlation between each area of sexual dysfunction in women and the age of the women studied except for pain.
- There is an important relationship between sexual dysfunction and women who have more than four children, women who have been married for more than 10 years, women with chronic diseases, the unemployed, and those who did not use contraceptives. There was no significant association between education level and monthly income.

The study concluded that the prevalence of FSD in Jordanian women is around 64.7%, sexual desire disorders are the most prevalent area of FSD, and age is the most important risk factor for FSD.

A study titled²⁰ "Factors Associated with Sexual Dysfunction in Jordanian Women and Their Sexual Attitudes" was conducted on a sample of 613 married females between October 2006 and August 2007 at the National Center for Diabetes, Endocrinology, and Genetics in Amman. Multivariate analysis showed an association between older women with a lower overall FSDI, and compared to women with a normal body mass index; women who were obese were more likely to have impaired arousal and impaired orgasm.

A study titled²¹ "Care Behavior among Men with Sexual Dysfunction in Jordan: Patients' Perspectives" was conducted using a qualitative approach to gain initial insights into the readiness of men with sexual dysfunction to discuss their sexual concerns and care needs with nurses. Data were collected through interviews with 16 men experiencing secondary sexual health problems due to chronic conditions. The men reported that they would not seek help from nursing professionals and that doctors and nurses might assist them when facing sexual health issues. However, they avoided talking to them directly and preferred using other sources, including the internet, friends, and other men with similar issues. They attempted to address their sexual health problems using alternative medicine and secretive treatments before

²⁰ Ruba M. Abu Ali, Rabaa M. Al Hajeri, Yousef S. Khader, Kamel M. Ajlouni, Factors associated with sexual dysfunction in Jordanian women and their sexual attitudes, *Ann Saudi Med* 2009; 29(4): 270-274.

²¹ Muwafaq M. Al Momani, Lourance A. Al Hadid, Ahmad Haroun Al- Nawafleh, Seeking care behavior of men with sexual dysfunction in Jordan: patients' perspective, *Journal of Health, Medicine and Nursing*, Vol.42, 2017.

seeking formal care. The study concluded that the closed social and family structures limit men's willingness to seek assistance in addressing their sexual problems in Jordan, leaving them untreated, which could threaten their overall health and well-being.

A study titled²² "Depression, Anxiety, and Sexual Dysfunction in Jordanian Women with Type 2 Diabetes" aimed to determine the prevalence of sexual dysfunction in Jordanian women, and study the relationships between sexual function and psychological factors (depression and anxiety) and diabetes-related factors among Jordanian women with type 2 diabetes. The study concluded that 94.4% of Jordanian women with type 2 diabetes experience sexual dysfunction, and there are significant associations between anxiety, depression, and female sexual function among women with type 2 diabetes.

A study titled²³ "Erectile Dysfunction among Jordanian Men with Diabetes" aimed to estimate the prevalence and severity of erectile dysfunction (ED) and its associations among Jordanian men with diabetes. The study included 988 patients at the National Center for Diabetes, Endocrinology, and Genetics in Amman, between January and August 2004, using the Arabic translation of the International Index of Erectile Function (IIEF). Key findings of the

study include a total prevalence rate of erectile dysfunction of 62%, with 30.3% experiencing severe erectile dysfunction. The prevalence increases with age, ranging from 26.5% in patients under 40 years to 91% in those over 70 years. Severity also increases with age. Additionally, 7% of patients with erectile dysfunction received treatment for it. Multivariable logistic regression analysis identified age, blood sugar level, blood pressure control, coronary artery disease, retinopathy, and neuropathy as independent risk factors for erectile dysfunction. The study concluded that the prevalence of erectile dysfunction among Jordanian diabetes patients is high, increasing with age and poverty

A study titled²⁴ "Sexual Health in Older Adults" aimed to identify the key considerations contributing to sexual satisfaction among older men and women through a review of global literature. Among the prominent findings of the review:

- Multiple factors contribute to the overall sexual health of both men and women. While age alone is a risk factor for sexual dysfunction, additional risk factors among older adults include hypertension, diabetes, gonadal failure, side effects of medications, metabolic syndrome, increased body mass index (BMI), cholesterol, low-density lipoprotein cholesterol, and medications known to cause sexual dysfunction (beta-blockers, thiazide diuretics, antidepressants).

²² Zaina Alazawi¹, Ola Alqudah¹, Ahmad Al-Bashaireh, Depression, Anxiety and Sexual Dysfunction Among Jordanian Women with Type 2 Diabetes Mellitus, *Acta Medica Iranica*, Vol. 58, No. 2 (2020).

²³ Faisal A. Khatib, Nadim S. Jarrah, Nadima S. Shegem, Anwar M. Bateiha, Ruba M. Abu-Ali, Kamel M. Ajlouni, Sexual dysfunction among Jordanian men with diabetes. *Saudi Med J* 2006; Vol. 27 (3): 351-356.

²⁴ John S. Fisher, Andrew Rezk², Elie Nwefo, John Masterson, Ranjith Ramasamy, Sexual Health in the Elderly Population, *Curr Sex Health Rep.* 2020 December; 12(4): 381–388.

- Understanding the aging process can improve sexual performance in both men and women through lifestyle changes, medications, and in some cases surgical interventions. Modifiable components of aging include improving cardiovascular health, hormone replacement therapy, psychological and social counseling, erectile dysfunction treatment, and reversing vaginal atrophy.

- In men, both gonadal failure and erectile dysfunction require comprehensive assessment, as underlying cardiovascular issues may be present in men experiencing these concerns. Treatment options for improving sexual satisfaction include hormone replacement therapy and traditional erectile dysfunction treatments, with therapeutic stem cell injections showing promise as a potential regenerative treatment for erectile dysfunction.

- In women, menopause, vaginal dryness, and dyspareunia play significant roles in sexual satisfaction. Vaginal moisturizers, topical estrogen, and Monalisa Touch laser therapy may help improve these symptoms and ultimately sexual function.

The study concluded that aging generally reduces libido and desire, but appropriate consultation and treatment can significantly benefit some patients. A multidisciplinary approach involving the physician, patient, and partner can improve care and may enhance the quality of life for older adults. Reviewing studies has shown that understanding the physical and social changes that occur with aging is crucial for addressing sexual health issues in these patients.



6. Natural Sexual Enhancers :

Highlighted facts derived from the scientific evidence found in the studies reviewed in this field:

1. In Jordan, a staggering 92% of men with infertility issues turn to herbalists for treatment.

2. While herbal remedies are used to enhance sexual function and act as male sexual enhancers, their use should be backed by scientific evidence and supervised by a medical professional.

3. Studies reveal a mixed bag regarding the effects of certain herbs used by Jordanian men for sexual enhancement. Some can indeed improve sexual function, but others may have detrimental effects. These negative effects can include reduced sperm count and quality, decreased libido and sexual behavior, and even erectile dysfunction. It's also important to note that some beneficial herbs may have adverse effects when taken for prolonged periods. Additionally, some plants used in traditional medicine for sexual enhancement lack scientific support.

4. Herbal supplements are readily available in most community pharmacies (a staggering 98.5%!), reflecting high public demand and pharmacist recommendations. Interestingly, weight loss supplements top the list of most sought-after herbal products according to participating pharmacists, followed by sexual and sports enhancers, and lastly, general health supplements.

5. It's crucial to always consult a doctor before using any new herb or dietary supplement.



Supporting Studies

A study titled²⁵ "Use of Herbal Medicines among Jordanian Population" investigated the prevalence and patterns of herbal medicine use in Jordan. The study employed a national survey with a random sample of 1,820 adults aged 18 and above. The study concluded that the prevalence of herbal medicine use was 53.3% (971/1820), and participants aged over 29 years were more prone to using herbal products. Among the participants using herbal medicines, 41.9% (407/971) used them for treating chronic diseases, 23.6% (229/971) used them for enhancing well-being, 16.2% (157/971) used them for weight reduction, and 13.9% (135/971) used them for treating acute problems. Meanwhile, the percentage of users using herbs to enhance their sexual performance was 4.4% (43/971). The majority of participants (86.5%, 1574/1820) believed that herbal products were safe because they are made from natural ingredients. However, more than a quarter of users (26.5%, 257/971) experienced uncomfortable symptoms, including diarrhea/constipation/abdominal pain (29.6%, 76/257), nausea/vomiting (26.1%, 67/257), and allergies (21.4%, 55/257).

The study titled²⁶ "Use of Plants in Jordanian Folk Medicine for Treating Male Sexual Dysfunction: Is There Scientific Basis?" investigated the validity of traditional herbal remedies for

erectile dysfunction. Researchers reviewed scientific studies conducted in labs, on animals, and human clinical trials that explored the potential of natural aphrodisiacs derived from local wild plants and evaluated their potential as sexual enhancers. The study revealed a significant reliance on herbal medicine in Jordan, with over 60% of the rural and desert population using herbs for medicinal purposes. Furthermore, a staggering 92% of men with infertility issues seek treatment from herbalists.

- Among 56 local plant species used by men as sexual enhancers, researchers focused on examining 23 in detail. Out of these 23, 15 were traditionally used to improve sperm production. Animal studies showed that only five of these plants enhance sperm formation. This included coriander, rocket, sage, rue, and Tribulus Terrestris's. The remaining ten plants, according to some studies, even reduce sperm count and characteristics.

- Among the 23 local plants examined, five were studied for their ability to increase sexual desire and enhance sexual behavior in Jordan. Human studies showed that two of them, Tribulus terrestris and Trigonella foenum-graecum, led to enhanced sexual behavior (mating) in humans. Another plant, Eruca sativa, was studied in rodents, while Salvia triloba and Withania somnifera caused a decrease in sexual behavior

²⁵ Derar H. Abdel-Qader¹, Abdullah Albassam, Najlaa Saadi Ismael³, and others, Herbal medicine use in the Jordanian population: A nationally representative cross-sectional survey, Pharm Pharmacogn Res (2020) 8(6): 526.

²⁶ Manal Ahmad Abbas, Is the use of plants in Jordanian folk medicine for the treatment of male sexual dysfunction scientifically based? Review of in vitro and in vivo human and animal studies, Article in Andrologia · June 2016.

in rodents instead of enhancement. It's also noted that the duration of plant use to enhance sexual desire should be determined, as contradictory results were obtained in male flies when given a plant extract (*Ferula hermonis*) for 10 days.

- Four local plants were studied for their ability to enhance erection, three of which were active: *Eruca sativa*, *Foeniculum vulgare*, and *Tribulus Terrestris*'s, while *Withania somnifera* decreased erection in rats. This highlights the need for further studies examining the remaining herbs, especially those reported to enhance erection.

- The study concluded that many of the plants used in Jordanian folk medicine had little to no effect on sperm formation in animal models. This highlights the importance of scientific evidence and the need for further research to determine the efficacy and safety of herbal remedies for erectile dysfunction.

- A study titled²⁷ "Herbal Supplements in Jordan: A Cross-Sectional Study of Pharmacists' Perspectives and Knowledge" explored the perspectives and knowledge of Jordanian community pharmacists regarding herbal medicines available in pharmacies. The study employed a questionnaire distributed via social media platforms to 401 community pharmacists. key findings include :

- Herbal supplements are widely available in Jordan, with 98.5% of community pharmacies stocking them. This high availability reflects increased public demand and pharmacist recommendations.

- While (76.8% of) pharmacists reported customer requests for herbal supplements, weight loss aids (14.7%) topped the list, followed by sexual and sports enhancers (14%). Pharmacists, on the other hand, most commonly recommended supplements for general health maintenance (12%), followed by weight loss aids (11.4%), and dermatological conditions (9.3%). Notably, sexual and sports enhancers ranked fourth among pharmacist recommendations.

- Pharmacists' self-reported knowledge of herbal supplements averaged 14.2 out of 20 (71.0%).

- Over 95% of participants reported no adverse reactions, but (4.4%) claimed negative experiences. Regarding reporting these to the Food and Drug Administration, (58.8%) expressed willingness, while (41.2%) wouldn't.

- (96.8%) of pharmacists did not receive a degree or further training in herbal medicine.

The study concluded by emphasizing the need to enhance core pharmacy curricula at the university level in Jordan with more formal academic training on the pharmacological effects and toxicity of herbal medicines, as well as on discovering, understanding, and reporting side effects.

7. Risks of Sexual Enhancement Supplements and Counterfeit Erectile Dysfunction Drugs

Here's a summary of key findings from reviewed scientific evidence :

²⁷ Banaz Jalil, Abdallah Y Naser, Jose M Prieto, Michael Heinrich, Herbal supplements in Jordan: a cross-sectional survey of pharmacists' perspectives and knowledge, *BMJ Open* 2022;12: e057405. doi:10.1136/bmjopen-2021-057405, <http://dx.doi.org/10.1136/bmjopen-2021-057405>

1. Prevalence of Counterfeits: A descriptive study of a sample of one hundred pharmacists in Amman found that (37%) of pharmacists encountered counterfeit erectile dysfunction drugs, with more than half facing multiple instances. Pharmacists attributed this to three main factors: high drug prices (48%), lack of regulatory oversight and inadequate lab testing (35.5%), and low public awareness (16.5%).

2. Market Growth: The market for these drugs is fueled by factors like the increased prevalence of male sexual dysfunction with age and the expansion of online pharmacies.

3. Health Risks of Counterfeits: Counterfeit drugs can pose serious health risks due to :
- Harmful contaminants: Many contain toxins or fillers used to cut costs or mimic the original product.

4. Unsanitary manufacturing : Counterfeit labs often lack proper sterilization, leading to potential contamination.

5. Incorrect ingredients/dosages: They may contain the wrong ingredients or inaccurate amounts of the active ingredients.

6. Missing safety information : Fake sexual enhancement products rarely come with proper warnings.

7. Risks of "Natural" Supplements : Many "natural" sexual enhancement supplements contain hidden ingredients derived from potent prescription drugs, exposing consumers to unexpected health risks.



Supporting Studies

The study titled²⁸ "Risks of Sexual Enhancement Supplements and Counterfeit Erectile Dysfunction Drugs" " reviewed the literature on counterfeit phosphodiesterase-5 inhibitors (PDE-5i)²⁹, a class of counterfeit and illegal drugs used to treat erectile dysfunction. The study concluded that :

The market for these drugs is rapidly growing, driven by several factors, including male sexual dysfunction being a common problem with aging and the proliferation of pharmaceuticals online. Consumers of illegal PDE-5i often do not realize they are using counterfeit products, exposing themselves to unnecessary health risks. Some seek to bypass legitimate healthcare systems due to embarrassment or a desire for cheaper alternatives, while others use them for recreational purposes associated with the stigma of erectile dysfunction to request prescription drugs.

The study summarized the scope and risks of these drugs based on the evidence reviewed, which can be summarized as follows :

²⁸ Jason Chiang, Faysal A. Yafi, Philip J. Dorsey, Jr, and Wayne J. G. Hellstrom, the dangers of sexual enhancement supplements and counterfeit drugs to "treat" erectile dysfunction, *Transl Androl Urol*. 2017 Feb; v.6(1): 12–19.

²⁹ Phosphodiesterase-5 (PDE-5) enzyme counteracts the process of erection by terminating the action of a second compound found in the smooth muscles of the penis called cyclic guanosine monophosphate (cGMP). This compound is responsible for influencing protein kinase G to open calcium channels, which lead to vasodilation and erection. Therefore, when we inhibit PDE-5 by administering phosphodiesterase-5 inhibitors (PDE-5i) medications, we assist cGMP in carrying out its role in the process of erection and its continuity. Some of the inhibitors used include sildenafil (Viagra), tadalafil (Cialis), vardenafil (Levitra or Staxyn), and avanafil (Stendra).

- Many counterfeit products contain harmful contaminants used to reduce production costs or mimic the appearance and physical characteristics of the original product. These components can contain specific toxins³⁰.

- The manufacturing conditions of counterfeiters cannot match the sterile processing conditions of legitimate drugs, as many counterfeit labs are exposed to outdoor air and use non-potable and unsterile water³¹.

- Counterfeit products may contain incorrect ingredients or inaccurate amounts of the active ingredient³².

- Fake sexual enhancement drugs are rarely packaged with appropriate warning leaflets about contraindications and documenting drug interactions with other potential pharmaceuticals, as they are often not supported by scientific evidence or clinical studies.

- Medical conditions require appropriate diagnosis and treatment, and some of the main reasons include:

- There are many reasons for erectile dysfunction, including chronic diseases, psychological factors, and poor lifestyle choices. Specialists

can examine patients to identify and diagnose the underlying cause and provide appropriate treatment.

- There are many side effects of medications for enhancing sexual performance, some of which may be life-threatening. Because they work by dilating blood vessels, there is a risk of severe hypotension and fainting when used at the same time with other blood pressure-lowering medications. Many side effects occur due to cross-reactivity with other types of phosphodiesterase enzymes found throughout the body, including headaches, dyspepsia, muscle pain, back pain, visual disturbances, and nasal congestion.

- Many "natural" dietary supplements contain active ingredients from potent drugs that may be harmful, often exposing users to significant health risks. These supplements are illegal and require a prescription for the real ingredients they contain, and the study cites evidence from studies it relied upon :

- 150 non-diabetic patients were admitted to a hospital in Singapore due to hypoglycemia. Seven patients went into a coma, and four died thereafter. The common link among these

³⁰ According to a study referenced in the mentioned study, "the samples seized in the United Kingdom, Italy, and Indonesia contained contaminants such as gypsum, impure talc, amphetamines, commercial paints, paracetamol, and metronidazole."

³¹ According to a study referenced in the mentioned study, "microbial load analysis of various illicit erectile dysfunction drugs revealed that 23% of them were contaminated with more than 103 colony-forming units (CFU) per gram, and 69% of them had high levels considered within acceptable limits, while not a single CFU unit was detected in any of the legally obtained approved PDE-5 inhibitors."

³² According to a study relied upon by the referenced study, "In 2009, UK authorities seized 2383 samples of counterfeit Viagra and referred them to Pfizer laboratories for analysis. It was found that the concentration of active sildenafil ranged from 0-200% of the stated strength, with only 10% of the samples containing an active component within 10% of what was declared on the packaging. Similar results were found in the analysis of counterfeit erectile dysfunction drugs sold in Italy, Austria, and Canada. In tablets labeled as 100 mg, 64% contained less than 50 mg, 25.5% contained between 50-95 mg, and only 4.7% contained between 95 to 105 mg; 5.7% contained more than 105 mg."

patients was the use of a dietary supplement for erectile dysfunction containing glibenclamide (sulfonylurea used to treat diabetes) in addition to undeclared PDE-5 inhibitors.

- The ingredients of 58 over-the-counter products for erectile dysfunction were analyzed, although 57 out of 58 products were classified as "natural dietary supplements." While no sample claimed to contain synthetic substances, 81% of them contained PDE-5 inhibitors, many of which had higher amounts than approved. Some contained unauthorized PDE-5i analogs for use, with one containing phentolamine, an alpha-blocker, which is not recommended for simultaneous use with PDE-5 inhibitors. Packaging and labeling were inadequate, with only 14 samples warning of concurrent nitrate use, a potentially lethal drug interaction.

The study concludes on the necessity for health-care providers to continue efforts to provide safe and effective treatment options, educate patients about the risks of counterfeit products and other unapproved products by the Food and Drug Administration, and remind them to purchase only from certified pharmacies.

A study titled³³ "Awareness of Pharmacists of the Problem of Drug Counterfeiting in Jordan," using a descriptive method and applying a questionnaire to a sample of 100 Jordanian pharmacists in Amman, showed :

- Approximately 76% of the sample reported a high awareness of the problem of drug counter

feiting and the laws and regulations in Jordan that restrict it. 54.8% of them believe these laws and regulations are sufficient, while 43.5% believe they are insufficient and suggested improving border regulations, conducting quality control tests, increasing penalties and public awareness, coordinating between regulatory authorities, and more international efforts, and finally combating nepotism.

- Approximately 63% of the participants reported that they had not encountered any counterfeiting case, while 37% had witnessed counterfeit drugs, with over 50% facing multiple instances.

- The three main reasons for counterfeit medication according to the participants were: high drug prices (48%), lack of supervision poor quality of laboratory testing (35.5%), and lack of public awareness (16.5%).

- The types of counterfeit drugs identified varied among three main groups: drugs used for chronic diseases such as hypertension, diabetes, and hyperlipidemia, followed by expensive drugs such as sexual enhancers and platelet inhibitors, then central nervous system drugs, cancer and psychosis medications, and finally commonly used medications such as analgesics, anti-inflammatories, and antibiotics.

The study recommended increasing awareness among pharmacists and the public in the issue of counterfeit medications through more effective public awareness campaigns.

³³ Yara Abu Taleb MSc Pharm*, Ra'eda Al Madadha MSc Pharm, Pharmacists' Awareness of Drug Counterfeiting in Jordan, JRMS June 2013; 20(2): 57-70 /DOI: 10.12816/0000079, <http://rmsjournal.org/ArticlesView.aspx?ArticleId=708>



8. Jordan's Legal Framework for Sexual Enhancers

The Drug and Pharmacy Law No. 12 of 2013 and its amendments³⁴ define a counterfeit drug in Article 81. Here's what constitutes a counterfeit drug according to the law:

- A. Manufactured outside the original company without its permission.
- B. Does not contain the active ingredient or contains a different substance than listed.
- C. Bears a forged trademark or datasheet.
- D. Has an incorrectly listed country of manufacture.

Article 82 prohibits, under penalty of legal liability, to trade of any counterfeit drug in the Kingdom, including free zones, economic zones, developmental zones, and transit areas. According to Article 83, printing packaging, data sheets, and internal leaflets related to substances specified in Article (3)³⁵ of this law is prohibited without the approval of the Food and Drug Administration (FDA).


The law outlines penalties for various violations. Pharmacists who dispense prescription drugs without a valid prescription face disciplinary action from their association and a fine ranging from 250 to 1000 dinars (Article 87(d)).

- Pharmacists can also be fined for other offenses listed in the law (Article 88(a)).

Non-pharmacists selling counterfeit, smuggled, or defective drugs face imprisonment for at least six months, a fine of 1000-5000 dinars, or both (Article 88(b)).

Penalties for dealing in counterfeit drugs are even harsher. Offenders can be sentenced to 3-5 years of imprisonment with hard labor and a 1000-5000 dinar fine, or a fine ten times the value of the counterfeit drugs sold (Article 89).

Additionally, regulations issued in 2017 govern the licensing of products containing vitamins, minerals, and natural ingredients³⁶. These regulations ensure proper oversight and licensing for such products to protect consumer safety.



9. Role of National Institutions in Monitoring and Combating the Trade and Promotion of Illegal and Counterfeit Sexual Enhancers

1. Food and Drug Administration (FDA)

The FDA is the sole authority in Jordan responsible for drugs, overseeing them from their initial stages as raw materials through all manufacturing processes until they are ready for use by patients. The Drug Directorate within the FDA aims to ensure the safety, quality, and effectiveness of drugs (both locally manufactured and imported) and provide them to citizens at a fair price. It undertakes the following tasks:

³⁴ <http://www.jfda.jo/Pages/viewpage.aspx?pageID=153>

³⁵ Article 3(a) states: 1. Prohibition of trading a drug in its final pharmaceutical form unless it is registered with the institution and a decision is made regarding its pricing by the provisions of this law. 2. Prohibition of registering a drug in its final pharmaceutical form unless the competent committee has confirmed its safe use, effectiveness, and quality. 3. Prohibition of trading a drug unless a decision is issued by the Director General to approve its trading.

³⁶ <http://www.jfda.jo/Pages/viewpage.aspx?pageID=153>

- Registering and monitoring all types of locally manufactured or imported drugs.
- Registering and monitoring pharmaceutical preparations containing vitamins and minerals, as well as preparations containing natural and plant products.
- Supervising the import and export procedures of drugs, serums, vaccines, botanicals, vitamins, minerals, and raw materials for local companies and factories, ensuring compliance with laws, regulations, and instructions to guarantee the safety, quality, and effectiveness of locally manufactured and imported drugs.
- Receiving and evaluating protocols for drug studies to be conducted in Jordan, supervising the decisions of the Drug Studies Committee, and following up on them.
- Monitoring and regulating procedures related to drug control, serums, vaccines, narcotics, psychotropic substances, vitamins, and minerals. It cooperates with various entities in monitoring violations, controlling smuggled and counterfeit drugs, and ensuring the local market is free from these drugs and preparations. This ensures citizens consume safe and effective drugs.
- The FDA has a platform for complaints on its website, where citizens can report any issues related to food and drugs.
- The Food and Drug Administration has managed to prosecute 23 cases during the period from 2019 to 2023; three of these cases involved counterfeit drugs for the Cialis and Viagra preparations, while the remaining twenty cases involved smuggling of unauthorized and illicit

sexual enhancers. These cases were addressed, and necessary actions were taken in accordance with applicable legislation.

2. Ministry of Health:

- The Ministry of Health is responsible for providing primary healthcare services to citizens, offering various medical specialties through hospitals and affiliated health centers. It also raises public awareness on priority topics, including the risks of consuming medication without a doctor's prescription, to educate the public on various health issues and how to manage them.
- Through its health directorates in all regions of the kingdom, the Ministry cooperates with the Food and Drug Administration to monitor and inspect various materials, including drugs and food. It's important to note that sexual enhancers are only available in Ministry of Health hospitals for treating other medical conditions, not for general use.

3. Jordan Customs Department:

- Combatting illegal commercial activities is a strategic objective of the Jordan Customs Department. These activities pose a significant threat to Jordanian society and citizens due to their non-compliance with international standards and safety measures. They negatively impact the national economy and general revenue of the country, while also jeopardizing the health and safety of citizens and national security.

- The department exerts strong efforts through its border customs centers and relevant directorates to identify and seize such activities upon arrival in Jordan. The Anti-Smuggling Directorate plays a crucial role by seizing smuggled materials that evade border controls due to various factors. The table below highlights customs cases related to sexual enhancer smuggling.

Table (1) : Figures on Sexual Stimulant smuggling

	Packet or Box	Pill	Parcel	Kilogram
2018	1356	68199	1	
2019	977	14042		
2020	1621	14757		
2021	1102	310826	2	
2022	2212	5108	2	18

Source: Jordan Customs Department, Official Document dated 28/11/2023

Despite variations in measurement units across years, it's clear that sexual enhancers remain a target for smugglers. This emphasizes the critical role of the Jordan Customs Department in preventing their entry into the Jordanian market, as most are expired or counterfeit, posing significant health risks³⁷. Cases in 2022 included 2212 packets or boxes, 5108 pills, two parcels, and 18 kilograms of sexual enhancers.

4. Public Security :

The Royal Environmental Protection Directorate, through its field departments, monitors the promotion of smuggled and counterfeit sexual enhancers that enter the Kingdom or are manu-

factured within the Kingdom. They receive complaints or conduct investigations to identify and apprehend the promoters of these substances, in coordination with the Jordan Food and Drug Administration (JFDA).

- The Criminal Investigation Department (Intellectual Property Protection Division and Cybercrime Unit) follows up on cases of counterfeit sexual enhancers, especially those promoted on social media and sold through free delivery services. They track down the pages, collect information about the people who use them to promote these substances, and apprehend them in coordination with the JFDA.

5. Jordan Standards and Metrology Organization (JSMO)

The Market Surveillance Department³⁸ is responsible for inspecting products offered in local markets or intended for market entry to ensure their compliance with the requirements and specifications stipulated in the relevant Jordanian technical regulations or any other mandatory requirements.

6. Pharmacists Syndicate

The Pharmacists Syndicate works to organize specialized workshops for pharmacists working in community pharmacies to provide pharmaceutical counseling on the optimal use of sexual stimulants and enhancers and how to deal with

³⁷ <http://www.rasseen.com/art.php?id=401e033934b1cf57c8e972711398752d56d8c727>

³⁸ <http://www.jsmo.gov.jo/ar/OrgStructure/Departments/Inspection/Pages/default.aspx>

them, in cooperation with manufacturing companies and civil society institutions. They also raise awareness among pharmacy visitors through distributed leaflets, explaining the side effects and discussing the patient's medical history to reduce drug interventions. In addition, pharmacists, through their work, provide companies and regulatory bodies with any side effects not mentioned in the drug's internal leaflet based on user feedback, in addition to the Syndicate's role in taking disciplinary measures by its law against violators of its members

7. Government Procurement Department

The Directorate of Purchasing Medicines, Sera, and Vaccines is one of the Directorates of the Government Purchases Department responsible for securing the needs of government agencies and units participating in its tenders, providing them with the necessary medicines and treatments. This contributes to achieving drug security and strategic stockpiling in the public health sector. The department's statistics indicate that during the period 2020-2021, purchases were

limited to (3600) tablets for the University of Jordan Hospital and (600) tablets for the Royal Jordanian Medical Services.

³⁹ Member of the Expert Practitioners Committee for Preparing the Fact Sheet on Sexual Enhancers in Jordan



#New_Return_Groom_With_Aphrodisiac_Male_Booster

#A small comment can change a lot of things.

#Beware_of_the_only_Turkish_male_booster

#The exclusive agent in Jordan Beware of imitation Make sure the original Turkish product is approved by the Food and Drug Administration number 3/1/4/2790



**White offers only at the price of American Cialis Original
Leila American Company Repair Pack... A solution for
speed and weakness in men. Cialis 20MG**





Illegal Sexual Enhancement in Jordan's Markets

RT Arabic :

1325548 - Jordan (Middle East) <https://arabic.rt.com>

[Jordan... Foiling Unprecedented Smuggling of Sexual Enhancers](#)

02/16/2022 - Jordanian customs foiled the smuggling of large quantities of expired pills and sexual enhancers, along with electronic cigarettes estimated to be in the hundreds of thousands.

Street Deals : The Risky Trade of Sexual Enhancement Drugs in Amman

202/12/29 - Throughout the bustling streets of downtown Amman, particularly in the older areas, a concerning trend thrives in plain sight. Sexual enhancement drugs are openly peddled on sidewalks, posing a significant health risk to men. These unregulated products are sold without...

Al-Maqar Newspaper <https://maqar.com>

[Jordan... Seizure of Sexual Enhancers and Morally Offensive Substances, and Counterfeit "Juice"](#)

2023/09/25 - Jordan. Sexual enhancers morally offensive substances, and counterfeit "juice" seized... The Customs Department urges citizens to cooperate with customs and report any violations. Citizens to cooperate with customs and report any violations

Roya News

[Conviction of a government employee, investor, and university student for smuggling sexual enhancers.](#)

December 28, 2021 - An Arab investor colluded with a government employee working at one of Jordan's air crossings, exploiting his position in violation of the law, and enticing a university student.....

garaanews : <http://garaanews.com>

[Man Dies After Taking Sexual Enhancement Pill in Jordan.](#) Garaa News reports the death of a man in Jordan who died thirty minutes after consuming a sexual enhancement pill. The article highlights the easy availability of smuggled and counterfeit sexual enhancement drugs and stimulants in Jordanian markets, particularly in downtown areas. These products are openly sold alongside everyday goods, raising concerns about public health risks.

Saraya News :

[400 Expired Sexual Enhancement Pills Seized in Irbid \(Jordan\)](#)

Saraya News reports that the Department of Health Affairs in Greater Irbid Municipality, along with the Royal Police Protection Department, seized a quantity of expired sexual enhancement pills. Rham Al Khazaaleh, a representative from [relevant department/municipality/police], provided details about the seizure

Roya News :

[Sexual Enhancement Sold on Streets Threatens Jordanians' Health.](#)

Roya's cameras captured images in downtown Amman showing the open sale of sexual enhancers on public streets. The footage reveals a significant increase in such sales, raising concerns about the potential health risks for Jordanians.



10. Production and Import of Sexual Enhancers in Jordan

As shown in table (2) light can be shed on Jordan's Production and import of Sexual Stimulants as follows.

Table (2) The Number of domestically produced and imported packages of sexual enhancers for the period 2020-2023.

	2020	2021	2022	2023
Local	1129472	1249267	1356421	1033370
Imported	776197	691995	581461	641547

Source: Jordan Food and Drug Administration.

Local Production : Pharmaceutical factories in the Hashemite Kingdom of Jordan produced, between 2020 and 2023, a total of 1,033,370 packages of sexual enhancer drugs, comprising 365 million tablets, in various sizes ranging from single tablets to 500 tablets. The drugs include scientific names such as Tadalafil in strengths of 2.5, 5, 10, and 20 MG/1 TAB, Sildenafil (citrate) in strengths of 10, 25, 50, and 100 mg/ml, Dapoxetine Hcl in strengths of 30 and 60 mg, and Varde nafil in strengths of 5, 10, and 20 mg.

Import: Jordan imported, between 2020 and 2023, a total of 2,691,200 packages of sexual enhancer drugs, containing 125 million tablets, in various package sizes ranging from single tablets to thirty. The imported drugs include various scientific names such as Testosterone Undecanoate in strengths of 25 and 40 mg, Tadalafil in strengths of 5, 10, and 20 mg, Dapoxetine in strengths of 30 and 60 MG/1 TAB, Sildenafil in strengths of 25, 50, and 100 mg, Vardenafil

in strengths of 5, 10, and 20 mg, Testosterone decanoate 100 mg/ml, Testosterone enanthate 250 mg/ml, Testosterone propionate 30 mg/ml, Avanafil in strengths of 50, 100, and 200 mg, and Sildenafil Citrate 140,480 MILLIGRAM.

It is evident that sexually enhancing drugs, licensed by the Jordan Food and Drug Administration, are available in Jordan whether produced locally or imported, and are accessible in community pharmacies.

By tracking the prices of locally produced and imported⁴⁰ alternatives to Viagra, as shown in Annex (1), the average price per tablet of 50 milligrams of locally produced Sildenafil is 1.20 dinars, compared to 4.5 dinars for the same standard from French production, 0.6 dinars from Indian production, and 0.8 dinars from Greek production per tablet. Therefore, there is no justification in terms of price for smuggling sexual enhancers or trading in counterfeit drugs, as both local and foreign medicines are available in the market containing the same active ingredient at reasonable prices.

11. Challenges and Risks:

- Increasing promotional advertisements (unmonitored) for sexual enhancers on various communication channels.
- Prescriptions for sexual enhancers, both natural and synthetic, are being circulated without

⁴⁰ <http://www.jfda.jo/Pages/viewpage.aspx?pageID=184>

proper medical consultation. However, these prescriptions can have different effects on different people, potentially benefiting some but harming others.

- Some sexual enhancers may lead to addiction and serious side effects on public health, undermining the principle of healthy living and well-being for all.
- The proliferation of counterfeit and illegal products poses a danger to consumers' health, especially since studies have shown that they contain incorrect components or inaccurate amounts of the active ingredient.
- Community pharmacies are a major source for those seeking sexual enhancers, both natural and synthetic. To address this, pharmacists' training should be enhanced. This would allow them to educate those seeking sexual enhancers without a prescription about the importance of consulting a doctor. A doctor can explain the potential side effects, especially for those with pre-existing health conditions.
- Doctors treating sexual dysfunction should emphasize the dangers of purchasing sexual enhancers from unreliable sources, especially the internet.



Conclusion

1. Further research on the use of sexual enhancers is needed to inform health policies aimed at reducing unnecessary or illegal use and to develop public awareness programs about the associated risks.

This analysis has identified the following areas for future studies:

- **Characteristics of sexual enhancer users in Jordan :** This includes examining factors like age, gender, education, income, and prevalence of use among both young people (exploring their motivations) and the elderly (considering any health conditions influencing their use).
- **Demand for sexual enhancement products :** This research should focus on the types of drugs and devices desired, the extent of use by elderly men, and perspectives from seniors, concerned physicians, and vendors.
- **Prevalence of counterfeit sexual enhancers :** This should explore the types of counterfeit products available, their sources, and the extent of the problem.
- **Health risks associated with sexual enhancers.**
- **Safety of traditional herbal remedies :** Research is needed to explore plants used in Jordanian folk medicine for sexual enhancement, providing scientific evidence regarding their safety or risks, and establishing appropriate use conditions.

2. Enhance public awareness programs about the use of sexual enhancers and their risks.
3. Provide specialized centers for sexual dysfunction treatment in the public sector.
4. Tighten control over online platforms that promote the use of sexual enhancers.



Appendix (1)

Licensed alternatives to Viagra produced locally according to dosage, price, and manufacturer.

Trade Name	Available Dosage (mg)	Packaging (Tablets)	Price (JOD)	Manufacturer	Scientific Name
Adenafil Tablet	50	4 F.C Tab	3.72	Arab Company for Pharmaceuticals (Private)	Sildenafil 50 mg
APHRODIL TABLETS	50	4	3.14	Dar Al-Dawa Development and Investment Company	Sildenafil 50 mg
Bluvisa F.C Tablet	50	4	5	United Pharmaceutical Manufacturing Company	Sildenafil 50 mg
Klick Tab	50		8.32	Jordanian Swedish Company	Sildenafil 50 mg
MOJOMEN	50	7 SAC/1 BOX	6.03	Oman Pharmaceutical Industries Company	Sildenafil Citrate 50 MG/1 SAC
Ssegofar	(mg/ml) 10		150	United Pharmaceutical Manufacturing Company	Sildenafil Citrate 10 mg/ml
Vigain tab	50	4	4.5	Life Pharmaceutical Industries Company	Sildenafil 50 mg
Vigro- tablets	50	4	4.5	Ram Pharmaceutical Industries Company	Sildenafil 50 mg
Vonta F.C tab	50	4	4.5	Middle East Pharmaceutical Industries Company	Sildenafil 50 mg
Zoltan	50	4	4.5	Jordanian Drug Manufacturing Company	Sildenafil 50

Source: <http://www.jfda.jo/Pages/viewpage.aspx?pageID=184>



Appendix (2)

Licensed alternatives to Viagra produced by foreign manufacturers, sorted by dosage, price, and manufacturer.

Trade Name	Available Dosage (mg)	Packaging (Tablets)	Price (JOD)	Manufacturer	Scientific Name
Viagra	mg/4 50	4	17.86	FAREVA AMBOISE/France	Sildenafil 50 mg
Kamagra Tablets	mg 50	4	2.32	Ajanta Pharma/India	Sildenafil 50 mg
Momint Chew tab	mg 50	4	3	Geneparm S.A./Greece	Sildenafil as Sildenafil Citrate 50 mg
Xment 50mg	mg 50	4	3.65	Geneparm S.A./Greece	Sildenafil 50 mg
Zed	mg 70.240	1X4 TABLET	3.67	Oman Pharmaceutical Products CO.L.L.C	Sildenafil Citrate 70.240

Source: <http://www.jfda.jo/Pages/viewpage.aspx?pageID=184>



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Amman - Madena Monawara Street

Faeg Haddaden Street, Building No. 13

Tel: 00962 6 5560748

Fax: 00962 6 5519210

P.O.Box 5118 Amman 11183 Jordan

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