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Natural Remedies for Optimum Men's Health

Dr. Bryan Ardis D.C.



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## VIEWER DISCRETION ADVISED:

CONTAINS MEDICAL ILLUSTRATIONS OF MALE ANATOMY,  
WHICH SOME VIEWERS MAY FIND SENSITIVE. MAY NOT BE  
SUITABLE FOR ALL AUDIENCES. PLEASE PROCEED ONLY IF  
YOU ARE COMFORTABLE WITH ANATOMICAL CONTENT.



# Men's Health Focus:

- Erectile Dysfunction (ED)



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- Erectile Dysfunction (ED)
- Testosterone

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- Erectile Dysfunction (ED)
- Testosterone
- Low Energy

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# Erectile Dysfunction

Erectile dysfunction (ED) is the inability to get or maintain an erection long enough to have sexual intercourse. There are many different causes, which may include conditions that affect your blood vessels, neurological conditions, mental health conditions and injuries. A healthcare provider can diagnose and treat erectile dysfunction.

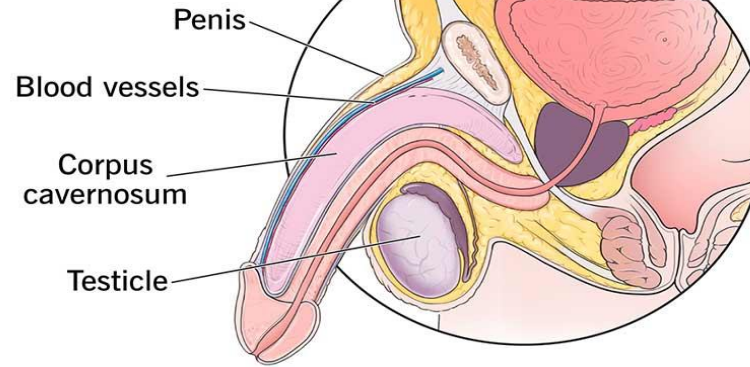
<https://my.clevelandclinic.org/health/diseases/10035-erectile-dysfunction>



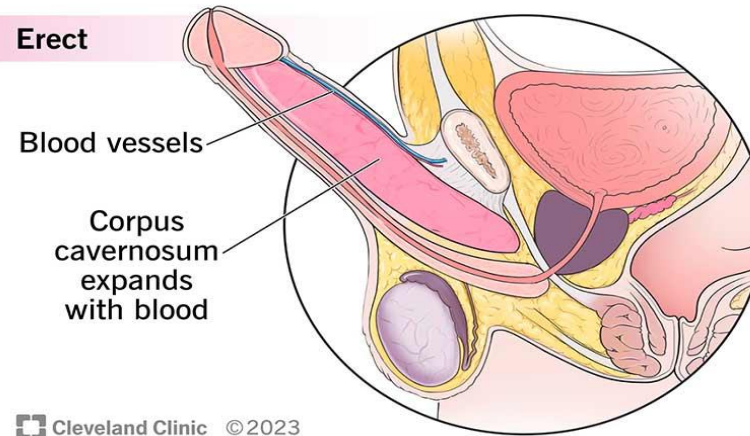
## Erectile dysfunction

If you fail to achieve a full erection more than 50% of the time, see a healthcare provider.

### Flaccid ★



### Erect



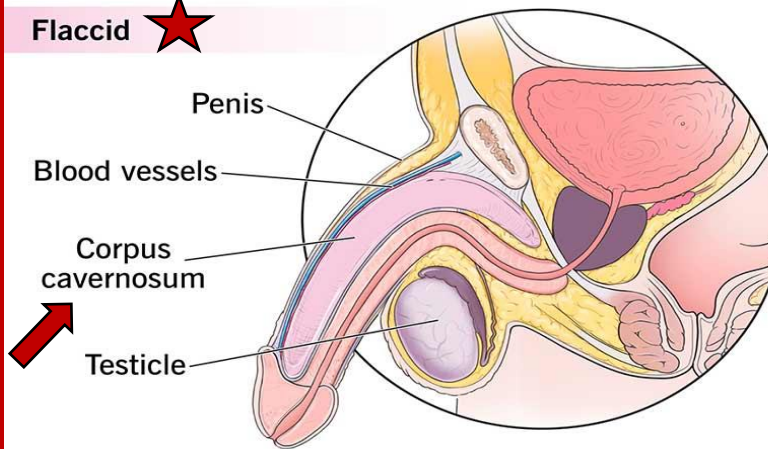
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<https://my.clevelandclinic.org/health/diseases/10035-erectile-dysfunction>

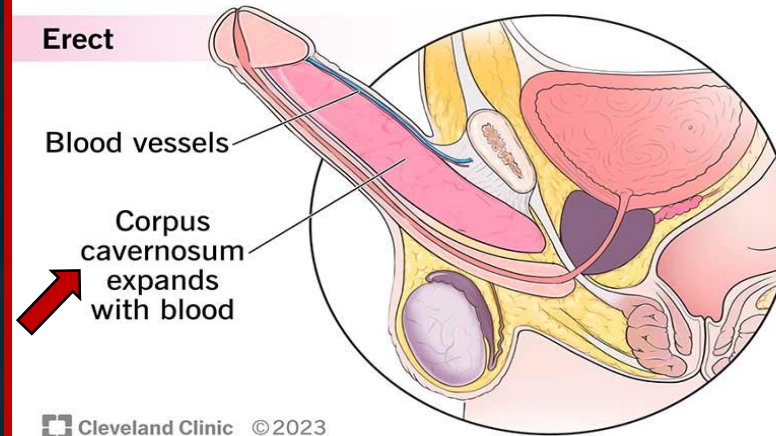
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Erect



Cleveland Clinic ©2023

<https://my.clevelandclinic.org/health/diseases/10035-erectile-dysfunction>

## What are the types of erectile dysfunction?

Healthcare providers separate ED into several categories:

- **Vascular erectile dysfunction.** Vascular ED includes causes that affect the [blood vessels](#) that send blood to the tissues in your penis that allow you to get and maintain an erection, or the valves in the penis that normally hold blood inside. Vascular ED is the most common type of ED.
- **Neurogenic erectile dysfunction.** Neurogenic ED occurs as a result of nerve problems, which prevent signals from traveling from your brain to your penis to create an erection. This can happen because of trauma, pelvic surgery, [radiation therapy](#) or neurologic conditions like [stroke](#), [spinal stenosis](#) and [multiple sclerosis](#) (MS).
- **Hormonal erectile dysfunction.** Hormonal ED refers to ED that happens as a result of [testosterone](#) deficiency, or in some cases as a result of [thyroid](#) issues.
- **Psychogenic erectile dysfunction.** Psychogenic ED involves psychological conditions (conditions that affect your thoughts, feelings or behavior) that can cause ED.

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Erectile dysfunction is a common side effect of many prescription drugs. Common medications that list ED as a potential side effect include:

- Antidepressants.
- Anti-anxiety medications (anxiolytics).
- Blood pressure medications.
- Diuretics.
- Antihistamines.
- Chemotherapy drugs.
- Parkinson's disease drugs.
- Prostate cancer drugs.
- Antiarrhythmics.
- Sedatives.
- Muscle relaxers.
- Antiseizure medications.

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## Who does erectile dysfunction affect?

You may have a greater risk of getting ED if you:

- Are 40 or older.
- Have diabetes.
- Have a body mass index (BMI) over 25.
- Have depression.
- Are physically inactive.
- Smoke.

<https://my.clevelandclinic.org/health/diseases/10035-erectile-dysfunction>



[Home](#) / [Health Library](#) / [Diseases & Conditions](#) / [Low Testosterone \(Male Hypogonadism\)](#)

# Low Testosterone (Male Hypogonadism)

Low testosterone (male hypogonadism) is a condition in which your testicles don't produce enough testosterone. It has several possible causes, including conditions or injuries affecting your testicles, pituitary gland or hypothalamus. It's treatable with testosterone replacement therapy.

<https://my.clevelandclinic.org/health/diseases/15603-low-testosterone-male-hypogonadism>

## Symptoms of low testosterone in men



**Reduced  
sex drive**



**Erectile  
dysfunction**



**Loss of armpit  
and pubic hair**



**Depressed mood**



**Fatigue**

<https://my.clevelandclinic.org/health/diseases/15603-low-testosterone-male-hypogonadism>

## What does testosterone do?

Testosterone is the main [androgen](#). It stimulates the development of male characteristics and is essential for sperm production (spermatogenesis). Levels of testosterone are naturally much higher in men than women.

In [men](#), testosterone helps maintain and develop:

- Sex organs and genitalia.
- Muscle mass.
- Adequate levels of [red blood cells](#).
- Bone density.
- Sense of well-being.
- Sexual and [reproductive function](#).

Your body usually tightly controls the levels of testosterone in your blood. Levels are typically highest in the morning and decline through the day.

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<https://my.clevelandclinic.org/health/diseases/15603-low-testosterone-male-hypogonadism>



## **What is a low testosterone level?**

The American Urology Association (AUA) considers low blood testosterone to be less than 300 nanograms per deciliter (ng/dL) for adults.

However, some researchers and healthcare providers disagree with this and feel that levels below 250 ng/dL are low. Providers also take symptoms into consideration when diagnosing low testosterone.

<https://my.clevelandclinic.org/health/diseases/15603-low-testosterone-male-hypogonadism>

## Who does low testosterone (male hypogonadism) affect?

Male hypogonadism is a medical condition that can affect people with testicles at any age from birth through adulthood.

Low testosterone is more likely to affect people who:

- Are older.
- Have [obesity](#).
- Have poorly managed [Type 2 diabetes](#).
- Have obstructive sleep apnea.
- Have chronic medical conditions, such as kidney dysfunction or [cirrhosis of the liver](#).
- [Have HIV/AIDs](#).

<https://my.clevelandclinic.org/health/diseases/15603-low-testosterone-male-hypogonadism>

## What Causes Low Energy in Men? 6 Potential Causes

November 17 2023

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Be honest: have you been feeling a constant surge of unexplainable tiredness hitting you lately? Does this feeling of exhaustion prevent you from performing to your desired levels?

While it's normal to feel tired after a strenuous workout or an all-nighter, persistent tiredness can be a sign of a more sinister condition lying beneath.

While having one sweeping explanation can make it easy to target and treat low energy levels, the truth is chronic fatigue can stem from multiple sources.

From hormonal imbalances to health conditions, several things can lead to fatigue. And when left untreated, it can spiral into an even worse problem.



### **Consult a Men's Health Specialist**

PRIVATE & CONFIDENTIAL

\* Indicates required questions

**Name \***

First

Last

**Email \***

**Phone # \***

**Comments**

<https://paramountmensmedical.com/blog/what-causes-low-energy-in-men-potential-causes/>

## 1. Sleep Difficulties

Are you getting enough sleep? [Researchers](#) have shown that an adult male should have at least 7 hours of uninterrupted sleep every night for optimal health. Any less than that and you could face adverse health problems, with one major one being severe fatigue throughout the day.

<https://paramountmensmedical.com/blog/what-causes-low-energy-in-men-potential-causes/>



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## 2. Poor Dietary Habits

Have you ever felt sluggish after eating certain foods? It should come as no surprise that food heavily influences your energy levels. Eating the right food can give you the boost to seize the day, whereas eating the wrong ones can do the exact opposite.

<https://paramountmensmedical.com/blog/what-causes-low-energy-in-men-potential-causes/>



### 3. Low Testosterone Levels ◀

Having low testosterone levels can cause a reduced capacity for the body to perform certain functions, such as maintaining muscle mass and regulating mood disorders. You may also face weight gain issues that are difficult to control.

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### 3. Low Testosterone Levels ◀

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### 4. Thyroid Gland Problems ◀

Another hormonal issue that can lead to low energy in men is hypothyroidism, a condition marked by abnormally low levels of thyroid hormones in the body.

When the thyroid gland doesn't produce enough hormones, it can slow down the body's natural metabolism. This, in turn, can make you feel sleepier and more prone to developing low energy.

<https://paramountmensmedical.com/blog/what-causes-low-energy-in-men-potential-causes/>

## 5. Depression

If you're depressed or have symptoms of depression, this can cause you to feel persistently tired and low-energy. You can switch your chronic, low-energy state to a renewed one with the right treatment plan.

<https://paramountmensmedical.com/blog/what-causes-low-energy-in-men-potential-causes/>



## 5. Depression

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## 6. Health Disorders

So your diet is balanced, your blood tests and hormone levels look good, and you're sleeping well. But if you're still afflicted by low energy. What gives?

Here are a few of these health disorders that may contribute to low energy levels:

- Iron deficiency anemia
- Severe heart disease
- Diabetes
- Cancer
- Kidney failure
- Chronic Fatigue Syndrome (CFS)

<https://paramountmensmedical.com/blog/what-causes-low-energy-in-men-potential-causes/>

TESTOSTERONE • 5 minute read

## **Could testosterone be the missing link to better sleep and energy?**



Written by **Joe Young**  
Digital Copywriter



Medical review by **Hassan Thwaini**  
Clinical Pharmacist and Copywriter | MPharm



<https://www.numan.com/low-testosterone/symptoms/testosterone-sleep-energy>

## **The role of testosterone in energy production**

Beyond its impact on sleep, testosterone is crucial for energy production by influencing metabolism. It helps muscles absorb glucose from the blood for energy and boosts fat burning. Both processes are key for maintaining steady energy levels. Low testosterone levels are associated with reduced insulin sensitivity and impaired glucose metabolism, which can lead to fatigue and reduced energy availability.<sup>5</sup>

<https://www.numan.com/low-testosterone/symptoms/testosterone-sleep-energy>

# 5 Ways Testosterone Can Impact Your Energy Levels



Testosterone is a fundamental hormone that carries out a range of tasks in countless parts of your body. *When your testosterone levels are out of balance, it can affect your mental health, your emotions, and your cognitive and physical performance.* Testosterone can also affect your energy levels.

But energy is crucial for you so you can go about your daily activities and perform work-related functions. Low testosterone that triggers low energy levels can further impact your personal life by preventing you from pursuing hobbies, committing to household chores, and spending quality time with your family.

<https://www.rethinktestosterone.com/blog/testosterone-and-energy>



# Does Testosterone Give You Energy?

You could say testosterone is something like an energy booster, which simultaneously promotes many aspects of your health. Various functions in your body are adversely affected by low testosterone and the consequential low energy levels resulting from it.

It's estimated that [10% to 40% of men](#) suffer from testosterone deficiency (TD) globally — a condition that could potentially impact their energy levels and thus limit their life quality. An impressive [28.7% of men](#) in the U.S. who are currently taking prescription testosterone, indicated that their **primary reason for taking testosterone was a lack of energy.**

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# What Type of Medication is Prescribed for Men's Health?



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When pain signals an emergency: Symptoms you should never ignore



MEN'S HEALTH

## Which drug for erectile dysfunction?

August 9, 2022

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**Erectile dysfunction pills have some differences, but price can limit your ED medicine choices.**



<https://www.health.harvard.edu/mens-health/which-drug-for-erectile-dysfunction>

## ED drugs: How soon they start working and how long they last

| Medication               | Onset         | Duration    |
|--------------------------|---------------|-------------|
| avanafil (Stendra) ★     | 15-30 minutes | 6-12 hours  |
| sildenafil (Viagra) ★    | 30-60 minutes | 4-5 hours   |
| tadalafil (Cialis)       | 30-45 minutes | 24-36 hours |
| tadalafil (Cialis) daily | continuous    | continuous  |
| varденаfil (Levitra)     | 30-60 minutes | 4-5 hours   |

<https://www.health.harvard.edu/mens-health/which-drug-for-erectile-dysfunction>



# Medications for Hypogonadism, Male

Other names: Hypogonadotropic Hypogonadism - Male; Low T; Low Testosterone; Primary Hypogonadism - Male

Hypogonadism occurs when the body's sex glands produce little or no hormones. In men, these glands (gonads) are the testes.

## Drugs used to treat Hypogonadism, Male

The medications listed below are related to or used in the treatment of this condition.

<https://www.drugs.com/condition/hypogonadism-male.html>

| Drug name ↕                  | Rating ↕ | Reviews ↕   | Activity ▾ ?           | Rx/OTC | Preg | CSA | Alcohol |
|------------------------------|----------|-------------|------------------------|--------|------|-----|---------|
| testosterone ★               | 7.3      | 507 reviews | <div><div></div></div> | Rx     | ×    | 3   |         |
| AndroGel ★                   | 7.4      | 112 reviews | <div><div></div></div> | Rx     | ×    | 3   |         |
| Depo-Testosterone            | 9.9      | 9 reviews   | <div><div></div></div> | Rx     | ×    | 3   |         |
| Androderm                    | 6.7      | 35 reviews  | <div><div></div></div> | Rx     | ×    | 3   |         |
| Testim                       | 6.3      | 103 reviews | <div><div></div></div> | Rx     | ×    | 3   |         |
| Fortesta                     | 7.3      | 27 reviews  | <div><div></div></div> | Rx     | ×    | 3   |         |
| chorionic gonadotropin (hcg) | 7.8      | 4 reviews   | <div><div></div></div> | Rx     | ×    | N   |         |
| Xyosted                      | 8.2      | 6 reviews   | <div><div></div></div> | Rx     | ×    | 3   |         |
| Aveed                        | 4.4      | 13 reviews  | <div><div></div></div> | Rx     | ×    | 3   |         |
| Gonal-f                      | 10       | 1 review    | <div><div></div></div> | Rx     | ×    | N   |         |
| Testopel                     | 6.8      | 17 reviews  | <div><div></div></div> | Rx     | ×    | 3   |         |

<https://www.drugs.com/condition/hypogonadism-male.html>

# What Are the Side Effects of These Prescribed Drugs??

# Avanafil

**Generic name:** avanafil [ a-VAN-a-fil ]

**Brand name:** Stendra

**Dosage form:** oral tablet (100 mg; 200 mg; 50 mg)

**Drug class:** Impotence agents



Medically reviewed by Drugs.com on Sep 23, 2025. Written by Cerner Multum.

[Uses](#) | [Side effects](#) | [Warnings](#) | [Before taking](#) | [Dosage](#) | [Interactions](#)

## What is avanafil?

Avanafil is used to treat [erectile dysfunction](#) (impotence).

<https://www.drugs.com/mtm/avanafil.html>

Home > Avanafil

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<https://www.drugs.com/mtm/avanafil.html>



# Avanafil Side Effects

Medically reviewed by Drugs.com. Last updated on Nov 2, 2025.

## Cardiovascular

- **Very common** (10% or more): Flushing (up to 10.1%)
- **Common** (1% to 10%): Hypertension, abnormal electrocardiogram
- **Uncommon** (0.1% to 1%): Peripheral edema, angina, [unstable angina](#), [deep vein thrombosis](#), [palpitations](#), hot flush, increased heart rate

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## Gastrointestinal

- **Common** (1% to 10%): Diarrhea, dyspepsia, nausea, [constipation](#)
- **Uncommon** (0.1% to 1%): Gastritis, gastroesophageal reflux disease, stomach discomfort, vomiting, dyspepsia, nausea

<https://www.drugs.com/mtm/avanafil.html>

## Musculoskeletal

- **Common** (1% to 10%): Back pain, arthralgia
- **Uncommon** (0.1% to 1%): Muscle spasms, musculoskeletal pain, myalgia, pain in extremity, muscle tightness

<https://www.drugs.com/mtm/avanatil.html>

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## Nervous system

- **Very common** (10% or more): Headache (up to 12.1%)
- **Common** (1% to 10%): Dizziness
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## Psychiatric

- **Uncommon** (0.1% to 1%): Depression, insomnia
- **Rare** (less than 0.1%): [Premature ejaculation](#), inappropriate affect<sup>[Ref]</sup>

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## Respiratory

- **Common** (1% to 10%): Nasal congestion, nasopharyngitis, upper respiratory infection (URI), bronchitis, sinusitis, sinus congestion
- **Uncommon** (0.1% to 1%): Oropharyngeal pain, cough, exertional dyspnea, wheezing

<https://www.drugs.com/mtm/avanafil.html>

Home > Sildenafil

# Sildenafil



**Generic name:** sildenafil (oral) [ *sil-DEN-a-fil* ]

**Brand names:** Revatio, Viagra

**Drug classes:** Agents for pulmonary hypertension, Impotence agents



Medically reviewed by Kaci Durbin, MD. Last updated on Dec 10, 2024.

[Uses](#) | [Warnings](#) | [Before taking](#) | [Dosage](#) | [Side effects](#) | [Interactions](#) | [FAQ](#)

## What is sildenafil?

Sildenafil relaxes muscles of the blood vessels and increases blood flow to particular areas of the body.

Sildenafil under the name Viagra is used to treat [erectile dysfunction](#) (impotence) in men.



<https://www.drugs.com/sildenafil.html>

# Sildenafil Side Effects

Medically reviewed by Drugs.com. Last updated on Jun 3, 2025.

## Cardiovascular

- **Very common** (10% or more): Flushing (up to 19%)
- **Rare** (0.01% to 0.1%): Myocardial infarction, [atrial fibrillation](#), unstable angina, tachycardia, palpitations
- **Frequency not reported**: Shock, [angina pectoris](#), AV block, migraine, syncope, hypotension, postural hypotension, myocardial ischemia, cerebral thrombosis, cardiac arrest, heart failure, abnormal electrocardiogram, cardiomyopathy, vasodilation, abnormal electrocardiogram, increased heart rate
- **Postmarketing reports**: Myocardial infarction, sudden cardiac death, cardiac arrest, ventricular arrhythmia, hypertension, hypotensive events after the use with alpha-blockers, tachycardia, hypotension, syncope

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## Psychiatric

- **Common** (1% to 10%): Insomnia, anxiety
- **Frequency not reported**: Depression, abnormal dreams

<https://www.drugs.com/sildenafil.html>

## Gastrointestinal

- **Very common** (10% or more): Dyspepsia (up to 17%), diarrhea
- **Common** (1% to 10%): Nausea, vomiting, dry mouth, gastritis, gastroesophageal reflux disease, hemorrhoids, abdominal distension

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## Musculoskeletal

- **Very common** (10% or more): Pain in limb (up to 15%), myalgia (up to 14%), back pain (up to 13%)
- **Frequency not reported:** Arthritis, arthrosis, myalgia, tendon rupture, tenosynovitis, bone pain, myasthenia, synovitis

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- **Frequency not reported:** Arthritis, arthrosis, myalgia, tendon rupture, tenosynovitis, bone pain, myasthenia, synovitis

## Nervous system

- **Very common** (10% or more): Headache (up to 28% in ED; up to 49% in PAH)
- **Common** (1% to 10%): Dizziness, vertigo, paresthesia, tremor, burning sensation, migraine, hypoesthesia
- **Uncommon** (0.1% to 1%): Somnolence

<https://www.drugs.com/sildenafil.html>

## Ocular

- **Very common** (10% or more): Abnormal vision (up to 11%)
- **Common** (1% to 10%): Abnormal sensation in eye, chromatopsia, cyanopsia, diplopia, eye irritation, photophobia, retinal hemorrhage, visual acuity reduced, visual color distortion
- **Uncommon** (0.1% to 1%): Dry eye, lacrimal disorder, photopsia, ocular hyperemia, visual brightness, conjunctivitis, eye pain

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## Respiratory

- **Very common** (10% or more): Upper respiratory tract infection (up to 31%), bronchitis (up to 20%), pharyngitis (up to 18%)
- **Common** (1% to 10%): Nasal congestion, cough, epistaxis, dyspnea, sinusitis, rhinitis, bronchitis, pneumonia, rhinorrhea
- **Uncommon** (0.1% to 1%): Sinus congestion
- **Frequency not reported**: Asthma, laryngitis, increased sputum, increased cough, respiratory tract infection, throat tightness, nasal dryness, nasal edema, bronchopneumonia, hypoxia, stridor, pulmonary hypertension

<https://www.drugs.com/sildenafil.html>

## Dermatologic

- **Common** (1% to 10%): Rash, erythema, alopecia
- **Frequency not reported**: Face edema, photosensitivity reaction, urticaria, pruritus, sweating, skin ulcer, contact dermatitis, exfoliative dermatitis
- **Postmarketing reports**: Stevens-Johnson syndrome (SJS), Toxic epidermal necrolysis (TEN)

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## Metabolic

- **Common** (1% to 10%): Increased weight, fluid retention
- **Frequency not reported:** Edema, gout, unstable diabetes, hyperglycemia, peripheral edema, hyperuricemia, hypoglycemic reaction, hypernatremia

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## Other

- **Very common** (10% or more): Pyrexia (up to 17%), influenza (up to 12%)
- **Common** (1% to 10%): Cellulitis, gynecomastia, breast enlargement, night sweats
- **Uncommon** (0.1% to 1%): Tinnitus, chest pain, feeling hot, fatigue

<https://www.drugs.com/sildenafil.html>

# Testosterone Injection



**Generic name:** testosterone injection [ *tes-TOS-ter-one* ]

**Brand names:** Aveed, Delatestryl, Depo-Testosterone, Testosterone Cypionate, Testosterone Enanthate, Testosterone undecanoate, Xyosted

**Drug class:** Androgens and anabolic steroids



Medically reviewed by Kaci Durbin, MD. Last updated on April 18, 2025.

[Uses](#) | [Warnings](#) | [Before taking](#) | [Dosage](#) | [Side effects](#) | [Interactions](#) | [FAQ](#)

## What is testosterone?

Testosterone is a naturally occurring sex hormone that is produced in a man's testicles. Small amounts of testosterone are also produced in a woman's ovaries and adrenal system.

Testosterone injection is used in men and boys to treat conditions caused by a lack of this hormone, such as delayed puberty or growth. It is only recommended for males with a known medical condition, such as a genetic disorder, problem with certain brain structures (called the hypothalamus and pituitary) or previous chemotherapy.



<https://www.drugs.com/testosterone.html>

# Testosterone Injection



## Important warnings

This medicine can cause some serious health issues



### Oral route (capsule)

Warning: Blood Pressure Increases. Testosterone undecanoate can cause blood pressure (BP) increases that can increase the risk of major adverse cardiovascular events (MACE), including non-fatal myocardial infarction, non-fatal stroke and cardiovascular death.

Before initiating testosterone undecanoate, consider the patient's baseline cardiovascular risk and ensure blood pressure is adequately controlled.

Periodically monitor for and treat new-onset hypertension or exacerbations of pre-existing hypertension and re-evaluate whether the benefits of testosterone undecanoate outweigh its risks in patients who develop cardiovascular risk factors or cardiovascular disease on treatment.

Due to this risk, use testosterone undecanoate only for the treatment of men with hypogonadal conditions associated with structural or genetic etiologies.

<https://www.drugs.com/testosterone.html>

*This medicine should not be used by women, especially those who are pregnant or might become pregnant. Testosterone may cause birth defects if a pregnant woman comes in contact with the medicine. Make sure your doctor knows if your sexual partner is pregnant. If a pregnancy occurs while you are using this medicine, tell your doctor right away.*

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This medicine may increase the risk of **prostate cancer**, especially in older men. Make sure your doctor knows if you have prostate cancer, or if anyone in your family has prostate cancer.

This medicine may increase your risk of having heart or blood vessel problems, including a heart attack or stroke. Tell your doctor right away if you have chest pain that may spread to your arms, jaw, back, or neck, faintness, headache, nausea, vomiting, trouble breathing, trouble seeing or speaking, or unusual sweating.

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*This medicine may cause some people to be agitated, irritable, or display other abnormal behaviors. It may also cause some people to have suicidal thoughts and tendencies or to become more depressed. Also tell your doctor if you have sudden or strong feelings, such as feeling nervous, angry, restless, violent, or scared. If you or your caregiver notice any of these side effects, tell your doctor right away.*

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*In some cases, this medicine may decrease the amount of sperm men make and affect their ability to have children. Talk with your doctor before you use this medicine if you plan to have children.*

<https://www.drugs.com/testosterone.html>



# Testosterone Side Effects

Medically reviewed by Drugs.com. Last updated on Apr 29, 2025.

## Dermatologic

- **Very common** (10% or more): Testosterone topical: Skin reaction (16.1%), burn-like blisters (12%), itching, allergic contact dermatitis (up to 37%)
- **Common** (1% to 10%): Acne, induration, burning
- **Uncommon** (0.1% to 1%): Alopecia, erythema, rash (including rash popular), pruritus, dry skin, folliculitis (testosterone topical)
- **Frequency not reported:** Seborrhea, urticaria, male pattern baldness, hirsutism injection site inflammation

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## Genitourinary

- **Common** (1% to 10%): Abnormal prostate examination, benign prostate hyperplasia (BPH), ejaculation disorder, prostatitis
- **Uncommon** (0.1% to 1%): Prostate induration, prostatic disorder, testicular pain, decreased urine flow, urinary retention, urinary tract disorder, nocturia, dysuria

<https://www.drugs.com/testosterone.html>

## Endocrine

- **Very common** (10% or more): Accelerated growth
- **Common** (1% to 10%): Increased estradiol, hypogonadism
- **Uncommon** (0.1% to 1%): Increased blood testosterone
- **Frequency not reported:** Signs of virilization in women (e.g., hoarseness, acne, hirsutism, menstrual irregularity, clitoral enlargement, and alopecia), precocious puberty (in prepubertal males)

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## Gastrointestinal

- **Very common** (10% or more): Testosterone buccal film: Gingivitis (32.6%)
- **Common** (1% to 10%): Diarrhea, oily stools (due to IM injection oily solvent); Testosterone topical: Gastroesophageal reflux disease, gastrointestinal bleeding, gum or mouth irritation (9.2%), taste bitter, gum pain, gum tenderness, gum edema, taste perversion

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## Musculoskeletal

- **Common** (1% to 10%): Back pain, hemarthrosis (testosterone topical)
- **Uncommon** (0.1% to 1%): Arthralgia, pain in extremity, muscle spasm, muscle strain, myalgia, musculoskeletal stiffness, increased creatine phosphokinase
- **Frequency not reported:** Pediatrics: Premature epiphyseal closure, increased bone formation

<https://www.drugs.com/testosterone.html>

## Local ★

- **Very common** (10% or more): Testosterone topical: Application site pruritus (up to 37%), application site blistering (12%)
- **Common** (1% to 10%): Injection site pain, injection site discomfort, injection site pruritus, erythema, injection site hematoma, injection site irritation, injection site inflammation; injection site reaction; Topical testosterone: Application site erythema, application site warmth, application site irritation, application site vesicles, application site exfoliation, application site burning, application site induration, bullae at application site, mechanical irritation at application site, rash at application site, contamination of application site

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## Cardiovascular

- **Common** (1% to 10%): Hot flush, hypertension
- **Uncommon** (0.1% to 1%): Cardiovascular disorder
- **Frequency not reported:** [Venous thromboembolism](#)
- **Postmarketing reports:** [Angina pectoris](#), [cardiac arrest](#), [cardiac failure](#), [coronary artery disease](#), coronary artery occlusion, myocardial infarction, tachycardia, cerebral infarction, [cerebrovascular accident](#), circulatory collapse, [deep venous thrombosis](#), syncope, [thromboembolism](#), thrombosis, venous insufficiency, stroke<sup>[Ref]</sup>

<https://www.drugs.com/testosterone.html>

## Hematologic

- **Common** (1% to 10%): Polycythemia, hematocrit increased
- **Uncommon** (0.1% to 1%): Increased red blood cell count, increased hemoglobin, prolonged activated partial thromboplastin time, prolonged prothrombin time
- **Frequency not reported:** Blood and lymphatic system disorders, suppression of clotting factors II, V, VII, and X, bleeding in patients on concomitant anticoagulant therapy

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## Metabolic

- **Common** (1% to 10%): Weight increased, appetite increased, fluid retention (sodium, chloride, water, potassium, calcium, and inorganic phosphates)
- **Uncommon** (0.1% to 1%): Increased glycosylated hemoglobin, hypercholesterolemia, increased triglyceride
- **Frequency not reported:** Abnormal lipids (decrease in serum LDL, HDL, and triglycerides), metabolism and nutrition disorders, hypercalcemia

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## Nervous system

- **Common** (1% to 10%): Headache, vertigo (topical testosterone)
- **Uncommon** (0.1% to 1%): Migraine, tremor, dizziness
- **Frequency not reported:** Nervousness, paresthesia

<https://www.drugs.com/testosterone.html>

## Oncologic

- **Common** (1% to 10%): Prostatic specific antigen (PSA) increased, prostate cancer
- **Uncommon** (0.1% to 1%): Prostatic intraepithelial neoplasia

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## Oncologic

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## Other

- **Common** (1% to 10%): Fatigue, hyperhidrosis; chills, body pain, smell disorder
- **Uncommon** (0.1% to 1%): Breast induration, breast pain, sensitive nipples, gynecomastia, increased estradiol, increased testosterone, asthenia, night sweats

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## Psychiatric

- **Common** (1% to 10%): Irritability, insomnia, mood swings, aggression,
- **Uncommon** (0.1% to 1%): Depression, emotional disorder, restlessness, increased libido, decreased libido
- **Frequency not reported:** Hostility, anxiety



<https://www.drugs.com/testosterone.html>



## What Dr. Ardis Recommends for Men's Health!!

Basic and Translational Science

# Saw Palmetto Extract Enhances Erectile Responses by Inhibition of Phosphodiesterase 5 Activity and Increase in Inducible Nitric Oxide Synthase Messenger Ribonucleic Acid Expression in Rat and Rabbit Corpus Cavernosum

Surong Yang<sup>a</sup>  , Changrui Chen<sup>a</sup>, Yiying Li<sup>a</sup>, Zhenghua Ren<sup>b</sup>, Yungang Zhang<sup>b</sup>, Gantong Wu<sup>c</sup>, Hao Wang<sup>c</sup>, Zhenzhen Hu<sup>a</sup>, Minghui Yao<sup>a</sup>

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<https://www.sciencedirect.com/science/article/pii/S0090429513001696>

Male erectile dysfunction (ED) is one of the most common sexual dysfunctions in men.<sup>1</sup>  
The severity and prevalence of ED increase with aging.<sup>2</sup> The Massachusetts Male Aging Study showed that an ED incidence of up to 52% in men aged between 40 and 70 years.<sup>3</sup>  
By 2025, an estimated 322 million men worldwide will be affected by ED.<sup>2</sup> Selective phosphodiesterase 5 (PDE5) inhibitors, such as sildenafil and tadalafil, are the first-line oral therapy for patients complaining of ED of any type and etiology. However, about 30% of patients are unresponsive to PDE5 inhibitor regimens, and discontinuation rates remain high.<sup>4, 5</sup>

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In the SPE studies, 40 rats were randomly divided into 4 groups. In the control group, saline was administered, whereas in the SPE-treated groups, the low-, middle-, and high-dose was 14.29, 28.58, and 57.16 mg/kg, respectively. The 30 rabbits were also classified into 4 groups as in the rat experiment, except that the dose in the 3 SPE-treated groups was 7.5, 15, and 30 mg/kg, respectively. SPE was given by intragastric administration once daily for 7 consecutive days.

In the sildenafil studies, 23 rats were randomly divided into 3 groups that were intragastrically administered sildenafil at 12.5, 25, and 50 mg/kg, respectively, 15 minutes before electrical stimulation, with saline administered as the control. The intragastric volume was 1 mL/100 g for rats and 1 mL/kg for rabbits.

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Saw palmetto extract (SPE) is extracted from the berries of American dwarf palm (*Serenoa repens*) and has been used to treat benign prostatic hyperplasia (BPH) since the 1800s.<sup>6</sup> Lower urinary tract symptoms related to BPH include frequency, urgency, nocturia, incomplete emptying, and weak stream. The standard medications for the treatment of BPH include  $\alpha$ -adrenergic blockers and 5 $\alpha$ -reductase inhibitors. However, these therapies are associated with troublesome sexual side effects.<sup>7, 8</sup> In controlled clinical trials in patients with BPH, SPE produced similar improvement as finasteride in peak urinary flow rate and reduction in nocturia. The adverse effects due to SPE are mild, and ED occurs less often than with finasteride.<sup>9, 10, 11</sup> Zlotta et al<sup>12</sup> analyzed the sexual function of patients with BPH treated with Permixon (a lipidosterolic extract of *S repens*, Pierre Fabre Medicament, Castres, France), tamsulosin, or finasteride. The study demonstrated that in contrast to the negative effect of tamsulosin and finasteride on sexual function, Permixon had no negative effect on male sexual function such as interest in sexuality, quality of erection, and achievement of orgasm and ejaculation.<sup>12</sup>

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In this study, we observed that intragastric use of SPE for 7 consecutive days dose-dependently promoted iNOS mRNA expression in rat and rabbit corpus cavernosum tissues. The results suggested that the significantly enhanced amplitude of relaxation induced by SPE in response to electrical stimulation of nerves in the corpus cavernosum might be associated with an increase in NO synthesis through iNOS, thereby activating guanylate cyclase to induce accumulation of cGMP in corpus cavernosum smooth muscles. Our results were consistent with previous studies in which iNOS transgenic treatment improved the symptoms of ED. Garban et al<sup>24</sup> continuously delivered iNOS inducers to the penises of old rats for 3-6 days and observed that the symptoms of ED were ameliorated. The efficacy of gene therapy to improve erectile function has been confirmed by injecting rat corpora cavernosa with a solution of a plasmid construct of iNOS cDNA.<sup>25</sup> Furthermore, Ferrini et al<sup>26</sup> found that the genetic blockade of iNOS expression in iNOS knockout mice intensified fibrosis and oxidative stress in the corpus cavernosum in streptozotocin-induced diabetes.

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The response to electrical stimulation of nerves in the corpus cavernosum after SPE administration was observed by measuring the electrical activity of the corpus cavernosum in rats and rabbits. After 7 consecutive days of intragastric SPE in the rats, we found that the amplitude of corpus cavernosum potential was significantly augmented in the high-dose group compared with that in the saline control group ( $P < .01$ ). SPE affected the electrical activity of corpus cavernosum in a dose-dependent manner ( $P < .01$ ; Fig. 1B). A similar significantly enhanced relaxation in response to electrical stimulation of nerves was recorded in the rabbit corpus cavernosum after 7 consecutive days of intragastric SPE ( $P < .05$  or  $P < .01$ ). The rabbits that received low-dose treatment showed a statistically significant increase in the amplitude of electrical activity of the cavernosum ( $P < .05$ ; Fig. 1C).

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In the SPE-treated animals, the relaxant response to electrical stimulation of nerves in the corpus cavernosum, reflected by the amplitude of the electrical activity within the cavernosum, was significantly and dose-dependently augmented. Similar effects were observed in the sildenafil-treated rats. PDE5 activity in rat and rabbit corpus cavernosum tissues was significantly and dose-dependently inhibited in SPE-treated animals, whereas the iNOS mRNA level increased compared with the saline group. PDE5 mRNA, however, was only significantly enhanced in the rats treated with the middle dose of SPE.

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## Conclusions

In this study, we found that SPE relaxed rat and rabbit corpora cavernosa and therefore increased the penile response to electrical stimulation, which may have been as a consequence of higher cGMP levels produced by increasing iNOS mRNA expression as well as by suppressing PDE5 activity in corpus cavernosum smooth muscles. The results provide an experimental basis for the low incidence of sexual dysfunction that occurs in the treatment of BPH patients with SPE and suggest that SPE may have potential application value for the prevention or treatment of ED in some cases, although further studies in pathologic models need to be performed.

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## **Standardized Saw Palmetto Extract Directly and Indirectly Affects Testosterone Biosynthesis and Spermatogenesis**

**Authors:** [Jeong Moon Yun](#), [Minhee Lee](#), [Dakyung Kim](#), [K. Shyam Prasad](#), [Sangwon Eun](#), [Ok-Kyung Kim](#) , and [Jeongmin Lee](#)  | [AUTHORS INFO & AFFILIATIONS](#)

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### **Abstract**

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We investigated whether a standardized saw palmetto extract (SP, mixture of supercritical extract and ethanol extract at a ratio of 9.5 to 0.5) can relieve the symptoms of andropause, including metabolic syndrome, and decreases in muscle endurance and spermatogenesis, in old rats. Twenty-four-week-old male Sprague Dawley rats received oral supplementation of SP at 40, 80, and 160 mg/kg body weight (bw) for 4 weeks. We found that SP supplementation reduced body weight gain by decreasing visceral and epididymal fat weights and the levels of serum triglycerides, total cholesterol, and low-density lipoprotein/very low-density lipoprotein cholesterol. In addition, SP supplementation increased muscle endurance, sperm counts, and testosterone biosynthesis through hormonal regulation. In Leydig cells under hydrogen peroxide-induced oxidative stress, SP treatment directly induced testosterone biosynthesis by activating the mRNA expression of the genes encoding 17,20-desmolase and 3 $\beta$ -hydroxysteroid dehydrogenase 4. In conclusion, our results suggest that supplementation of SP may be useful for alleviating the symptoms of andropause *via* direct and indirect regulation of testosterone biosynthesis.

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## **Magnesium deficiency score predicts erectile dysfunction risk and mortality: a population-based analysis of NHANES 2001–2004**

[Xiaobao Chen](#)<sup>1,†</sup>, [Kangqiang Weng](#)<sup>1,†</sup>, [Ruoyun Xie](#)<sup>1</sup>, [Junwei Lin](#)<sup>1</sup>, [Lingjun Liu](#)<sup>1</sup>, [Shaoxing Zhu](#)<sup>1,\*†</sup>, [Huaiying Zheng](#)<sup>1,\*†</sup>

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Magnesium is an essential mineral involved in numerous physiological processes, including the metabolism of nitric oxide, a critical mediator of penile erection (11). Hypomagnesemia, or magnesium deficiency, has been implicated in various cardiovascular and metabolic disorders, which are also risk factors for ED. Despite the biological plausibility linking magnesium status to erectile function, the relationship between magnesium deficiency and ED has not been extensively studied.

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Previous research has shown that hypomagnesemia is associated with an increased prevalence of ED in certain populations. For instance, a study on elderly men with chronic kidney disease found that those with hypomagnesemia had a significantly higher prevalence of ED compared to those with normal magnesium levels (10). Additionally, dietary intake of magnesium and other trace metals has been inversely associated with the prevalence of ED, suggesting that adequate intake of these nutrients may be protective against the development of ED (12). The concept of a Magnesium Depletion Score (MDS) has been proposed as a composite measure to assess magnesium status in individuals. Conventional methods rely on serum magnesium levels, which may not accurately reflect total body magnesium content, as serum levels constitute only 0.3% of total body magnesium (13). This discrepancy can lead to underdiagnosis of chronic magnesium deficiency, even when serum levels appear normal. The Magnesium Tolerance Test (MTT) is recognized as a reliable method for assessing magnesium status, but its complexity and procedural requirements limit its clinical use (14, 15). In response, Fan et al. (16). Developed the MDS, offering a more accessible and accurate tool for identifying magnesium deficiency. The MDS considers factors such as diuretic and proton pump inhibitor usage, changes in renal function, and alcohol consumption, providing a comprehensive assessment that surpasses the limitations of serum and urinary magnesium measures. Understanding the relationship between MDS and ED could provide insights into potential preventive and therapeutic strategies for ED.

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Several interconnected biological mechanisms may elucidate the observed relationship between magnesium deficiency and erectile dysfunction. Magnesium serves as a critical cofactor for endothelial nitric oxide synthase (eNOS), and its deficiency significantly compromises nitric oxide (NO) production while simultaneously enhancing oxidative stress (21, 29, 30), thereby diminishing the essential vasodilatory capacity required for penile erection. Furthermore, magnesium functions as an endogenous calcium channel antagonist in vascular smooth muscle; consequently, magnesium depletion results in elevated intracellular calcium concentrations, promoting pathological vasoconstriction and impeding the necessary relaxation of corpus cavernosum smooth muscle (21). Magnesium deficiency also induces a pro-inflammatory state characterized by increased levels of inflammatory cytokines and oxidative stress markers, contributing to endothelial dysfunction and vascular impairment specifically within penile microvasculature (31, 32). Compelling evidence indicates magnesium's regulatory role in testosterone biosynthesis and hormonal homeostasis, both fundamental to normal erectile physiology (33, 34). Additionally,

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magnesium deficiency is intricately linked with insulin resistance and various components of metabolic syndrome, established independent risk factors for erectile dysfunction (12, 35). Lastly, magnesium modulates autonomic nervous system function, with its deficiency potentially disrupting the parasympathetic predominance essential for initiating and maintaining erection (21). These physiological mechanisms likely operate synergistically in magnesium-deficient states to compromise erectile function, providing robust biological plausibility for the epidemiological associations observed in our study.

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## Conclusion

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In conclusion, our findings reveal a significant dose-dependent association between magnesium deficiency score and both erectile dysfunction and subsequent mortality. These robust relationships persist after comprehensive confounder adjustment, indicating that magnesium status represents a potentially modifiable risk factor in erectile physiology and overall health outcomes. While prospective studies are needed to establish causality, our results provide compelling evidence that magnesium deficiency assessment and correction could represent a novel therapeutic approach in ED management and mortality risk reduction. Given the high prevalence of both magnesium deficiency and erectile dysfunction worldwide, these findings have substantial implications for clinical practice and public health strategies.

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# Effects of Magnesium Supplementation on Testosterone Levels of Athletes and Sedentary Subjects at Rest and after Exhaustion

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This study was performed to assess how 4 weeks of magnesium supplementation and exercise affect the free and total plasma testosterone levels of sportsmen practicing tae kwon do and sedentary controls at rest and after exhaustion. The testosterone levels were determined at four different periods: resting before supplementation, exhaustion before supplementation, resting after supplementation, and exhaustion after supplementation in three study groups, which are as follows: Group 1—sedentary controls supplemented with 10 mg magnesium per kilogram body weight. Group 2—tae kwon do athletes practicing 90–120 min/day supplemented with 10 mg magnesium per kilogram body weight. Group 3—tae kwon do athletes practicing 90–120 min/day receiving no magnesium supplements. The free plasma testosterone levels increased at exhaustion before and after supplementation compared to resting levels. Exercise also increased testosterone levels relative to sedentary subjects. Similar increases were observed for total testosterone. Our results show that supplementation with magnesium increases free and total testosterone values in sedentary and in athletes. The increases are higher in those who exercise than in sedentary individuals.

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## **Zinc improves sexual performance and erectile function by preventing penile oxidative injury and upregulating circulating testosterone in lead-exposed rats**

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Zinc co-administration significantly improved absolute and relative penile weights and the latencies and frequencies of mount, intromission, and ejaculation in lead-exposed rats. Also, zinc ameliorated lead-induced reductions in motivation to mate and penile reflex/erection. These findings were accompanied by attenuation of lead-induced suppression of circulating nitric oxide (NO), penile cyclic guanosine monophosphate (cGMP), dopamine, serum luteinizing hormone, follicle-stimulating hormone, and testosterone. In addition, zinc alleviated lead-induced upregulation of penile activities of acetylcholinesterase and xanthine oxidase (XO), and uric acid (UA) and malondialdehyde (MDA) levels. Furthermore, zinc ameliorated the lead-induced decline in penile nuclear factor erythroid 2-related factor 2 (Nrf2) and reduced glutathione (GSH) levels, and catalase, superoxide dismutase (SOD), glutathione peroxidase (GPx), and glutathione-S-transferase (GST) activities.

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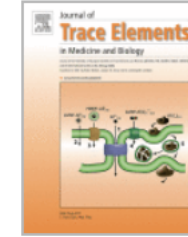
The present study revealed that XO/UA-mediated oxidative stress and suppression of testosterone is associated with lead-induced sexual and erectile dysfunction. Co-administration of zinc prevented lead-induced sexual performance and penile erection by activating Nrf2-dependent signaling. This provides a novel mechanistic understanding of the possible role(s) of zinc therapy in lead-induced sexual and erectile dysfunction.

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# Journal of Trace Elements in Medicine and Biology

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## Correlation between serum zinc and testosterone: A systematic review

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Zinc deficiency may lead to testis structural damage and impaired testosterone synthesis through oxidative stress and autophagy, adversely affecting the normal development of male gonads, spermatogenesis and fertilization [42]. Studies have shown that the main reason for the reduction of testosterone levels in zinc deficiency is the change in the enzymatic conversion of testosterone [6]. Zinc-deficient Leydig cells fail to convert ingested sex steroid precursors into active hormones [43]. In addition, zinc deficiency may also lead to reduced testosterone synthesis through impaired action of epistatic hormones such as gonadotropin-releasing hormone, luteinizing hormone, and follicle-stimulating hormone [44]. Zinc may also play a role in testosterone synthesis through other related proteins. ZnT8, a member of the zinc transporter family, may be involved in the production of testosterone through the PKA signaling pathway. Compared with wild-type mice, the testosterone level of ZnT-8-KO mice decreased significantly [45]. Zinc is an important component of zinc finger protein, an important transcription factor, which is widely present in organisms and participates in a variety of cellular biological processes [46], [47]. A recent study showed that a transcription factor, zinc finger protein 185 (ZNF185), is highly expressed in mouse Leydig cells and plays a role in the secretion of testosterone [48].

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Zinc deficiency may lead to testis structural damage and impaired testosterone synthesis through oxidative stress and autophagy, adversely affecting the normal development of male gonads, spermatogenesis and fertilization [42]. Studies have shown that the main reason for the reduction of testosterone levels in zinc deficiency is the change in the enzymatic conversion of testosterone [6]. Zinc-deficient Leydig cells fail to convert ingested sex steroid precursors into active hormones [43]. In addition, zinc deficiency may also lead to reduced testosterone synthesis through impaired action of epistatic hormones such as gonadotropin-releasing hormone, luteinizing hormone, and follicle-stimulating hormone [44]. Zinc may also play a role in testosterone synthesis through other related proteins. ZnT8, a member of the zinc transporter family, may be involved in the production of testosterone through the PKA signaling pathway. Compared with wild-type mice, the testosterone level of ZnT-8-KO mice decreased significantly [45]. Zinc is an important component of zinc finger protein, an important transcription factor, which is widely present in organisms and participates in a variety of cellular biological processes [46], [47]. A recent study showed that a transcription factor, zinc finger protein 185 (ZNF185), is highly expressed in mouse Leydig cells and plays a role in the secretion of testosterone [48].

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Testosterone levels in the zinc-deficient animals and men included in this study tended to decline, correlating with the severity and duration of zinc deficiency. Studies have confirmed that the degree of testosterone reduction in severely zinc-deficient rats is lower than that in marginal zinc-deficient rats[10]. We observed lower testosterone levels in 2-week zinc-deficient rats than in 4-week rats in one article, although they were not statistically compared between the 2 groups [14]. Consistently, testosterone levels were lower in men on a zinc-restricted diet for 20 weeks than for 8 weeks, and both were lower than baseline levels [12]. Men with zinc intake of 1.44 mg/d had lower testosterone levels than men with 10.35 mg/d[18]. Therefore, it can be confirmed that zinc deficiency has a negative effect on testosterone levels.

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By summarizing numerous animal and clinical studies, we concluded that zinc supplementation can be helpful in increasing testosterone levels. This clinical effect is affected by several factors. First, the effect of zinc supplementation is related to patients' zinc status and basal testosterone level before zinc supplementation. Intervention outcomes tended to be more effective in zinc-deficient individuals than in healthy individuals [12], [51]. Moreover, patients with lower basal testosterone levels had more significant increases in testosterone after zinc supplementation [37]. Second, the appropriate dose range is very important for the curative effect. Here, we refer to the dose of elemental zinc rather than the total dose. The recovery degree of testosterone level in mice reproductive injury model induced by cyclophosphamide was higher than that of 4 mg/kg bw and 8 mg/kg bw when supplemented with 2 mg/kg bw. The 2 mg Zn/kg bw is the intake of mice calculated from the recommended nutritional intake (RNI, 12.5 mg/day). Zinc supplementation at doses within the recommended intake yields better results, and beyond the body's tolerable maximum intake with little or no benefit [29]. Third, the duration of supplementation between studies resulted in varied clinical outcomes. For the elderly with marginal zinc deficiency, the testosterone level after 6 months of zinc supplementation is higher than that after 3 months [12]. In addition,

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zinc supplementation can regulate key genes and protein levels in testosterone synthesis and affect steroidogenesis [29]. In clinical studies, adjunctive zinc supplementation in appropriate doses can be used to treat male hypogonadism[50].

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## ORIGINAL ARTICLE

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CERM 

# The effects of *Commiphora mukul* extract on spermatogenesis and testosterone levels in male diabetic rats

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[https://www.researchgate.net/publication/339828072\\_The\\_effects\\_of\\_Commiphora\\_mukul\\_extract\\_on\\_spermatogenesis\\_and\\_testosterone\\_levels\\_in\\_male\\_diabetic\\_rats](https://www.researchgate.net/publication/339828072_The_effects_of_Commiphora_mukul_extract_on_spermatogenesis_and_testosterone_levels_in_male_diabetic_rats)

**Methods:** Male Wistar rats were randomly divided into four groups: control, control animals treated with CME, diabetic animals, and diabetic animals treated with CME. CME extract (300 mg/kg) was administered for 60 days by daily gavage. Diabetes was induced by an intraperitoneal injection of 50 mg/kg STZ. The epididymal sperm count, weight, motility, morphology, viability, and serum testosterone and glucose levels were determined.

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**Results:** In the diabetic animals, CME decreased blood glucose levels ( $p < 0.05$ ), increased the total sperm count ( $p < 0.05$ ), and decreased the proportion of sperm with abnormal morphology ( $p < 0.05$ ). Diabetes reduced sperm motility ( $p < 0.001$ ), and CME supplementation partially reversed this effect of diabetes ( $p = 0.003$ ). Furthermore, in diabetic animals, CME decreased the proportion of immotile sperm ( $p < 0.001$ ). In rats, diabetes caused a significant decrease ( $p < 0.05$ ) in serum testosterone levels ( $F[3, 28] = 3.283, p = 0.035$ ), but treatment of diabetic animals with CME increased serum testosterone levels.

[https://www.researchgate.net/publication/339828072\\_The\\_effects\\_of\\_Commiphora\\_mukul\\_extract\\_on\\_spermatogenesis\\_and\\_testosterone\\_levels\\_in\\_male\\_diabetic\\_rats](https://www.researchgate.net/publication/339828072_The_effects_of_Commiphora_mukul_extract_on_spermatogenesis_and_testosterone_levels_in_male_diabetic_rats)



In the present study, the administration of CME for 60 consecutive days significantly increased sperm motility and viability in diabetic animals. This increase in sperm motility and viability may have been due to the protective effects of *C. mukul*. No toxicity symptoms occur in response to chronic treatment with *C. molmol* [44]. Furthermore, it has been reported that *C. molmol* has androgenic potential [45], and based on our results, it attenuates the negative effects of diabetes on sperm parameters, testosterone levels, and plasma glucose levels in STZ-induced diabetic rats. Several plants have been found to affect serum testosterone and dihydrotestosterone levels [44]. Testosterone and related androgenic derivatives are essential for male fertility and the maintenance of spermatogenesis. In conclusion, the present study demonstrated that *C. mukul* possesses antioxidant and proandrogenic activities, enabling it to exert a beneficial effect on spermatogenesis and sperm parameters in rats.

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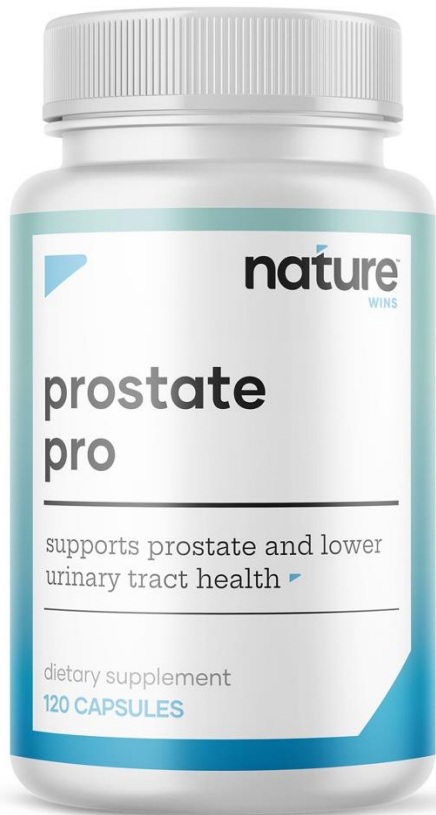


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## Supplement Facts

Serving Size: 2 Capsules    Servings Per Container: 60

| Amount Per Serving                                     | % Daily Value |   |
|--|---------------|---|
| Saw Palmetto Berry Powder (45% Free Fatty Acids)       | 450mg         | † |
| Bovine Prostate Powder                                 | 188mg         | † |
| Phytosterol Extract 70% Betasisterol (Pine Tree Trunk) | 176mg         | † |
| Stinging Nettle Root Extract (Urtica Doica)            | 154mg         | † |
| Pumpkin Seed Extract                                   | 120mg         | † |
| Uva Ursi Leaf Extract (Std. to 20% Arbutin)            | 16mg          | † |
| Swedish Flower Pollen Standardized Extract             | 8mg           | † |

\*Percent Daily Value (DV) are based on a 2000 calorie diet.  
†Daily Value (DV) not established.

**OTHER INGREDIENTS:** Vegetable cellulose (HPMC), rice hull, silicon dioxide.

## Nature Wins Prostate Pro (120 Count)

Nature Wins    SKU: PROSTATE001--listing

\$55.99

★★★★★ (12 reviews) + [Write a Review](#)

SIZE: \*

1 Bottle

\$55.99

3.00%

3 Bottles

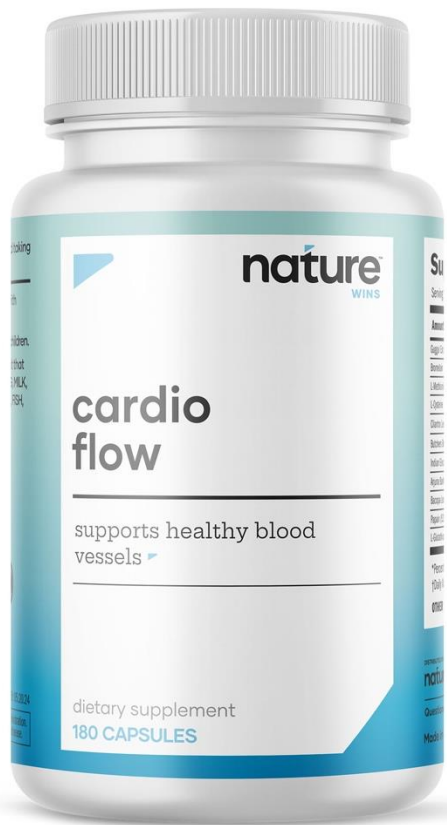
\$162.93

5.00%

6 Bottles

\$319.14

<https://thedrardisshow.com/>



## Supplement Facts

Serving Size: 2 Capsules    Servings Per Container: 90

| Amount Per Serving                                |       | % Daily Value |
|---|-------|---------------|
| Guggul Extract (Std. to 2.5% Guggulsterones)      | 300mg | †             |
| Bromelain   | 200mg | †             |
| L-Methionine                                      | 200mg | †             |
| L-Cysteine  | 200mg | †             |
| Cilantro Leaf Powder                              | 200mg | †             |
| Butchers Broom Extract (Rhizome)                  | 100mg | †             |
| Indian Elecampane Extract 0.5% (Root)             | 76mg  | †             |
| Arjuna Bark Extract (Std. to 0.5% Arjunolic Acid) | 50mg  | †             |
| Bacopa Leaf Extract (Std. to 20% Bacosides)       | 50mg  | †             |
| Papain (525 TU/mg)                                | 20mg  | †             |
| L-Glutathione                                     | 14mg  | †             |

\*Percent Daily Value (DV) are based on a 2000 calorie diet.

†Daily Value (DV) not established.

**OTHER INGREDIENTS:** Vegetable Capsule (HPMC).

## Nature Wins Cardio-Flow (180 Count)

Nature Wins    SKU: CARDIO001--listing

\$55.99

★★★★★ (6 reviews) + [Write a Review](#)

SIZE: \*

1 Bottle

\$55.99

5.00%

6 Bottles

\$319.14

3.00%

3 Bottles

\$162.93

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WINS

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THE  
**dr. ardis**  
SHOW





## Supplement Facts

Serving Size: 4 Capsules    Servings Per Container: 30

| Amount Per Serving  | % Daily Value |
|---|---------------|
| Magnesium (as magnesium citrate, magnesium aspartate, and magnesium malate) 400mg | 95%*          |

\*Percent Daily Value (DV) are based on a 2000 calorie diet.

†Daily Value (DV) not established.

**OTHER INGREDIENTS:** Hydroxypropyl Methylcellulose (Capsule), Vegetable Stearate

## Nature Wins Magnesium Complex (120 Count)

Nature Wins    SKU: MAGCOMPLEX001--listing

\$29.99

★★★★★ (49 reviews) + [Write a Review](#)

SIZE: \*

1 Bottle

\$29.99

3.00%

3 Bottles

\$87.27

4.47%

6 Bottles

\$170.94

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## Supplement Facts

Serving Size: 1 Capsule   Servings Per Container: 30

| Amount Per Serving   |       | % Daily Value |
|--|-------|---------------|
| Zinc (as zinc picolinate)                                    | 30mg  | 200%*         |
| Copper (as copper gluconate and sodium copper chlorophyllin) | 2mg   | 100%*         |
| Pea Powder   | 100mg | †             |
| Millet Flour   | 50mg  | †             |
| Lentil Flour   | 50mg  | †             |
| Chlorophyll (as sodium copper chlorophyllin)                 | 1mg   | †             |

\*Percent Daily Value (DV) are based on a 2000 calorie diet.

†Daily Value (DV) not established.

**OTHER INGREDIENTS:** Hydroxypropyl methycellulose (vegetable capsule), vegetable stearate.

## Nature Wins Zinc Plus (30 Count)

Nature Wins   SKU: ZINC001-listing

\$19.99

★★★★★ (5 reviews) + [Write a Review](#)

SIZE: \*

1 Bottle

\$19.99

5.00%

6 Bottles

\$113.94

3.00%

3 Bottles

\$58.17

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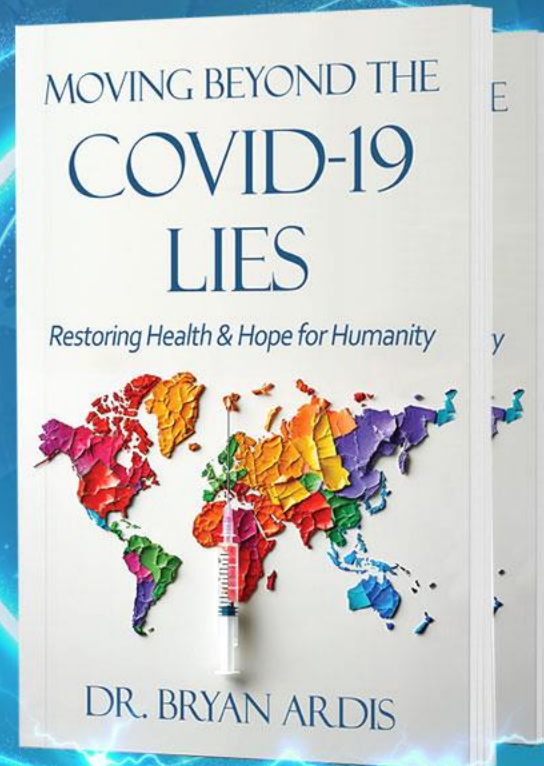


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