

Dr. Priyank's

ANDR

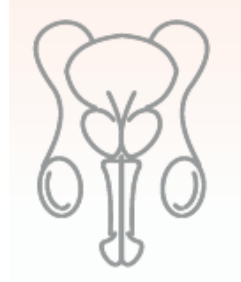


P+US
Clinic

DR. PRIYANK SALECHA



- **M.B.B.S; M.S, DNB Urology,**
- **Fellowship in men's health & infertility (Singapore)**
- **Fellowship in Microsurgery from J & J**
- **Fellowship in Penile prosthesis, (Turkey)**
- **Consultant Urologist and Andrologist,**
- **Androplus and Apollo spectra hospital, Hyderabad**

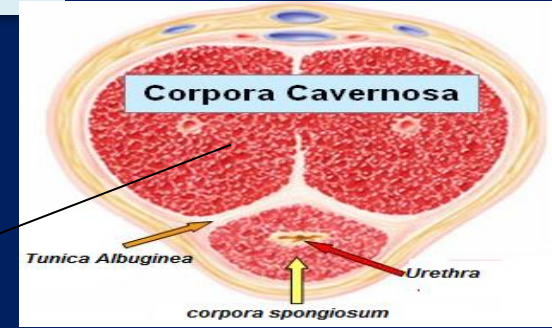
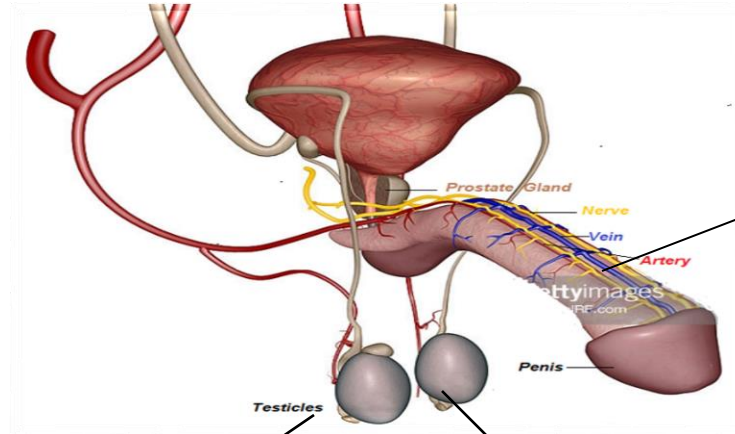


Pro-Sexual Nutrients

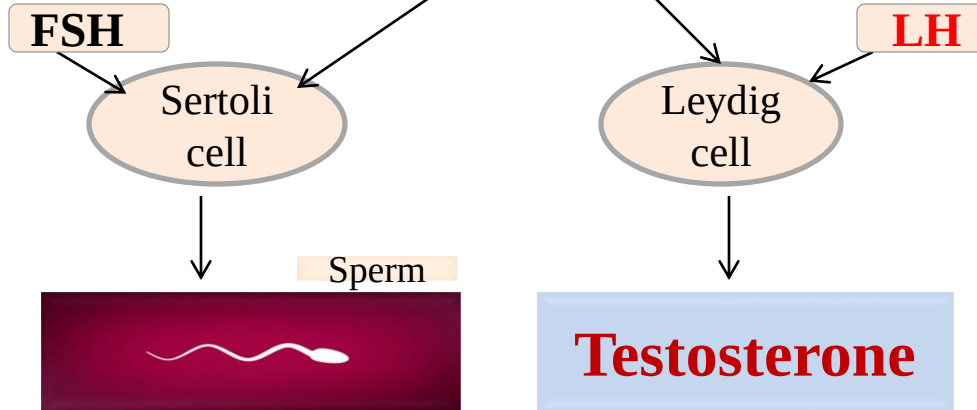
In the Management of

Male **S**exual **D**ysfunction

A bit about Male Genitalia



Penile Erectile tissue

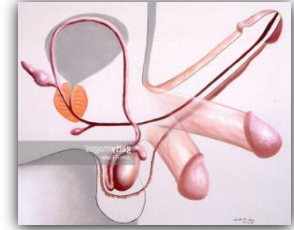


- **Penis**
- **Blood vessels –Artery, Vein**
- **Nerves**
- **Corpora cavernosa (Erectile tissue)**
- **Testis -Testosterone (Male Sex hormone - Androgen) / Sperm**
- **Prostate gland**
- **FSH /LH : Pituitary hormones**

What are Male Sexual Functions ?

Male Sexual functions are

- **L**ibido - **E**rection - **O**rgasm



What is **M**ale **S**exual **D**ysfunction ?

*Disturbance in **LEO** functions in Male
is **MSD***

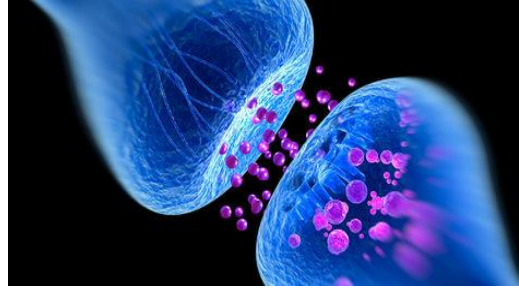


Is **SEX**
An action
Between TWO bodies ?

Or

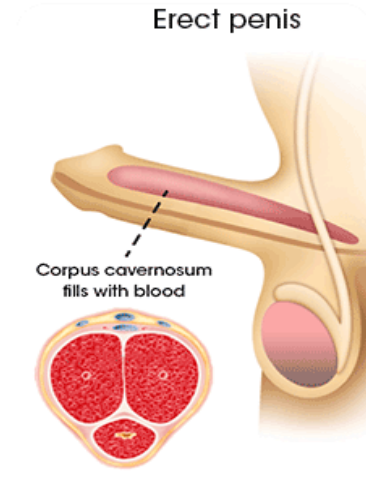
An Involvement of
Multiple
Systems !??

Essential Systems of Male Sexual Functions



Dopamine

Serotonin



Hormonal

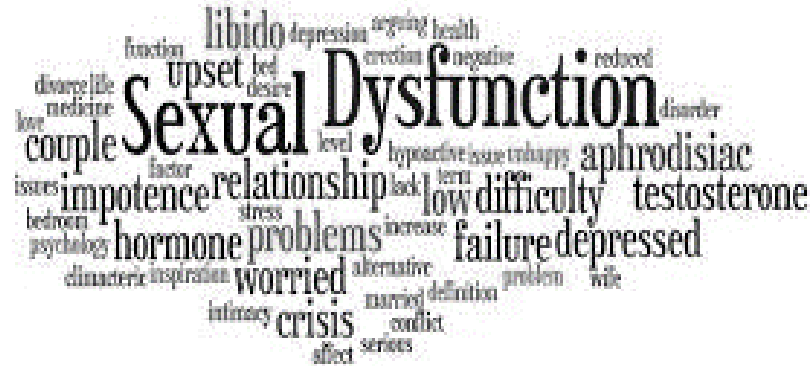
Neuronal

Vascular

Mediators of Male Sexual Functions

Systems	Mediators
H ORMONAL	<i>Testosterone</i>
N EURONAL	<i>Dopamine</i>
	<i>Serotonin (5 Hydroxy Tryptamine)</i>
	<i>Neuronal NOS (Nitric oxide synthase)</i>
V ASCULAR	<i>NO-cGMP (Nitric Oxide-cyclic GMP)</i>
	<i>Penile Blood Flow</i>

Male Sexual Dysfunction - Common forms



Libido disorder

Erectile **D**ysfunction

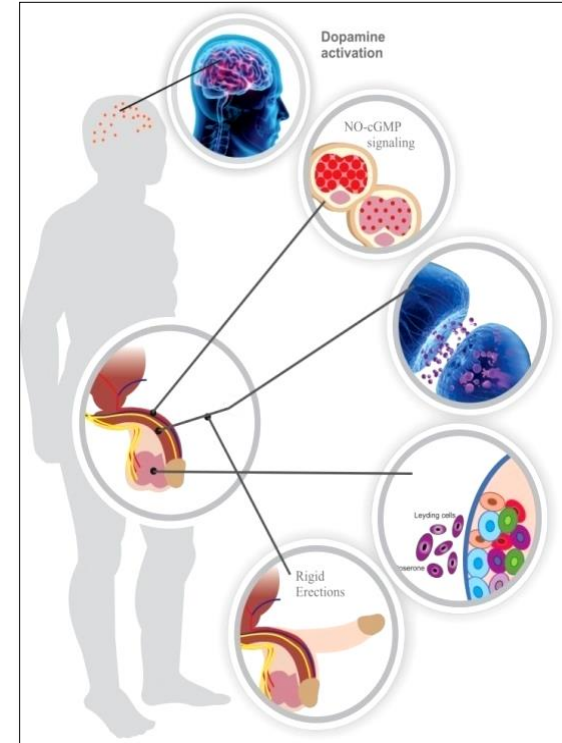
Premature **E**jaculation

Anejaculation

Male Sexual Dysfunction- Causative Factors

A consequence of multiple **factors** like

- **Low** Testosterone (H)
- **Improper** Neurotransmission (N)
of Neurotransmitters i.e. Dopamine, Serotonin (5HT)
Less Neuronal NOS
- **Less** Nitric Oxide-cyclic GMP signal (V) /
Less Penile blood flow (V)



Male Sexual Dysfunction -Prospective Group

- ✓ **Diabetes**
- ✓ **Hypertension**
- ✓ **Hypercholesterolemia**
- ✓ **Obesity / Overweight**
- ✓ Heavy smokers
- ✓ Alcoholism
- ✓ Psychiatric Medications
- ✓ BPH Medication

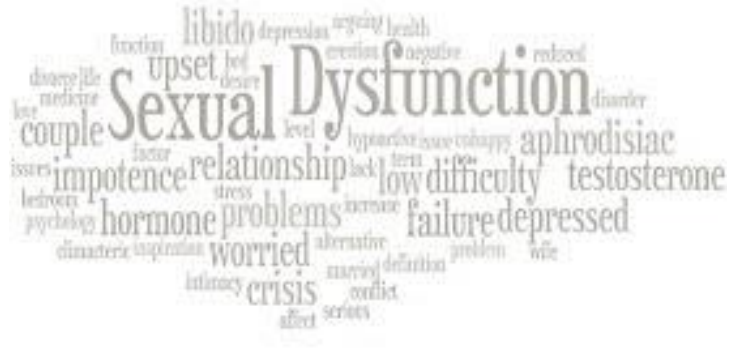


MSD A Multifactorial - Management

Needs multiple agents advocacy

- ✓ Hormonal preparations - *Testosterone*
- ✓ Dopamine agonist - *Apomorphine, L-Dopa, Mucuna Pruriens **
- ✓ SSRIs (Selective Serotonin Reuptake Inhibitors)
- *Dapoxetine, Hypericum perforatum **
- ✓ PDE5 inhibitors - *Sildenafil, Tadalafil*
- ✓ Nitric Oxide stimulants - *L-Arginine **
- ✓ Penile Blood flow enhancer - *Ginkgo biloba*
- ✓ Nutritional supplements * - *Zinc, Magnesium, Vit D3*
- ✓ Antioxidants : *Pinus gerardiana*

Or **A combination of above in a Prescription**



Are Nutritional Supplements / Pro-Sexual Nutrients

A comprehensive Approach

In the Management of
Male **S**exual **D**ysfunction ?

For the Comprehensive Management of **M**ale **S**exual **D**ysfunction

<i>Pro-Sexual Nutrients</i>	3g Sachets	Capsules
<i>Tribulus Terrestris</i>	300 mg	200 mg
<i>Mucuna Pruriens</i>	250 mg	20 mg
<i>Ginkgo Biloba</i>	40 mg	20 mg
<i>Vitamin D3</i>	200 IU	200 IU
<i>L-Arginine</i>	1500 mg	500 mg
<i>Zinc</i>	10 mg	10 mg
<i>Hypericum Perforatum</i>	300 mg	-
<i>Pinus Gerardiana</i>	200 mg	-

For the Comprehensive Management of **Male Sexual Dysfunction**

Pro-Sexual Nutrients are Well established & conferred *

INGREDIENTS	INCLUSION	ACTIVE CHEMICAL	STRUCTURE	CAS NUMBER
Tribulus terrestris	EFSA, BP	Protodioscin		55056-80-9
Ginkgo biloba	EFSA, USP, BP	Gingcolide		33570-04-6
Pinus-Gerardiana		Phenolic compounds		
Vitamin D3	EP, BP, USP	1,25-dihydroxycholecalciferol		67-97-0
Mucuna pruriens	EFSA, USP, BP	L Dopa		59-92-7
Hypericum perforatum	US FDA	Hypericin		548-04-9
L-Arginine	USP	L Arginine		74-79-3
Zinc	USP	Zinc sulphate		7733-02-0

*** USP / BP / US FDA / EFSA**

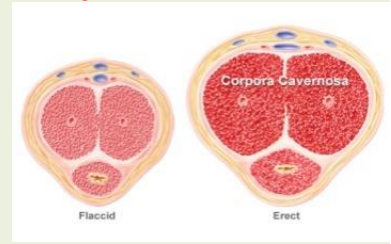
United states Pharmacopeia
British Pharmacopeia
US Food and Drug Administration
European Food Safety Authority

CAS Number
Chemical Abstract Service

Pro-Sexual Nutrients mediate **LEO** in **MSD** ?

Management of **MSD** requires action
@ **H**ormonal **N**euronal **V**ascular parameters

- ✓ A Testosterone Booster - *improves Libido*
- ✓ A Dopamine stimulant - *improves Mood*
- ✓ A 5 HT / 5HT 2C enhancer @ post synaptic area - *controls Premature Ejaculation*
- ✓ A Nitric oxide- cGMP stimulant & Penile blood flow enhancer
- *supports maintainable STRONGER Erection*
- ✓ A Neuronal NOS enhancer - *supports Orgasm*



↑ **HNV** = ↑ **LEO**

Pro-Sexual Nutrients mediate **LEO** functions in **MSD** ?

Parameters / Activity	Pro-Sexual Nutrients
<i>Testosterone Boost</i>	Yes
<i>Dopamine stimulation</i>	Yes
<i>IELT increase</i>	Yes
<i>5 HT 2C receptor concentration increase</i>	Yes
<i>Neuronal NOS increase</i>	Yes
<i>Cavernosal relaxation</i>	Yes
<i>Penile microcirculation</i>	Yes
<i>Endothelial protection</i>	Yes
<i>Intra cavernous pressure (ICP)</i>	Yes

International
Journals

 **Fertility
and Sterility**
Role of Mucuna Pruriens in
HPG axis activation

First International Journal of Andrology
ANDROLOGIA
Andrologia 2016 talks about role of
Tribulus Terrestris in improving
DHT and Semen parameters

IJE
International Journal of Endocrinology
International Journal of Endocrinology 2018
states Vitamin D is important for
Male Sexual Wellness

UJ
Uro International Today 2010 talks
about role of Hypericum Perforatum
in increasing IELTime.

Are Pro-Sexual Nutrients efficacious ? Any evidence ?

Proven efficacy

- ✓ As per the study by **Dept. Urology & Biochemistry** from King George's Medical University, Lucknow
- ✓ As per ref. from Evidence Based Complimentary & Alternate Medicine 2020

Hindawi
Evidence-Based Complementary and Alternative Medicine
Volume 2020, Article ID 4598217, 7 pages
<https://doi.org/10.1155/2020/4598217>



Research Article

A Prospective Clinical Study of a Prosexual Nutrient: Nano Leo for Evaluation of Libido, Erection, and Orgasm in Indian Men with Erectile Dysfunction

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available at www.sciencedirect.com
journal homepage: www.europeanurology.com



Platinum Priority – Editorial

Referring to the article published on pp. x-y of this issue

Is a Normal Testosterone Level Necessary for Erectile Function?

Taylor P. Kohn^a, Ranjith Ramasamy^{b,*}

^aBaylor College of Medicine, Houston, TX, USA; ^bDepartment of Urology, University of Miami Miller School of Medicine, Miami, FL, USA

Testosterone regulates both **Nitric Oxide & PDE5** levels which are both essential for ERECTION



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Available online at www.sciencedirect.com



Phytomedicine 15 (2008) 44–54

Phytomedicine

www.elsevier.de/phymed

The hormonal effects of *Tribulus terrestris* and its role in the management of male erectile dysfunction – an evaluation using primates, rabbit and rat

Kalamegam Gauthaman*, Adaikan P. Ganesan

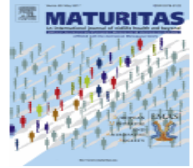
*Department of Obstetrics & Gynaecology, Yong Loo Lin School of Medicine, National University of Singapore,
5 Lower Kent Ridge Road, 119074 Singapore*

- ✓ Improves Testosterone, Dihydrotestosterone, DHEAS levels
- >>>>>>> supports Androgenic response (Hormonal)



Maturitas

Volume 99, May 2017, Pages 20-26



Evaluation of the efficacy and safety of *Tribulus terrestris* in male sexual dysfunction—A prospective, randomized, double-blind, placebo-controlled clinical trial ☆

Zdravko Kamenov ^a  , Svetlana Fileva ^b, Krassimir Kalinov ^c, Emmanuele A. Jannini ^d

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<https://doi.org/10.1016/j.maturitas.2017.01.011>

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- ✓ IIEF score significantly improved
- ✓ Sexual Desire, Intercourse satisfaction, Orgasmic function and Overall satisfaction score improved significantly.
>>>>> Improves overall Sexual Function



Contents lists available at ScienceDirect

Journal of Ethnopharmacology

journal homepage: www.elsevier.com/locate/jethpharm



Dose- and time-dependent effects of ethanolic extract of *Mucuna pruriens* Linn. seed on sexual behaviour of normal male rats

Sekar Suresh, Elumalai Prithiviraj, Seppan Prakash*

Department of Anatomy, Dr. Arcot Lakshmanasamy Mudaliar Postgraduate Institute of Basic Medical Sciences, University of Madras, Taramani Campus, Chennai 600 113, India

- ✓ Has high levels of L-Dopa
- ✓ Improves Dopaminergic neurons response >>>>> supports Mood

Safety and Efficacy of the Herbal Drug *Hypericum Perforatum* for the Treatment of Premature Ejaculation

Seyyed Alaeddin Asgari, Siavash Falahatkar, Seyed Hosein Hoseini Sharifi, Ahmad Enshaei, Michael Fariad Jalili, Aliakbar Allahkhah

Urology Research Center, Guilan University of Medical Sciences, Razi Hospital, Rasht, Iran

Submitted April 24, 2010 - Accepted for Publication May 4, 2010

- ✓ IELT increased from 1.17 mnts to 5.8 mnts
- ✓ IIEF ratings are higher for intercourse satisfaction & overall satisfaction
- ✓ Safe & Effective option bcs of effect on SEROTONIN / 5HT_{2C} receptors

Sexual Dysfunction

Effects and Mechanism of Action of a *Tribulus terrestris* Extract on Penile Erection

Jungmo Do, Seemin Choi, Jaehwi Choi, Jae Seog Hyun

Department of Urology, Gyeongsang National University Hospital, Jinju, Korea

- ✓ Improves Corpus cavernosum relaxation via eNOS/ NO-cGMP
- ✓ Increases ICP >>>>>> supports RIGID ERECTION

Diabetes, Metabolic Syndrome and Obesity: Targets and Therapy

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ORIGINAL RESEARCH

Gross saponin of *Tribulus terrestris* improves erectile dysfunction in type 2 diabetic rats by repairing the endothelial function of the penile corpus cavernosum

- ✓ Improves Penile Endothelial function via eNOS expression
- ✓ Inhibits cavernosum fibrosis & Apoptosis >>>> supports ERECTION in ED

ORIGINAL ARTICLE



Long-term high-dose L-arginine supplementation in patients with vasculogenic erectile dysfunction: a multicentre, double-blind, randomized, placebo-controlled clinical trial

D. Menafrà¹  · C. de Angelis¹  · F. Garifalos¹  · M. Mazzella¹  · G. Galdiero¹  · M. Piscopo¹  · M. Castoro¹  ·
N. Verde¹  · C. Pivonello¹  · C. Simeoli¹  · R. S. Auriemma¹  · A. Colao^{1,2}  · R. Pivonello^{1,2} 

L-ARG supplementation for 3 months significantly increased IIEF-6 score

- >>>>>>>>> Supports Maintainable ERECTION

Summary of Presentation

- ✓ Sexual Functions are **Libido, Erection and Orgasm** (LEO)
- ✓ LEO needs involvement of **Hormonal, Neuronal, Vascular** systems
- ✓ LEO needs **Six parameters** support
- ✓ Pro-Sexual Nutrients compliment Natural Sexual Functions
- ✓ Pro-Sexual Nutrients are non-habit forming
- ✓ Pro-sexual Nutrients are SAFE for Long Term use.
- ✓ Effective in Diabetes, Hepatic patients.



THANK YOU!