




MALE HORMONE THERAPY OPTIONS


The following tables have been compiled by Women's International Pharmacy staff pharmacists to represent some of the more frequently prescribed regimens for men. The Women's International Pharmacy logo is placed throughout the tables to signify the hormones and dosage forms Women's International Pharmacy compounds. Other therapies may be considered and appropriate depending on individual differences.


This material is for informational purposes. It is not intended as a substitute for medical advice. Please consult a qualified health care professional for individual health and medical advice.


 = Compounded by Women's International Pharmacy


Oral Testosterone

ORAL TESTOSTERONE

BIODIDENTICAL	DOSAGES AVAILABLE	DOSING REGIMEN	COMMENTS/REFERENCES
Testosterone capsules (compounding pharmacies) 	Any	25-120 mg daily	Brownstein D. <i>The Miracle of Natural Hormones</i> , 3rd Edn. (W. Bloomfield, MI: Medical Alternatives Press) 2003:128.
NON-BIODIDENTICAL	DOSAGES AVAILABLE	DOSING REGIMEN	COMMENTS/REFERENCES
Android®/Methitest® methyltestosterone tablets (Valeant/Impak)	10 mg 25 mg	10-50 mg daily	Generics available. Periodic liver function tests needed because of association with hepatotoxicity with oral methylated androgens. (<i>Drug Facts And Comparisons</i> ; 2006:259a.)
Testred®/Virilon® methyltestosterone capsules (Valeant/Star)	10 mg	10-50 mg daily	Generics available. See Android® and Methitest® for further comments.
Halotestin® fluoxymesterone tablets (ICN Pharmaceuticals)	2 mg 5 mg 10 mg	5-20 mg daily	Generics available. Total daily dose may be administered in single or divided (3 or 4) doses. Periodic liver function tests needed because of association with hepatotoxicity with oral methylated androgens. (<i>Drug Facts And Comparisons</i> ; 2006:259a, 262a.)

ORAL DHEA			
BIODIDENTICAL	DOSAGES AVAILABLE	DOSING REGIMEN	COMMENTS/REFERENCES
DHEA (dehydroepiandrosterone) capsules (compounding pharmacies) 	Any	5-50 mg daily	Brownstein D. <i>The Miracle of Natural Hormones</i> , 3rd Edn. (W. Bloomfield, MI: Medical Alternatives Press) 2003:128. Hertoghe T. <i>The Hormone Solution</i> , (New York, NY: Harmony Books) 2002:264.


ORAL PROGESTERONE			
BIODIDENTICAL	DOSAGES AVAILABLE	DOSING REGIMEN	COMMENTS/REFERENCES
Progesterone capsules (compounding pharmacies) 	Any	2-10 mg daily	Brownstein D. <i>The Miracle of Natural Hormones</i> , 3rd Edn. (W. Bloomfield, MI: Medical Alternatives Press) 2003:99. Progesterone may inhibit the 5 α reductase enzyme reaction from testosterone to dihydrotestosterone. (Giacomini M, et al. <i>Journal of Steroid Biochemistry</i> 1980; 13:645-651.) Progesterone may inhibit the aromatase enzyme conversion from testosterone to estrogen. (Schmidt M, et al. <i>Journal of Endocrinology</i> 1998; 158:401-407.)

ORAL PREGNENOLONE			
BIODIDENTICAL	DOSAGES AVAILABLE	DOSING REGIMEN	COMMENTS/REFERENCES
Pregnenolone capsules (compounding pharmacies) 	Any	10-50mg daily to twice daily	Brownstein D. <i>The Miracle of Natural Hormones</i> , 3rd Edn. (W. Bloomfield, MI: Medical Alternatives Press) 2003:178. Regelson W. <i>The Super Hormone Promise</i> (New York, NY: Simon & Schuster) 1996:255.


TRANSDERMAL PATCHES – TESTOSTERONE			
BIODIDENTICAL	DOSAGES AVAILABLE	DOSING REGIMEN	COMMENTS/REFERENCES
Androderm® testosterone (Allergan)	2 mg 4 mg	1 patch nightly every 24 hours	Apply to clean, dry skin on the back, abdomen, upper arms or thighs, but DO NOT apply to scrotum. (<i>Drug Facts And Comparisons</i> ; 2006:261.) Patch should not be cut. (<i>Pharmacist Letter</i> 1998; 14(7):140712.)




TOPICAL CREAMS/GELS/SOLUTIONS – TESTOSTERONE

BIODIDENTICAL	DOSAGES AVAILABLE	DOSING REGIMEN	COMMENTS/REFERENCES
Testosterone cream, gel or non-alcohol gel (compounding pharmacies) 	Any	25-100 mg once to twice daily	Shippen E. <i>The Testosterone Syndrome</i> , (New York, NY: M. Evans and Company) 1998:197. Brownstein D. <i>The Miracle of Natural Hormones</i> , 3rd Edn. (W. Bloomfield, MI: Medical Alternatives Press) 2003:128.
AndroGel® testosterone topical gel (AbbVie Inc.)	10mg/gram packet 16.2mg/gram packet or metered dose pump	25-100 mg daily	Contains 67% ethanol. Each 10mg/gm packet contains 2.5 grams or 5 grams of gel (25-50mg testosterone). Each 16.2mg/gm packet contains 1.25 grams or 2.5 grams of gel (20.25-40.5mg testosterone). Each 16.2mg/gm pump dispenses 1.25 grams of gel (20.25mg testosterone). Should not be applied to genitals or abdomen. (AndroGel [package insert]. AbbVie, North Chicago, IL; 2014)
Testim® testosterone topical gel (Auxilium, Inc.)	10 mg/gram	50-100 mg daily	Contains 74% ethanol. Available in unit dose tubes. Each tube contains 5 grams of gel. Should not be applied to genitals or to the abdomen. (<i>Drug Facts And Comparisons</i> ; 2006:261.)
Axiron® testosterone topical solution (Lily)	30 mg per pump	1-4 pumps to axilla daily	Alcohol based solution. Each pump is 1.5 ml of solution. Use applicator to apply directly to axilla. Apply in 1 pump increments. Alternate axilla for dosing greater than 1 pump. Allow site to dry completely before dressing. Apply deodorant prior to Axiron application. (<i>Drug Facts and Comparisons</i> ; 2011:261a-261c.)
Fortesta® testosterone topical gel (Endo Pharmaceuticals Inc)	10 mg per pump	1-7 pumps daily starting with a dose of 4 pumps.	Alcohol based gel. Each pump is 0.5 grams of gel. Apply with 1 finger to inner thighs. If dosing more than 1 pump alternate thighs. (<i>Drug Facts and Comparisons</i> ; 2011:261a-261b.)



TOPICAL CREAMS/GELS – DHEA

BIODIDENTICAL	DOSAGES AVAILABLE	DOSING REGIMEN	COMMENTS/REFERENCES
DHEA (dehydroepiandrosterone) cream, gel or non-alcohol gel (compounding pharmacies) 	Any	25-50 mg daily	Sahelian R. <i>DHEA: A Practical Guide</i> (Marina Del Rey, CA: Be Happier Press) 1996:77-79.

TOPICAL CREAMS/GELS – PROGESTERONE

BIODIDENTICAL	DOSAGES AVAILABLE	DOSING REGIMEN	COMMENTS/REFERENCES
Progesterone cream, gel or non-alcohol gel (compounding pharmacies) 	Any	2-10 mg daily	Brownstein D. <i>The Miracle of Natural Hormones</i> 3rd edn (W. Bloomfield, MI: Medical Alternative Press) 2003:99. Progesterone may inhibit the 5 α reductase enzyme reaction from testosterone to dihydrotestosterone. (Giacomini M, et al. <i>Journal of Steroid Biochemistry</i> 1980; 13:645-651.) Progesterone may inhibit the aromatase enzyme conversion from testosterone to estrogen. (Schmidt M, et al. <i>Journal of Endocrinology</i> 1998; 158:401-407.)

SUBLINGUAL/BUCCAL LOZENGES, DROPS, TABLETS – TESTOSTERONE

BIODIDENTICAL	DOSAGES AVAILABLE	DOSING REGIMEN	COMMENTS/REFERENCES
Testosterone lozenges (compounding pharmacies) 	Any	25mg once to three times daily	Shippen E. <i>The Testosterone Syndrome</i> , (New York, NY: M. Evans and Company) 1998:197.
Testosterone drops (compounding pharmacies) 	Any	25mg once to three times daily	See reference in Testosterone lozenges.
Striant [®] testosterone buccal system (Actient)	30mg	1 buccal system twice daily to gum region	Each buccal system adheres to the gum or inner cheek to provide a controlled and sustained release of testosterone. (<i>Drug Facts And Comparisons</i> ; 2006:262.)

NASAL GEL - TESTOERONE

BIODIDENTICAL	DOSAGES AVAILABLE	DOSING REGIMEN	COMMENTS/REFERENCES
Natesto [®] testosterone nasal gel (Aytu Bioscience, Inc)	5.5 mg per pump	2 pump actuations (1 in each nostril) three times per day	The product is self-administered into the nostrils via a metered-dose pump applicator. Approved for adult males with conditions associated with deficiency or absence of endogenous testosterone. Total daily dose of 33mg per day. (Natesto [package insert]. Aytu Bioscience, Inc. Englewood, CO; 2016)

INJECTABLES/PELLETS

BIOIDENTICAL	DOSAGES AVAILABLE	DOSING REGIMEN	COMMENTS/REFERENCES
Pregnyl[®] human chorionic gonadotropin (Merck & Co, Inc)	10,000 units per 10 ml vial	Injected intramuscularly	Generics available. Maintains intratesticular testosterone in normal men with testosterone induced gonadotropin suppression. Coviello AD, Matsumoto AM, Bremner WJ, Herbst KL, Amory JK, Anawalt BD, Sutton PR, Wright WW, Brown TR, Yan X, Zirkin BR, Jarroo JP. J Clin Endocrinol Metab. 2005 May; 90(5):2595-602. Epub 2005 Feb 15. Low-dose human chorionic gonadotropin maintains intratesticular testosterone in normal men with testosterone-induced gonadotropin suppression.
Testosterone pellets (some compounding pharmacies)	Various	4-6 200 mg pellets implanted subcutaneously	Testosterone blood levels peak at 1 month then sustained in normal range for 4 to 6 months. Requires surgical incision for insertions; pellets may extrude spontaneously. (Bhasin S, et al. <i>Journal of Clinical Endocrinology & Metabolism</i> , Vol 91, Issue 6:1995-2010)

INJECTABLES/PELLETS

NON-BIOIDENTICAL	DOSAGES AVAILABLE	DOSING REGIMEN	COMMENTS/REFERENCES
Depo-Testosterone[®] testosterone cypionate ^Δ in cottonseed oil (Pharmacia)	100 mg/ml 200 mg/ml	Injected intramuscularly 50-400 mg every 2 to 4 weeks	Generics available. Long acting testosterone ester. (<i>Drug Facts and Comparisons</i> : 2007:260a.)
Delatestryl[®] testosterone enanthate ^Δ in sesame oil (Endo)	200 mg/ml	Injected intramuscularly 50-400 mg every 2 to 4 weeks	Long acting testosterone ester. (<i>Drug Facts and Comparisons</i> ; 2007:260.) Inject deep into muscle.
Testopel[®] testosterone propionate pellets (Endo)	75mg	150-450mg every 3-6 months	This product contains a bioidentical testosterone, but is chemically bound to other substances. About 1/3 of the pellets is absorbed in the first month, 1/4 in the second month, and 1/6 in the third month. (<i>Drug Facts And Comparisons</i> ; 2006:260.)

^ΔBioidentical hormones may be bound to various esters to increase the length of activity. Only when the ester is removed from the hormone by the body does the hormone become bioidentical.