



Appendix B: Medications that May Alter Testosterone Levels in Men and Women

Note: Does not represent an exhaustive list.

| Medications that May Alter Testosterone Levels in Men ^{1,2} | |
|--|---|
| Increase serum testosterone levels | Decrease serum testosterone levels |
| <ul style="list-style-type: none"> • bicalutamide • cimetidine • finasteride • leuprolide • phenytoin • rifampin • tamoxifen • valproic acid | <ul style="list-style-type: none"> • anabolic steroids • carbamazepine • corticosteroids • cyclophosphamide • cyproterone • digoxin • estrogens • finasteride • goserelin • ketoconazole • leuprolide • nilutamide • opioids*, including opioid agonist treatment • spironolactone • tetracycline • thioridazine • verapamil |
| <p><i>* Studies indicate opioid-induced testosterone deficiency is likely linked to long term therapy with opioids.³ Consistent with the evidence, the recommendations from the 2018 Endocrine Society Guideline suggest to only test those who are receiving long-term opioids rather than short-term.⁴</i></p> | |

| Medications that May Increase Testosterone Levels in Women ^{1,2} | |
|--|--|
| <ul style="list-style-type: none"> • barbiturates • clomiphene | <ul style="list-style-type: none"> • estrogens • valproic acid |

References

1. Wilson DD. McGraw-Hill's manual of laboratory & diagnostic tests. New York: McGraw-Hill Medical; 2008. 666 p.
2. Young DS. Effects of drugs on clinical laboratory tests. 3rd ed. Washington: AACC Press; 1990.
3. O'Rourke TK, Wosnitzer MS. Opioid-Induced Androgen Deficiency (OPIAD): Diagnosis, Management, and Literature Review. Curr Urol Rep [Internet]. 2016 Oct [cited 2018 Apr 24];17(10). Available from: <http://link.springer.com/10.1007/s11934-016-0634-y>
4. Bhasin S, Brito JP, Cunningham GR, Hayes FJ, Hodis HN, Matsumoto AM, et al. Testosterone Therapy in Men With Hypogonadism: An Endocrine Society Clinical Practice Guideline. J Clin Endocrinol Metab [Internet]. 2018 Mar 17 [cited 2018 Mar 22]; Available from: <https://academic.oup.com/jcem/advance-article/doi/10.1210/jc.2018-00229/4939465>