

## **Research Articles on Various Aspects of LowT and TRT**

**{you can click on any of the links and read the material}**

### **The International Society for Sexual Medicine's Process of Care for the Assessment and Management of Testosterone Deficiency in Adult Men**

<https://www.sciencedirect.com/science/article/abs/pii/S1743609515341928>

Good data on possible side effects. Excellent debunking of prostate cancer and cardiovascular concerns. The concerns for prostate cancer with TRT stemmed from a 1941 article with only 3 patients in it. JAMA [Journal of the American Medical Association] published an article highly suggestive that TRT could create dangerous cardiovascular risk outcomes. It garnered enormous media attention but within one week multiple serious errors were found in the study. When the data was appropriately interpreted it showed that patients with treated lowT had ½ the number of cardiovascular events as their untreated counterparts. Powerful. A rich literature history has strongly suggested that TRT may actually be protective against prostate cancer and cardiovascular events; therefore not just not a bad thing, but instead a good thing

### **Diagnosis and Treatment of Testosterone Deficiency: Recommendations From the Fourth International Consultation for Sexual Medicine (ICSM 2015)**

[https://www.researchgate.net/publication/311332427\\_Diagnosis\\_and\\_Treatment\\_of\\_Testosterone\\_Deficiency\\_Recommendations\\_From\\_the\\_Fourth\\_International\\_Consultation\\_for\\_Sexual\\_Medicine\\_ICSM\\_2015](https://www.researchgate.net/publication/311332427_Diagnosis_and_Treatment_of_Testosterone_Deficiency_Recommendations_From_the_Fourth_International_Consultation_for_Sexual_Medicine_ICSM_2015)

### **Diagnosis and Treatment of Testosterone Deficiency: Recommendations From the Fourth International Consultation for Sexual Medicine (ICSM 2015)**

<https://www.sciencedirect.com/science/article/abs/pii/S1743609516304696>

### **What Is a Normal Testosterone Level for Young Men? Rethinking the 300 ng/dL Cutoff for Testosterone Deficiency in Men 20-44 Years Old**

<https://medicine.umich.edu/sites/default/files/content/downloads/What%20Is%20a%20Normal%20Testosterone%20Level%20for%20Young%20Men%20Rethinking%20the%20300%20ngdL%20Cutoff%20for%20Testosterone%20Deficiency%20in%20Men%2020-44%20Years%20Old.pdf>

### **Correlates of testosterone change as men age**

<https://www.tandfonline.com/doi/full/10.1080/13685538.2021.2023493#abstract>

### **Harmonized Reference Ranges for Circulating Testosterone Levels in Men of Four Cohort Studies in the United States and Europe**

<https://academic.oup.com/jcem/article/102/4/1161/2884621>

### **Pharmacology of testosterone replacement therapy preparations**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5182226/>

### **Comparison of Testosterone Replacement Therapy Medications in the Treatment of Hypogonadism**

[https://www.npjjournal.org/article/S1555-4155\(16\)30716-4/pdf](https://www.npjjournal.org/article/S1555-4155(16)30716-4/pdf)

### **Variation in Practice Pattern of Male Hypogonadism: A Comparative Analysis of Primary Care, Urology, Endocrinology, and HIV Specialists**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5818126/> (different providers have different practice patterns, just like most all other diagnostic entities)

### **Erythrocytosis and Polycythemia Secondary to Testosterone Replacement Therapy in the Aging Male**

<https://www.sciencedirect.com/science/article/abs/pii/S2050052115300998>

### **The Utilization and Impact of Aromatase Inhibitor Therapy in Men With Elevated Estradiol Levels on Testosterone Therapy**

[https://www.researchgate.net/publication/352104099\\_The\\_Utilization\\_and\\_Impact\\_of\\_Aromatase\\_Inhibitor\\_Therapy\\_in\\_Men\\_With\\_Elevated\\_Estradiol\\_Levels\\_on\\_Testosterone\\_Therapy](https://www.researchgate.net/publication/352104099_The_Utilization_and_Impact_of_Aromatase_Inhibitor_Therapy_in_Men_With_Elevated_Estradiol_Levels_on_Testosterone_Therapy)

### **A Validated Age-Related Normative Model for Male Total Testosterone Shows Increasing Variance but No Decline after Age 40 Years**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4190174/>

### **Indications for the use of human chorionic gonadotropic hormone for the management of infertility in hypogonadal men**

<https://cdn.amegroups.cn/journals/amepc/files/journals/3/articles/19649/public/19649-PB1-5738-R2.pdf>

### **Accuracy of calculated free testosterone formulae in men**

<https://pubmed.ncbi.nlm.nih.gov/20346001/>

### **Adverse effects of testosterone replacement therapy: an update on the evidence and controversy**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4212439/>

### **High Estrogen in Men After Injectable Testosterone Therapy: The Low T Experience**

<https://journals.sagepub.com/doi/full/10.1177/1557988314539000>

### **Testosterone Deficiency: A Review and Comparison of Current Guidelines**

<https://www.sciencedirect.com/science/article/abs/pii/S1743609519307192>

Compares 6 specialty organizations' guidelines (clearly demonstrates lack of agreement)

Canadian Medical Association, International Society for Sexual Medicine, British Society for Sexual Medicine, American Urological Association, European Association of Urology, and the Endocrine Society.

### **Alternatives to Testosterone Therapy: A Review**

<https://www.sciencedirect.com/science/article/pii/S2050052117301221>

### **Injectable testosterone cypionate FDA package insert**

[https://www.accessdata.fda.gov/drugsatfda\\_docs/label/2014/085635s029lbl.pdf](https://www.accessdata.fda.gov/drugsatfda_docs/label/2014/085635s029lbl.pdf)

## **Opioid Induced Androgen Deficiency articles**

<https://www.sciencedirect.com/science/article/abs/pii/S2050052118300568>

<https://www.painphysicianjournal.com/current/pdf?article=MTcxMg%3D%3D&journal=68#:~:text=OPIAD%20can%20have%20a%20significant,incl%20prostate%20disease%20in%20males.>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7645309/#:~:text=Few%20management%20alternatives%20have%20been,better%20guiding%20of%20the%20patients.>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2974597/#:~:text=Hypogonadism%20can%20lead%20to%20erectile,periods%20or%20amenorrhoea%20in%20women.&text=Symptoms%20of%20flushing%2C%20sweating%2C%20decreased,remediable%20hypogonadism%20may%20be%20considered.>

## **Recommendations on the diagnosis, treatment and monitoring of hypogonadism in men**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4648196/>

## **Evaluation and Management of Testosterone Deficiency (2024) - AUA Guidelines**

<https://www.auanet.org/guidelines-and-quality/guidelines/testosterone-deficiency-guideline>

## **Testosterone Therapy in Men With Hypogonadism: An Endocrine Society\* Clinical Practice Guideline**

<https://genetic.org/wp-content/uploads/2016/01/KS-Testosterone-Hypogonadism-Guidelines-2018.pdf>

## **Use of HCG (human Chorionic Gonadotropin) to Prevent Testicular Shrinkage**

<https://socalbhrt.com/use-of-hcg-human-chorionic-gonadotropin-to-prevent-testicular-shrinkage/#:~:text=Potential%20Side%20Effects,the%20site%20of%20the%20injection>

## **Coadministration of Anastrozole Sustains Therapeutic Testosterone Levels in Hypogonadal Men Undergoing Testosterone Pellet Insertion**

<https://www.sciencedirect.com/science/article/abs/pii/S1743609515305555>

## **Human Chorionic Gonadotropin is Effective as Monotherapy for Men With Symptomatic Testosterone Deficiency (Hypogonadism)**

<https://meeting.neaua.org/abstracts/2014/17.cgi#:~:text=CONCLUSIONS:%20hCG%20is%20an%20effective,subcutaneous%20injections%20three%20times%20weekly.>

## **Human Chorionic Gonadotropin monotherapy for the treatment of hypogonadal symptoms in men with total testosterone > 300 ng/dL**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6844348/#:~:text=Our%20study%20indicated%20that%20hCG,on%20response%20to%20hCG%20monotherapy.>

## **Efficacy and Safety of Human Chorionic Gonadotropin Monotherapy for Men With Hypogonadal Symptoms and Normal Testosterone**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9246432/>

## **Risks of testosterone replacement therapy in men**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3897047/>

## **A practical guide to male hypogonadism in the primary care setting**

[https://www.scienceopen.com/document\\_file/b33755ea-eefb-42db-a385-be7ff9fc8124/PubMedCentral/b33755ea-eefb-42db-a385-be7ff9fc8124.pdf](https://www.scienceopen.com/document_file/b33755ea-eefb-42db-a385-be7ff9fc8124/PubMedCentral/b33755ea-eefb-42db-a385-be7ff9fc8124.pdf)