



## Appendix A: Differential Diagnosis of Hypogonadism in Men

Adapted from Bhasin et al. 2018.<sup>1</sup>

Primary hypogonadism	Secondary hypogonadism
<b>Gonadal Disease</b>	<b>Hypothalamic/pituitary disease</b>
<ul style="list-style-type: none"> <li>• Kallmann syndrome and other genetic conditions</li> <li>• Cryptorchidism, myotonic dystrophy, anorchia</li> <li>• Some types of cancer chemotherapy, testicular irradiation/damage, orchidectomy</li> <li>• Orchitis</li> <li>• Testicular trauma, torsion</li> <li>• Advanced age</li> </ul>	<ul style="list-style-type: none"> <li>• Hypothalamic/pituitary tumour</li> <li>• Hemochromatosis</li> <li>• Radiation exposure, infiltrative/destructive disease of hypothalamus/pituitary</li> <li>• Idiopathic hypogonadotropic hypogonadism</li> </ul>
<b>Secondary to a distinct illness or medication</b>	
<ul style="list-style-type: none"> <li>• Medications (refer to Appendix C)</li> <li>• End-stage renal disease</li> </ul>	<ul style="list-style-type: none"> <li>• Hyperprolactinemia</li> <li>• Medications (refer to Appendix C)</li> <li>• Substance use (alcohol, marijuana, opioids)</li> <li>• Systemic illness</li> <li>• Nutritional deficiency/excessive exercise</li> <li>• Severe obesity, some sleep disorders, type II diabetes mellitus</li> <li>• Organ failure (liver, heart and lung)</li> <li>• Comorbid illness associated with aging</li> <li>• HIV</li> <li>• Severe hypothyroidism</li> </ul>

### Reference

1. 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>