Journal of Andrology, Vol 18, Issue 5 522-527, Copyright © 1997 by The American Society of Andrology

JOURNAL ARTICLE

Relationship between sleep-related erections and testosterone levels in men

A. R. Granata, V. Rochira, A. Lerchl, P. Marrama and C. Carani

Department of Internal Medicine, University of Modena, Italy.

In order to identify a possible threshold for a serum testosterone level below which sleep-related erections are impaired and to compare this threshold with the normal laboratory range of testosterone serum levels, we studied 201 men, including hypogonadal and eugonadal subjects. The protocol included nocturnal penile tumescence and rigidity monitoring and the assay of basal testosterone, prolactin, luteinizing hormone (LH), and follicle-stimulating hormone (FSH) serum levels. The subjects were assigned to eight groups according to their testosterone serum levels. Group 1 had testosterone between 0 ng/dl and 99 ng/dl; the following seven groups had testosterone levels increased by 100 ng/dl per group. The groups of subjects with higher testosterone serum levels showed almost constantly higher values for the erectile parameters we studied than the subjects with serum testosterone < or = 99 ng/dl. On the contrary, subjects with higher testosterone serum levels showed higher values for only some erectile parameters compared to the subjects with serum testosterone between 100 and 199 ng/dl, without any significant difference among the groups with testosterone serum levels in the normal range. Our data suggest that the serum testosterone threshold for sleep-related erections is lower than the low end of the normal laboratory male range and is about 200 ng/dl. Further efforts are needed to find the precise serum testosterone ranges related to normal sleep-related erections and to normal sexual behavior, the testosterone ranges of which will probably not coincide.

This article has been cited by other articles:

Journal of ANDROLOGY HOME

A. Armagan, N. N. Kim, I. Goldstein, and A. M. Traish
Dose-Response Relationship Between Testosterone and Erectile Function: Evidence for the Existence of a Critical Threshold
J Androl, July 1, 2006; 27(4): 517 - 526.
[Abstract] [Full Text] [PDF]

Journal of ANDROLOGY HOME

V. Rochira, A. Balestrieri, B. Madeo, A. R. M. Granata, and C. Carani
Sildenafil Improves Sleep-Related Erections in Hypogonadal Men: Evidence From a Randomized, Placebo-Controlled, Crossover Study of a Synergic Role for Both Testosterone and Sildenafil on Penile Erections
J Androl, March 1, 2006; 27(2): 165 - 175.
[Abstract] [Full Text] [PDF]

Am. J. Physiol: Regulatory, Integrative and Comparative Physiology HOME

C. J. Wingard, J. A. Johnson, A. Holmes, and A. Prikosh
Improved erectile function after Rho-kinase inhibition in a rat castrate model of erectile dysfunction
Am J Physiol Regulatory Integrative Comp Physiol, June 1, 2003; 284(6): R1572 - R1579.
[Abstract] [Full Text] [PDF]

Journal of ANDROLOGY HOME

T. M. Mills, R. W. Lewis, C. J. Wingard, K. Chitaley, and R. Clinton Webb
Inhibition of Tonic Contraction--A Novel Way to Approach Erectile Dysfunction?
J Androl, September 1, 2002; 23(5): S5 - S9.
[Full Text] [PDF]

Diabetes Care HOME

Z. T. Bloomgarden
American Association of Clinical Endocrinologists Meeting, May 2002
Diabetes Care, August 1, 2002; 25(8): 1464 - 1471.
[Full Text] [PDF]

Journal of ANDROLOGY HOME

V. Rochira, A. R. M. Granata, A. Balestrieri, B. Madeo, and C. Carani
Effects of Sildenafil on Nocturnal Penile Tumescence and Rigidity in Normal Men: Randomized, Placebo-Controlled, Crossover Study
J Androl, July 1, 2002; 23(4): 566 - 571.
[Abstract] [Full Text] [PDF]

the Journals of gerontology BIOLOGICAL SCIENCES AND MEDICAL SCIENCES HOME

A. M. Matsumoto
Andropause: Clinical Implications of the Decline in Serum Testosterone Levels With Aging in Men
J. Gerontol. A Biol. Sci. Med. Sci., February 1, 2002; 57(2): M76 - 99.
[Full Text]

THE JOURNAL OF CLINICAL ENDOCRINOLOGY & METABOLISM HOME

J. D. Veldhuis, A. Iranmanesh, M. Godschalk, and T. Mulligan
Older Men Manifest Multifold Synchrony Disruption of Reproductive Neurohormone Outflow
J. Clin. Endocrinol. Metab., April 1, 2000; 85(4): 1477 - 1486.
[Abstract] [Full Text]