

Testosterone Failure Following Continuous Long Term Androgen Deprivation Therapy with an LHRH Agonist (and other exacerbating conditions).

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Disclaimer: Please recognize that I am not a Medical Doctor. I have been an avid student researching and studying prostate cancer as a survivor and continuing patient since 1992. I have dedicated my retirement years to continued research and study in order to serve as an advocate for prostate cancer awareness, and, from a activist patient's viewpoint, to help patients, caregivers, and others interested develop an understanding of prostate cancer, its treatment options, and the treatment of the side effects that often accompany treatment. Readers of this paper must understand that the comments or recommendations I make are not intended to be the procedure to blindly follow; rather, they are to be reviewed as my opinion, then used for further personal research, study, and subsequent discussion with the medical professional/physician providing prostate cancer care.

Speaking from personal experience and in exchanging emails with many patients who had been on long term ADT that included an LHRH agonist, once passing two to three years of continuous LHRH agonist use and then chancing going off this medication with intermittent ADT, I found few able to return to normal testosterone levels. If stopping at two years, there is more likelihood of some testosterone recovery (at least above the low side of normal). If stopping at three years, some men may experience some return, but many not sufficient to reach the low end of what is considered normal for their age. The best I ever attained when going IADT after my urologist had kept me on ADT2 for five years, was 122ng/dl. And that tapered off into the 40ng/dl's. After my second 15 months on ADT3 when returning to IADT, my testosterone had never risen above one reading of 68ng/dl; all other readings every quarter much lower stabilizing at 16ng/dl.

In monitoring the “Combined Hormone Blockade” list (chb@prostatepointers.org), you will continually find men who had been on long term ADT complaining of failure of return to normal levels of testosterone and wondering if it would be safe for testosterone replacement therapy (TRT).

Long term prescribing of an LHRH agonist causes hypotestosteronemia (abnormally low concentration of testosterone). Even without androgen deprivation therapy involving LHRH agonists, men, as they age, experience a reduction in testosterone concentration due mainly to a decline in Leydig cell mass in the testicles or a dysfunction in hypothalamic-pituitary homeostatic control, or both, leading to abnormally low secretion of luteinizing hormone with resultant low testosterone production. Add intentional testosterone deprivation over a long term by use of LHRH agonists, and this becomes even more problematic.

Of interest are that associated conditions also can exacerbate this problem and include advancing age, obesity, liver disease, alcoholism, osteoporosis, rheumatoid arthritis, AIDS, chronic renal failure, diabetes, and chronic anemia. In the United States, an estimated five million men have the medical condition of testosterone deficiency (hypogonadism), which is approximately one in twenty adult males. Also of interest are these figures that indicate the low side of “normal” testosterone range depending on age:

20-30: 280ng/dl; 30-40: 350ng/dl; 40-50: 255ng/dl, 50-60: 255ng/dl; 60-70: 120ng/dl; 70-80: 38ng/dl!! 80-90: only 28ng/dl!!!

Looking at these figures, it is likely that my age on prostate cancer recurrence, 63, and the initial long term/5 years of continuous ADT2 to age 68, both combined to exacerbate any return of significant testosterone production. What is considered preferable across all these age ranges is to have a level at least in a range of 500ng/dl to 800ng/dl. Some men are fortunate throughout their lives into their 80s to maintain high levels of testosterone; would that I had been one of them.

I would suggest that for those concerned how prevalent this is for men who had been on LHRH agonist continually for over 3 years, would be to ask via the CHB or advancedprostatecancer@yahogroups.com lists if on stopping their LHRH agonist medication their testosterone levels ever returned to normal ranges.

In conclusion, it is my opinion that the foregoing information pleads a case for intermittent androgen deprivation therapy rather than continual, long term administration of an LHRH agonist.