

# 'Needle in a haystack'

Dr Richard Casey, Editor-in-chief, *Journal of Sexual & Reproductive Medicine*

Recent interest in the clinical consequences of relative androgen deficiency in the aging male is well served by the series of papers from the Canadian Andropause Society in the present issue of the *Journal of Sexual & Reproductive Medicine*. Does this heightened interest herald the acceptance of the andropause syndrome by the mainstream medical community? Not yet.

The effects of androgen deprivation are well documented, as are the clinical benefits of androgen supplementation in hypogonadal men. The much larger population of potential patients with relative androgen deficiency who may benefit from androgen therapy remains unsorted. All men experience a relative decrease in bioavailable testosterone levels as they age. Bone loss, decreased muscle mass, reduced cognitive ability and diminished libido are all consequences of aging. Attention to diet, the elimination of risk factors (such as tobacco consumption), regular exercise and an interested sexual partner can mitigate these eventual consequences. Lifestyle management has always been less attractive to

patients than a written prescription. The cost of widespread hormone replacement therapy would be astronomical. Without well-constructed, placebo-controlled, prospective clinical trials supporting the clinical benefits (and, indirectly, the cost benefits) of testosterone therapy, the use of testosterone in the graying population remains unscientific and unsupported, other than by anecdotal evidence.

The group of patients who will truly benefit from hormone replacement therapy needs to be better defined, and physicians need to resist the pressure from industry to use the various forms of testosterone therapies that are now available. In the past five years, physicians have seen the introduction of a safe oral testosterone, a scrotal patch, an androgen gel and a transdermal delivery system. Hopefully, the next five years will allow physicians to determine what subgroup of male patients will be served by these novel delivery systems. Organizations such as the Canadian Andropause Society will be instrumental in providing physicians with the tools necessary to serve their aging male patients.

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## Partial androgen deficiency in the aging male fact *not* fiction

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Fifteen years ago, the concept of hormone replacement therapy (HRT) for women was greeted with much skepticism and resistance. Today, it is almost considered to be malpractice not to prescribe HRT to women experiencing menopause. Studies have shown that more highly educated and better informed women request and accept HRT.

Are men different from women? In certain ways they are!

Hormone deficiency occurs in all men as they age. The difference is that, in women, the cessation of hormonal production is both abrupt and complete. As Archie Bunker said to Edith when she was going through menopause: "So change already, time is up!!"

In men, the decrease in hormone production occurs very gradually but progressively, starting at about age 45 years. As well, the production rate never declines to zero. It is a slow and gradual fall-off. There is a decrease in total, free and bioavailable testosterone, and a concomitant rise in the sex hormone-binding globulin (SHBG). SHBG has a higher affinity for testosterone than estrogens. As a consequence, in addition to a decrease in the production of testosterone, whatever is produced is mostly bound up in the SHBG (and not available to tissues), resulting in a change in the normal testosterone to estrogen ratio, which can also cause negative effects.

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