

The Healthy Male

Issue 20 – Spring 2006

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Newsletter of Andrology Australia – Australian Centre of Excellence in Male Reproductive Health

Drugs in sport could Landis in trouble

A positive test result for testosterone saw Floyd Landis lose the 2006 Tour de France championship title, as was heavily reported in the media. What was not focused on by the world's press was the damage the steroids could have done to Landis' health – particularly his reproductive health.

Testosterone in the body builds muscle and increases strength, haemoglobin levels and oxygen carrying capacity – which is why athletes may consider the use of testosterone or other androgenic anabolic steroids to try to improve sports performance.

Drugs in sport are not only banned, but are also not good for your health, and in men, anabolic steroids can stop the body's own production of testosterone and cause liver damage.

In the wider community, abuse of androgens in sport is an important issue with some elite athletes and body builders using massive doses of hormones. Androgen abusers risk causing long-term damage to their bodies, in particular the prostate, heart and liver.

An Australian study published in 2000 looked at the adverse effects of anabolic-androgenic steroid use in 58 male community-based users¹.

More than 68 per cent of users had abnormal liver function test results. The most commonly reported adverse effects were alterations in libido, which were experienced by 61 per cent of men. Forty-eight per cent reported changes in mood, while 46 per cent experienced reduced testis volume which can lead to infertility. Gynaecomastia (breast growth) was found in 20 per cent of men.

Perhaps most alarmingly was that after discussion of test results, only 11 participants reported they would cease using steroids.

While it's great to be active and look and feel good about yourself, the use of anabolic steroids is not a positive lifestyle behaviour and is really not worth the associated negative health risks.

¹ O'Sullivan AJ, Kennedy MC, Casey JH, Day RO, Corrigan B, Wodak AD. Anabolic-androgenic steroids: medical assessment of present, past and potential users. *MJA* 2000; 173: 323-327



From the Director

Welcome to the 20th issue of the *Healthy Male* newsletter. This is an exciting time for Andrology Australia as we have reached some significant milestones in our community education outreach. Not only have we reached the 20th issue of this newsletter, but we have also now distributed over 100,000 of the Andrology Australia consumer guides.

Also, even more exciting, is that cricket legend Merv Hughes has come on board as Ambassador for Andrology Australia!

We hope Merv will challenge the stigma of talking about men's health by discussing it in the public arena. If Merv can talk about men's private parts, then hopefully other men will be encouraged to talk to their partners

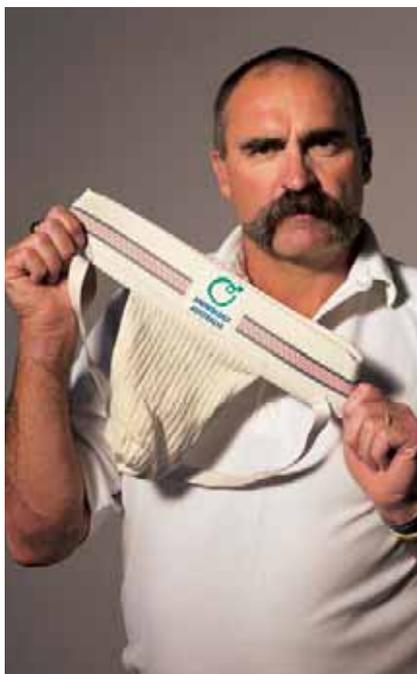
and doctors about these important health matters and any concerns they might have.

Keeping in line with the addition of Merv as the latest face of men's health, this issue of the newsletter focuses on sport and reproductive health. With the recent Tour de France doping scandal, we thought it was a timely opportunity to explain the risks involved with taking testosterone and other reproductive issues arising from sport.

We hope you enjoy this issue and continue to learn more about men's health.

Professor Rob McLachlan

Getting to know Merv



Australian cricket legend Merv Hughes is lending his support to Andrology Australia to help raise awareness of men's health. We thought we'd give you a chance to get to know the man behind the moustache.

Posters and flyers have been produced which aim to encourage men to speak to their doctor about their health. Available at no cost from Andrology Australia, to order please phone 1300 303 878, or you can order online.

You can also win Merv's support by visiting the Andrology Australia website at www.andrologyaustralia.org

On cricket...

What is your most memorable cricket moment?

It would have to be the day we won the Ashes back from England, in England, in 1989. The Australian team had been described by the Pommy press as the worst team to leave Australia's shores (they had apparently forgotten all the English touring teams that got flogged in Australia) and that moment, on the balcony at Old Trafford, when David Boon hit the winning run to win the series will always be my favourite cricket moment.

What is your most scariest/ forgettable cricket moment?

Can't remember the most forgettable...but scariest has to be facing West Indian fast bowlers.

At what point did you realise your stretches on the field were being copied?

Not until a few overs after it started, because every time I turned around to look at the crowd to find out what all the noise was about, the crowd would turn around to look behind them too!

Is there any fresh new talent coming in to the Australian cricket side?

Heaps. And with the likes of Glenn McGrath, Shane Warne and Adam Gilchrist coming to the end of their careers (some time in the next decade) we need to have plenty of candidates to consider. Which is why there is a National Selector at virtually every first-class match played in an Australian summer.

On health...

How has being on the TV show *Celebrity Overhaul* changed your life?

Made me aware of what healthy food looked like, and showed me that knowing about food and planning to insert regular exercise into my daily routine could seriously make me feel 15 years younger.

What are you doing now to look after your health?

I try to eat 15 different species of plant every day, make sure that animal products do not incorporate more than one third of my daily consumption, and do something active and outdoors every day.

Why do you think it's important for men to look after their health?

Because if you do, you live better, love better and are generally a lot more fun to be around!

What messages would you give to men about their health?

Don't obsess but don't ignore. Do the simple things regularly and seek advice if you have any niggling doubts about things that change.

Why have you put your support behind Andrology Australia?

I know that what they are finding in research is true: men don't talk about Men's health issues, and what I have discovered from talking to the people at Andrology Australia is new to me and I am sure new to many blokes like me. So we need to get the word out there: get a professional to have a peek at your pecker problem and it will probably produce a positive prognosis. I thought a lot of "p"s was appropriate...

On life...

Would you ever consider shaving off your trademark moustache?

I wouldn't want to scare myself.

What would you consider a perfect day?

An Australian Test victory and a Western Bulldogs premiership followed by a successful fishing trip with the family.

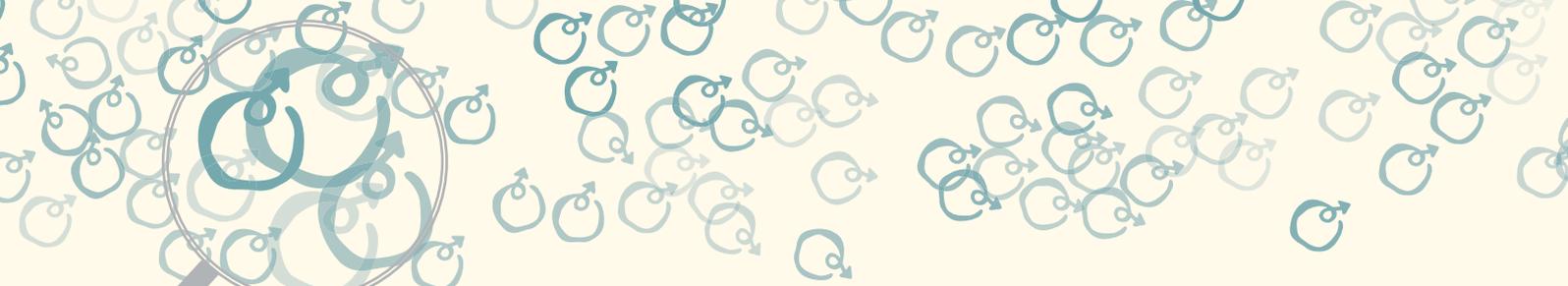
On the future...

How long do you hope to continue as an Australian cricket selector?

I am still young so I think I still have a lot to contribute to the game.

Where do you see your interests focusing in the future?

Doing what I am doing now for as long as possible. I would hate to need to get a real job!



Focus on: Sport and reproductive health

Author: Professor Rob McLachlan

The AFL and rugby league grand finals held at the end of September were both testament to the massive interest and importance of sport in Australia. Attendance levels were at record highs; millions watched the games live on television; and people from around the nation came together to focus on sport.

Playing sport or taking part in regular exercise is important for your general health, and also your reproductive health. Sport is often a big focus of many men's lives (although sometimes it's just watching, not playing sport!), however, there are some health issues that can be experienced by being involved in sport.

Sport and risks to reproductive health

Can cycling cause erectile dysfunction?

It has been reported that men may experience erectile dysfunction after long periods of cycling. This is because the position of the perineum (the area between the scrotum and the anus) on the bicycle saddle can reduce blood supply and compress nerves in the area. However, studies have both supported and refuted this link between cycling and erectile dysfunction.

If you do feel any numbness or tingling sensations when cycling, it is advised to stop and take a break, and position the seat so that there is only a small amount of pressure on the perineum. Also, using a wider seat with more support may help.

Can cycling cause infertility?

There is no good evidence to suggest that cycling can cause infertility. Normal amounts of cycling, such as riding to work or going for a leisurely ride on the weekend, will not have any affect on fertility levels. One study did find that sperm morphology (shape) had changed in an analysis of the sperm of long distance competitive cyclists¹. However the authors suggest that this may be a result of heat rather than injury from exercise. More research needs to be done in this area if this question is to be fully answered.

Can mountain biking damage the scrotum?

Mountain biking involves riding off-road which is not as smooth a ride as other types of cycling. The bumping and jarring of the scrotum on the bike seat has been thought to cause scrotal abnormalities. One study looked at a group of mountain bikers versus a control group of non-bikers, and found that 94% of the mountain bikers had abnormal scrotal findings². These abnormalities included epididymal cysts, small collections of calcium in the scrotum and the testes, and varicoceles. Out of the non-bikers, only 16% had abnormalities, all of which were epididymal cysts. These scrotal abnormalities may cause scrotal tenderness or discomfort.

Can getting hit in the testes cause permanent damage?

Male genital injury can be quite common in contact and collision sports such as rugby and hockey. Some men do not wear any genital protection during sport, and so getting hit in the groin can not only be very painful, but it can also be quite damaging. A study in the USA found that one in five visits to the hospital emergency department for sports-related genital trauma had a risk of permanent injury³. Severe damage can lead to bleeding within the testis, known as a testicular hematoma. Being hit in the testes can also lead to impaired sperm production or even the loss of a testis.

A study in New South Wales looked at eye and testis injuries in rugby league and union players over a period of 16 years⁴. Fourteen players had testicular injuries from playing rugby. This resulted in 11 of these players losing a testis and another three losing part of one or both testes. The cause of the injuries was kicking and kneeing, usually during tackles.

What is the best thing to do if you get hit on your testes (e.g. in a sports game)?

If the pain is severe, go straight to hospital. Even if you do get hit and the pain passes, it is still advised that you visit your local GP for a check up.

Can playing sport and increasing body temperature cause problems to male reproductive health?

It has been shown that an increase in temperature in the testes can reduce sperm production and fertility levels⁵. This is because the testes need a cooler temperature to produce sperm. However, there is no evidence to suggest that playing sport and increasing body temperature is detrimental to male reproductive health due to the increase in heat during the period of exercise.

Unless a man is very sick, e.g. with the flu and his core body temperature is increased, heat generated from the body does not usually affect sperm production as the body can adapt. The scrotum provides a very effective 'evaporative' cooling system so that when it is hot, or when playing sport, sweating and evaporation keep the testes cool. Heat can be a problem for sperm production when the heat has nowhere to escape, such as when sitting in a hot bath for prolonged periods of time.

Can extreme exercise affect reproductive health?

In many sports including ski-jumping, gymnastics and long-distance running, athletes need a low body weight to gain an advantage over their opponents. However, some competitive athletes may experience health problems due to their extreme exercise and loss of muscle mass.



Men who take part in rigorous short-term exercise can experience an increase of up to 25 per cent in their serum testosterone levels⁶. But after many hours of intensive exercise, testosterone levels are drastically reduced⁷. Research into soldiers who spend time in combat training found that testosterone levels were lowered as a result of the prolonged and repeated physical and psychological strain⁸. Stress and sleep deprivation in this situation are both contributing factors to this drop in testosterone levels. When soldiers complete this combat training, it has been found that their testosterone levels do rise again to normal levels.

The effects of exercise on testosterone levels are dependent on the type of training (for example, resistance training), the duration, and the intensity of the exercise program. In cases of extreme exercise, especially when coupled with low body weight, the ability of the testes to produce testosterone is interrupted. However, few studies have been conducted in elite athletes. Sperm production in endurance athletes has been found to be similar or a little less than men who are not active at this level, although there is conflicting research in this area.

Is there any evidence that sporting prowess leads to fathering girls?

There is no scientific evidence to support this phenomenon happening in athletes.

Can sporting injuries lead to testicular cancer?

Getting hit in the testes, or being injured in the genital area playing sport cannot cause testicular cancer. It is more likely to be the case that because of the injury, the testes are examined and a lump may be found incidentally.

Maximising Performance

Can men with testosterone deficiency play competitive sport?

Testosterone deficiency is a condition in which there is not enough testosterone for the body to function normally, and affects one in 200 men in Australia. It can be caused by a genetic or medical problem, by damage to the testes, or as part of the ageing process. Klinefelter's syndrome (a genetic condition affecting males) is a common cause of testosterone deficiency.

Those athletes who clinically need testosterone (androgens) to keep their hormones at a normal level are able to engage in competition. If a man has confirmed testosterone deficiency requiring treatment, the disorder and the need for testosterone therapy will need to be proven. An exemption must be issued from the Australian Sports Drug Medical Advisory Committee before being allowed to compete.

What are anabolic steroids and what do they do?

High doses of anabolic steroids (also known as androgens) improve sporting ability and cause changes to physical appearance such as increasing muscle size and strength.

The side-effects of androgens include acne, weight gain, mood changes (especially aggressive behaviour), decreased testes size and low sperm counts leading to infertility. Some men take chemically modified forms of testosterone and put themselves at risk of liver disease.

Some men seek androgens from illegal sources and take doses that are far more than those used for normal replacement treatment. The purity of the materials from such sources may not be known; some androgens are only approved for veterinary use and others may be toxic to the liver.

The use of anabolic steroids (androgens) in competitive sport has been banned since 1974. Athletes using androgenic-anabolic steroids can face disqualification and are now more likely to be caught because of increasing rigorous detection procedures. However, their use in elite sports continues and anonymous questionnaires also suggest large usage in certain non-competitive sports like bodybuilding.

1 Leibovitch I, Yoram M. The Vicious Cycling: Bicycling related urogenital disorders. *European Urology* 2005; 47:277-287

2 Frauscher F, Klauser A, Stenzl A, Helweg G, Amort B, zur Nedden D. US findings in the scrotum of extreme mountain bikers. *Radiology* 2001; 219:427-31

3 Congeni J, Miller SF, Bennett CL. Awareness of genital health in young male athletes. *Clin J Sport Med* 2005; 15:22-6

4 Lawson JS, Rotem T, Wilson SF. Catastrophic injuries to the eyes and testicles in footballers. *Med J Aust* 1995; 163:242-4

5 Kandeel FR, Swerdloff RS. Role of temperature in regulation of spermatogenesis and the use of heating as a method of contraception. *Fertil Steril* 1988; 49:1-23

6 Zmuda JM, Thompson PD, Winters SJ. Exercise increases serum testosterone and sex hormone-binding globulin levels in older men. *Metabolism* 1996; 45:935-939

7 Opstad PK. Androgenic hormones during prolonged physical stress, sleep and energy deficiency. *J Clin Endocrinol Metab* 1992; 74:1176-1183

8 Gomez-Merino D, Chennaoui M, Burnat P, Drogou C, Guezennec CY. Immune and hormonal changes following intense military training. *Mil Med* 2003; 168:103408





How do you measure up?

Andrology Australia has begun producing orchidometers for GPs and men's health specialists to assist them in identifying reproductive health disorders such as infertility, androgen deficiency and the under-diagnosed Klinefelter's Syndrome.

An orchidometer is a sequential series of beads ranging from one to 35 milliliters that is used to measure the size of the testis. Traditional orchidometers - ranging in size from one to 25 ml - are too small to be used for men of all ages. The advantages of the Andrology Australia orchidometer are that it includes the larger beads, and also that these larger beads can be removed for paediatric endocrinologists needing a smaller range of beads.

Examination of the male genitals, and in particular the testes, should be included as part of a standard health check for any new and existing male patients. Examinations should be conducted on men with conditions associated with the reproductive system, and as part of any routine thorough health examination (for example health insurance checks). It should also be considered when a patient presents

specifically with a history of undescended testes as an infant, gynaecomastia, infertility investigation and any feature consistent with androgen deficiency.

Klinefelter's Syndrome is the most common cause of androgen deficiency (1 in 650 males), although 70 per cent of men with this genetic condition are not being diagnosed. This is largely because Klinefelter's Syndrome may present in different ways and most men do not, at any time, have a genital examination performed by their doctor.

The orchidometers will be available at the end of 2006 and Andrology Australia hopes that over the next few years, each general practice in Australia will have an orchidometer readily accessible in their practice for assessment of their male patients. In early 2007, the first 1000 GPs who register for the "Caring for the reproductive health of younger males" online interactive Active Learning Module

(Category 1) to be made available on the Andrology Australia website (www.andrologyaustralia.org) will receive a FREE orchidometer for their practice.

Clinical guidelines on the diagnosis and management of the reproductive health of males are also being developed to complement the availability of the orchidometers. These include topics on male physical examination, erectile dysfunction, androgen deficiency, testicular cancer, prostate disease, male infertility and premature ejaculation. The guidelines will be available from early 2007 to download from the Andrology Australia website or to order as a complete education package.

This first round of orchidometers is being produced with the generous support of Schering Pty Ltd.

Research round-up

Barriers to seeking treatment for erectile dysfunction

Erectile dysfunction (ED) is a common condition that affects one in five Australian men over 40 years of age. Despite its high prevalence, many men either do not seek treatment or experience difficulties with treatment for this condition.

Andrology Australia supported a research study into the barriers men encounter when seeking treatment for ED, which explored the partner's role in diagnosis and treatment as well as the role of GPs.

This study, conducted by the Monash Institute of Health Services Research, Monash University, aimed to address psychosocial attitudes - such as embarrassment and stoicism - which are believed to act as barriers for men seeking treatment from their GP. It is believed these same psychosocial factors may also prevent

GPs from initiating a discussion on the issue with their male patients.

In-depth interviews were conducted with men experiencing ED and their partners, and focus group discussions were conducted with GPs.

The study found that men experiencing ED preferred to discuss the issue with middle aged or elderly male GPs, citing these doctors as most likely to relate to the issue and cause less embarrassment.

Participants generally preferred to speak to their GP alone, and then potentially involve their partner in the consultation. Men were divided on whether an established rapport with a GP was necessary to discuss and obtain treatment for ED.

Many participants believed there was a lack of good quality patient

information available, although they did cite the internet as a useful resource - without the psychosocial barriers.

Participants expressed a variety of emotions with the initial onset of ED, including embarrassment, denial, frustration, anxiety and fear. Many men believed ED had negatively impacted on their attempts at intimacy with their partner, and subsequently their confidence.

Limited research has been conducted into how the presence of ED and the lack of treatment impacts on a man's relationship with his partner. If left untreated, the issue has the potential to negatively affect a couple's relationship.

For more information about the study, please contact Dragan Ilic, at dragan.ilic@med.monash.edu.au

In brief

Winning can be deadly!

Mick Adams, member of Andrology Australia's Aboriginal and Torres Strait Islander reference group, has won a Deadly Award for his work in improving the health and well-being of Aboriginal and Torres Strait Islander people. The Deadly Awards recognise excellence in Aboriginal and Torres Strait Islander music, sport, entertainment, the arts and community achievement.

Mick is one of the few Aboriginal men undertaking a PhD in public health, which is being supported by Andrology Australia and undertaken at QUT, Queensland. He is researching the prevalence and correlates of sexual dysfunction among Aboriginal and Torres Strait Islander males, which includes sexual and reproductive health. Congratulations Mick!



Farewell to Andrology Australia team member

We are sad to announce that Vanessa Fleming-Baillie, Andrology Australia's administrative officer, is moving on to greener pastures. Vanessa has been with Andrology Australia for almost 5 years, and has been an integral part of the team. She is the first contact that many make with the program when they call the 1300 number. Without Vanessa, you wouldn't receive these newsletters every quarter!

We wish her all the best in her new role.



Recent events

Obesity a cause of low testosterone

The fall in androgen (testosterone) levels experienced by men as they age is known to be influenced by a number of health-related factors. One of the most important of these is obesity.

Currently more than one in three Australian men aged 55 to 74 years has a waist circumference considered to be in the obese range, and one in five has a body mass index (BMI) in the obese range. This has more than doubled over the past 20 years. This rise in obesity is likely to be an important contributing factor to the increased prevalence of androgen deficiency (AD) in ageing men, but has not been well studied.

The influence of obesity on the diagnosis of AD in symptomatic ageing men was the focus of a recent study conducted at Prince Henry's Institute¹. More than 200 men aged between 54 and 86 years with symptoms suggestive of AD were recruited from the community, with 99 classed as obese and 124 as non-obese according to BMI and waist circumference measurements.

The study found obese men had lower total testosterone and calculated free testosterone levels than non-obese men. More than 12 per cent of obese men had clearly low total testosterone levels, compared with less than one per cent of non-obese men.

When applying the Endocrine Society of Australia guidelines for the diagnosis of age-related AD, obese men were almost twice as likely as non-obese men to be considered as androgen deficient and therefore eligible for PBS-supported testosterone therapy,

Dr Carolyn Allan, chief investigator and medical advisor to Andrology Australia, concluded that obesity is an important determinant of testosterone levels in ageing men with symptoms of AD. Carolyn also commented that studies of testosterone therapy in this group of ageing men were needed to determine whether androgen replacement was beneficial.

1 Allan CA, Strauss BJ, Burger HG, Forbes EA, McLachlan RI. The association between obesity and the diagnosis of androgen deficiency in symptomatic ageing men. *MJA* 2006; 185:424-427

Prince Henry's Institute, Monash Medical Centre, Southern Health is seeking non-smoking, healthy but overweight men aged 40-70 years for a study of testosterone treatment on body fat and cardiovascular disease. For more information contact Anna Zamojska or Elise Forbes on 9594 3087 or 9594 3554.

Newsletter of Andrology Australia

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