Steroids: use, users and responses

Major national research shedding light on a drug problem thriving in the gyms and sports clubs of Britain

ANABOLIC-ANDROGENIC steroids (from here on referred to as 'steroids'[1]) are synthetic compounds structurally related to the male hormone testosterone. 'Anabolic' refers to their tissue-building properties, 'androgenic' to their 'male-producing' properties. Some of these compounds are more 'anabolic', some more 'androgenic'; testosterone is highly both. People who use these drugs for non-therapeutic reasons hope to build muscle and reduce body fat, improve strength or endurance and hasten recovery from training. The desired results are improved sports performance or appearance.

Steroids are diverse in their actions but may be divided into two major groups: those designed to be taken by mouth and those designed to be injected. Orally active steroids have usually been pharmacologically altered to slow their removal by the liver; these variants have been associated with many of the side-effects linked to steroid use. Steroids designed for intramuscular injection are chemically constructed to slow their release into the circulation.[2]

The most popular oral steroids include Dianabol (methandrostenolone), Anavar (oxandrolone) and Winstrol (stanozolol). Popular injectables include Deca-Durabolin (nandrolone decanoate) and testosterone products such as testosterone propionate and cypionate.[3,4,5]

Two or more steroids are often taken simultaneously ('stacking'). Most users believe that large doses and a combination of steroids are more effective for muscle growth than the manufacturer's recommended dose for a single drug.[6]

Gym owners, steroid users and others closely involved generally agree that steroid use has risen dramatically in Britain over the past five to 10 years. For example, one author has suggested that steroid use is "Edinburgh's lesser known drug problem".[7] Later he reported that among college students in a small town on the west coast of Scotland, nearly 1 in 20 men and 1 per cent of women had used steroids[8]; use started early, at age 14-15. Also in Scotland, nearly 20 per cent of the clients of one gym had used steroids.[9] In gymnasia in the south of Wales these drugs may be taken by about 30 per cent of the clients.[10]

To shed further light on the extent of steroids use we describe some of the findings from our one-year exploratory study. Undertaken in 1992, the study was commissioned by the Departments of Health for England, Scotland and Wales.

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Steroids are used by many men and to a lesser extent women involved in sport. In some areas they form a significant part of the syringe exchange's caseload. There is concern over the effects of some steroids and little is known about their long-term use. As drugs commonly injected, there are risks of infection through sharing injecting equipment. Sreoid users do not see themselves as drug users, raising the issue of whether current drug services can attract them and meet their needs

Use widespread

Steroid use was studied in 21 gymnasia in parts of London, South Wales, Merseyside, Glasgow and Edinburgh. All had a good range of weight training equipment which meant that 'proper' weight training could take place. A one-page questionnaire was given to all their clients over a two-day period.

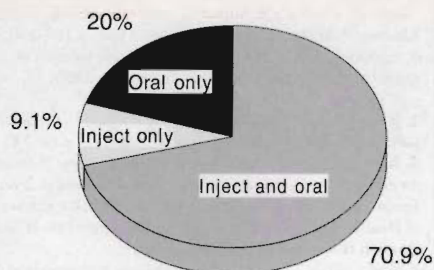
Nearly 60 per cent of the clients approached responded, giving us 1669 questionnaires to analyse. Nearly 8 per cent said they had used steroids and 5 per cent were current users (6 per cent of the men and 1.4 per cent of the women). 73 per cent of those who had used steroids had injected them.

Evidence of steroid use was found in all the areas studied. In only three gyms was no steroid use found, in six between 5 and 17 per cent, and in four, 24-46 per cent.

Many syringe exchanges have steroid injectors among their clients. To find out about their experiences, 130 questionnaires were given out at the National Syringe Exchange Group meeting in March 1992. The 88 agencies which responded were spread throughout England and Wales (see map). Almost 60 per cent had come into contact with steroid injectors during 1991, 18 per cent had not, and the rest were uncertain. Nearly three-quarters of the 42 exchanges which could supply trend data said the number of steroid users seen had increased in the past year. Just 7 per cent said it had decreased.

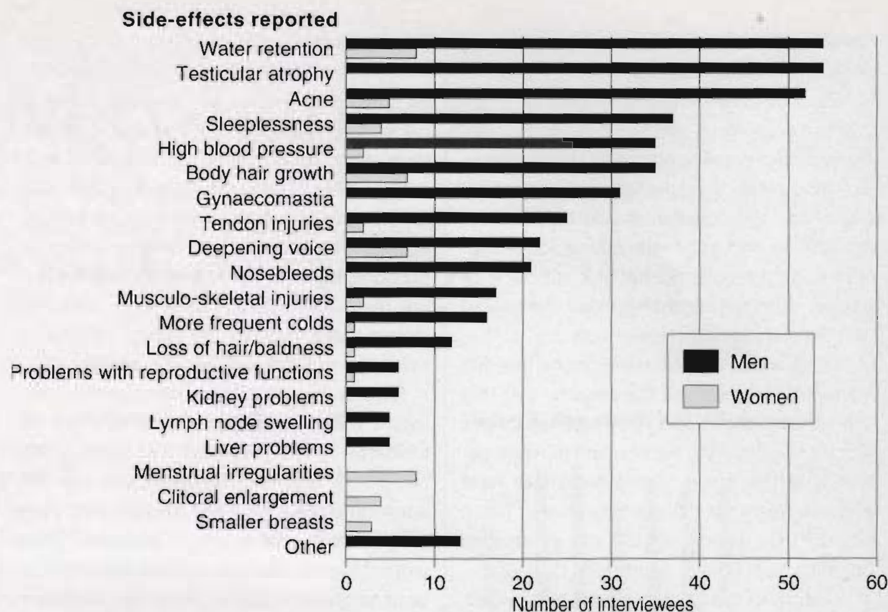
Thirty-seven agencies supplied complete data about the clients they saw in a typical month in 1991. We calculated that 6.5 per cent of their clients were steroid injectors, ranging from 44 per cent in one agency (11 out of 25) to under 1 per cent. A few were seeing

How steroids were taken



Based on interviews with 110 steroid users

What side effects did steroid users report?



Based on interviews with 110 steroid users. Each user could report more than one side effect.

50-60 steroid injectors in a typical month. Thirteen agencies volunteered that some clients regularly collected large quantities of injecting equipment for friends and training partners.

This data from syringe exchanges confirms that steroids are used in many parts of the country. Anecdotal reports since the survey suggest that more agencies now have steroid using clients and that many are serving increasing numbers.

Syringe exchange staff appear to be short of information for this relatively new client group. In 81 of the 88 exchanges, staff said they needed more information about steroids. Apart from some scientific literature, almost all the information available to steroid users comes from 'underground' handbooks. These are largely based on users' experiences and practices, not on scientific data.[11] Our in-depth interviews with 110 steroid users indicate that information is mainly gained from friends, steroid handbooks and dealers, in that order.

Location of the syringe exchanges surveyed

• Syringe exchanges with no knowledge of steroid using clients
x Syringe exchanges with steroid using clients

Health consequences unclear

A careful scrutiny of the literature on steroid-related health risks suggests that as a general class of drugs no significant adverse effects have been established.[12] However, some oral forms of these drugs (17-alpha-alkylated androgens) have been linked with negative consequences involving the liver. These include consistent changes in cholesterol levels which could increase the risk of heart disease.[13, 14, 15] Liver tumours are rare in athletic men but are also associated with oral steroids.

Injectable testosterone derivatives have been linked with fewer adverse effects, although there are suspicions that very high doses may be associated with cancer of the prostate and stroke.[16] The available information frequently does not support the claimed risks, but these are impossible to assess without long-term studies of healthy, athletic men and women, who take the drugs as they are commonly taken. Unfortunately, information about the long-term effects of using steroids is completely lacking.[17, 18]

In a separate study we interviewed 110 steroid users and asked them to describe their last 'on cycle' (a period of steroid use followed by a break). The three steroids most commonly taken by the 97 men we interviewed were Dianabol, Deca-Durabolin and various types of testosterone. The 13 women commonly took Anavar, Winstrol and Dianabol.

On average, each user was taking three different drugs (steroids and others) during their most recent cycle. For men, the maximum was 16 and for women, four. Over 80 per cent took at least two different drugs.

To give some flavour of doses taken, the highest reported dose of Dianabol was 34 times, and of Deca-Durabolin 24 times, the therapeutic recommendations, though on average doses were much lower.[19] Women took fairly conservative single doses. Steroids appear to have greater effects the higher the dose,[20] so it is important to note that the common practice of using several steroids during a cycle raises the total dose of androgens taken.

Interviewees were asked to complete a checklist of health symptoms experienced while taking steroids. Seventeen did not report any while 85 (77 per cent) reported two or more, but there was no way to confirm whether these were actually due to steroid use. Only 35 per cent had received regular medical checks (mainly from GPs). Some of the effects of steroids are readily visible and not dangerous to health (virilising effects in women, gynaecomastia and testicular atrophy in men). Others are impossible to self-detect but potentially serious (blood pressure and liver and kidney problems) and may have gone unreported.

Steroid users generally believe doctors are ill-informed about steroids and that it is difficult to get medical monitoring without being able to pay private fees.

ISSUES IN SERVICE DELIVERY

Many of the health risks of steroid use may be reduced by steps such as promoting the use of syringe exchanges and pharmacies for clean injecting equipment, and by education on safer sex and safer injecting practices. Health checks including blood pressure, plasma cholesterol profile and liver function should be more accessible, as should general advice about steroids and their potential harmful effects – including warnings regarding those associated with the more serious side-effects.

We know that steroid users can be found in many areas throughout the country, and that syringe exchanges and drug agencies have quickly responded to the new and different demands of this group. Some exchanges have even employed special 'steroid workers'. These provide user-friendly advice and information but often have little or no medical back-up.

A harm reduction service needs to provided, but how and by whom? Most steroid users do not see themselves as drug users in the same frame as, for example, heroin users, and therefore do not see themselves as running the risks of HIV or other infections that they associate with drug users. This begs the question whether it is appropriate to bring them into drug agencies.

The strongest argument for using existing agencies is that they are already skilled at providing professional counselling and advice. For them the biggest obstacle to attracting steroid users might be the clients' reluctance to identify with the staff and the agency.

Another argument against using present services is that their existing clients may feel intimidated by the 'big boys'.28 Bringing the two groups together may also encourage the adoption of new drug use practices by each group. Already many steroid users use other drugs: 25 per cent of our interviewees had used amphetamines and 18 per cent cannabis in the past six months.

Health checks would certainly be welcomed by many users as a way of preventing serious consequences and for the withdrawal of the drugs or the adjustment of drug schedules.

HIV risk underestimated

Injection is a common way of taking steroids – 80 per cent of our interviewees injected (see chart). The literature reports two cases of steroid injectors contracting HIV as a result of sharing injecting equipment[21,22] and other reports express concern at the potential for HIV spread among steroid injectors.[23,24] In Britain HIV infection has not yet been linked with steroid use, though health professionals are worried about the risk.

Our interviews with steroid users and one British survey indicate that needle sharing is not commonplace.[25] On the other hand, 42 new steroid-using clients at a syringe exchange in Wales were asked in detail about their sharing behaviour; 23 had shared 10 or more times. Attendance at the syringe exchange reduced the number of steroid users who shared.[26]

Our contacts with syringe exchanges and drug agencies has suggested that there are pockets of steroid injectors who share equipment and are unaware of needle exchanges. There are also numerous reports of inadequate and dangerous injecting practices.

We also asked the steroid users we interviewed a few questions about their sexual behaviour. The number of different sexual partners in the past six months was similar to that for the general public (about one for women and two for men),[27] as were levels of condom use with regular and casual partners.

Steroid users often fail to acknowledge the risk of HIV or other infections related to their 'sharing' or sexual behaviour (see panel).

Syringe exchange staff lack information on steroid use

A HARM REDUCTION service for steroid users is clearly needed (though there are real issues about how it should be provieded – see panel) as is more information. Our conference on steroids and public health in May of last year provided the first occasion for people from different backgrounds to discuss the issue. It was obvious that very little is known about the effects of these drugs and that more needs to be known about how widely they are used and why. Service provision at the moment is very dependent on whether an individual worker is interested in this issue, yet the number of steroid users is probably substantial enough to demand a national policy to prevent and limit possible harm to the users and others around them. ❍

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FOR MORE INFORMATION

❑ **ANABOLIC STEROID USE IN GREAT BRITAIN: AN EXPLORATORY INVESTIGATION. Korkia P.K. and Stimson G.V. Centre for Research on Drugs and Heath Behaviour, 1993.**
The full report of the research described in this article.
Available from CRDHB, 200 Seagrave Road, London SW6 1RQ, phone 081 846 6565.

❑ **STEROIDS. Mid Glamorgan Community Drug Team, 1993. £2.50.**
One of the first booklets for steroid users to offer harm reduction information.
Available from Trudi Peterson, Llwyn-yr-Eos Clinic, Main Road, Church Village, Pontypridd CF38 1RN, phone 0443 217026.