

Experiences of Anabolic Steroid Use

In-depth Interviews with Men and Women Body Builders

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Abstract

This study was designed to investigate anabolic steroid users' experiences of, and motivations for, use. Five men and six women users took part in in-depth interviews. Four themes emerged: Steroid Use vs Abuse; Side-effects; Trusted Information Sources; and Social Pressure. Many users believed that steroids used in moderation were safe. Serious side-effects (liver and kidney damage, hypertension) were not significant disincentives. Information from health professionals tended to be mistrusted because it was not based on first-hand experience of use. Social support, especially from within the body building community, was an important motivator. It is concluded that intervention programmes need the support of the body building community in order to be effective.

Keywords

- *anabolic steroids*
- *body building*
- *gender*
- *intervention programmes*
- *side-effects*

RECENT research suggests that British men are investing increasing amounts of time and energy in body maintenance and body building (Aoki, 1996; Grogan, 1999; Mishkind, Rodin, Silberstein, & Striegel-Moore, 1986; Shabi, 2001; Wright, Grogan, & Hunter, 2001). Women's body building is a relatively new cultural phenomenon, and has shown a significant increase in popularity since the 1980s (St Martin & Gavey, 1996). The use of anabolic steroids and other drugs such as human growth hormone as an aid to body building is becoming more and more prevalent in Britain (Drugs and Sport Information Service, 1997; Korkia, 1994; Lennehan, 2003). Steroids help to maximize the effects of weight training in increasing muscle mass, but carry with them risks of serious side-effects such as kidney and liver damage and hypertension, as well as presenting risks of HIV infection and Hepatitis to those who use injectable steroids (Institute for the Study of Drug Dependence, 1993; Rich et al., 1999). An understanding of the first-hand experience of steroid use is necessary in order to be able to make credible and useful suggestions for health professionals, including Community Drugs Teams, who deal with the side-effects of steroid use and who may wish to develop interventions for use with steroid users.

Body building is perhaps unique as a sport in that most competitors in mainstream amateur body building competitions take steroid drugs in the lead up to competition (Korkia, 1994; Wright et al., 2001). Indeed, anabolic steroids are so much a part of body building culture, that 'natural body building' competitions have been set up specifically for those body builders who choose not to take steroid drugs (St Martin & Gavey, 1996). Although there is some debate as to whether steroids are really necessary to attain the levels of muscularity required in mainstream competitions (Pope, Phillips, & Olivardia, 2000), users are likely to believe that this requires the use of steroids (Wright, Grogan, & Hunter, 2000). Protein supplements, creatine and ephedrine are also used by many body builders, and are heavily marketed in mainstream body building magazines such as *Muscle and Fitness*, in spite of conflicting evidence on effectiveness and the unknown health risks of long-term, heavy use (Pope et al., 2000). When in competition body builders diet and dehydrate themselves to levels that mean that although they

may look strong they may actually feel weak because of starvation and dehydration necessary to present in competition form (Fussell, 1991). Steroid use presents particular tensions between the appearance of the body (muscular which implies strength and fitness) and the felt body (as experienced by body builders themselves who may feel weak and ill). One of the most important questions to be addressed here is how people who choose to use steroids make sense of the paradoxical relationship between the apparently healthy, muscled external appearance, and the often unhealthy internal states of their bodies. This article examines this interesting paradox through a reading of accounts presented by users, to investigate the felt experience of steroid use.

In previous work (Wright et al., 2000, 2001) we have asked men and women body builders to complete questionnaires to give us information about their motivations for steroid use. We found that 59 out of 135 body builders who completed questionnaires placed in two body building magazines (44 per cent of the sample) had used steroids. We applied Content Analysis to responses and found that motivations to use steroids were complex and person-specific (Wright et al., 2001). Although respondents gave us full and detailed responses to the questions we asked, we were not able to look in depth at motivations for steroid use in the sample that we studied due to the nature of the postal questionnaire methodology. We never met any of the respondents, which meant that we did not get a full picture of the lived experience of steroid use. This study is an attempt to redress that, and is complementary to the quantitative work that we have published previously. In this investigation, the results of in-depth interviews (over a period of six months) with men and women who have used anabolic steroids for body building are presented.

Most previous work on anabolic steroid use has focused on men, as most body builders are men, and most steroid users are male (Lennehan, 2003; Pope et al., 2000). High levels of muscularity are generally seen as inappropriate for women (Choi, 2000), and in interviews with girls as young as eight, we have found that girls are as scared of becoming muscular as they are of becoming fat (Grogan & Wainwright, 1996). Various authors have documented the struggle

faced by pioneering women body builders as they entered the competitive body building world in the 1970s (St Martin & Gavey, 1996). The first widely publicized women's body building event was held in 1979 in Los Angeles (previously the only choice for women body builders was the 'beauty pageant' added on to the men's competitions). In the 1980s, the Ms Olympia competition started in the USA, and in the UK, NABBA (National Amateur Body Building Association) renamed its 'Miss Bikini International' competition 'Ms Universe'. In 1986, the Ms Universe competition was divided into 'Physique' and 'Figure' classes. 'Physique' class caters for those who are aiming for a more muscular physique and less traditionally feminine presentation (minimal make-up, bare feet), and the 'Figure' for those who want traditionally feminine presentation (moderate degrees of muscularity, high shoes, g-strings, make-up). In the 1990s, Ms Fitness competitions were added, targeting women who engage in weight training as part of a general fitness regime. Fitness competitors engage in an aerobic performance as well as posing to reveal body shape and tone. Women's use of anabolic steroid drugs for body building has increased recently, in tandem with the increase in women's body building competitions (Korkia, 1994; Wright et al., 2001). Masculinizing side-effects would be expected to act as a deterrent for many women. Excess hair growth on the body and male pattern baldness are well-established side-effects when women take steroids (Korkia, 1994). These would be expected to take women away from traditional western ideals of femininity (Choi, 2000; Grogan, 2000) so were of particular interest here.

This study aimed to investigate the felt experience of anabolic steroid use in men and women. In particular, the ways that these men and women talked about their reasons for taking (and for not taking) anabolic steroids were of interest to facilitate an understanding of how harm-minimization and prevention interventions might be targeted effectively.

Method

Participants

Five women and six men who use anabolic steroids for body building were interviewed. All were resident in the UK at the time of the study

and all were white. The women were contacted through 'snowball sampling' from an initial contact known by the fifth author. Two of the male interviewees were known to the first author. The other four men volunteered to take part in the study responding to a request by the second author. Participants varied in age from 20 to 39 years. Pseudonyms are used here to protect the identity of the participants.

Women 'Paula' was 39 years old, worked as a personal trainer, had used anabolic steroids and had been body building for about 10 years. She competed as an amateur athlete until she was prevented from continuing due to physical injury. She trained twice a day, six days a week, with each session lasting about an hour, plus an hour of aerobics workout. She had competed as a Physique body builder in the past, and intended to compete again in the near future.

'Sharon' was 22 years old, a health care professional, had used anabolic steroids and had been training for seven-and-a-half years and body building for five-and-a-half years. She started training at 15 years old, and trained five days a week—45 minutes with weights and 20–40 minutes' cardiovascular work at the time of the interview. She had entered five body building competitions as a Physique competitor, and planned to compete again at some point in the future.

'Samantha' was 34 years old, a gym owner, had used anabolic steroids and had been body building for five years. She trained four times a week, or six days a week when in preparation for a show, training for about an hour each time. She also did aerobics six days a week. She initially competed as a Figure competitor, the year after starting to body build, and then changed to Physique competitions the following year, and she intended to compete again in the near future. She was not taking steroids at the time of the interview.

'Ruth' was 26, a fitness instructor, had used (and was using) anabolic steroids and had been training for three years, training every day. She had entered one Physique competition and planned to compete again.

'Emma' was 24 years old, a factory worker, had used (and was using) anabolic steroids and had been training for six years, training seven times per week for about 90 minutes. She had

entered competitions as a Physique competitor and intended to compete again in the future.

Men 'John' was a 25-year-old, ex-steroid user. He started body building and taking steroids when he was 21 years old because he felt underweight. He had never competed as a body builder, and trained every day. He intended not to take steroids again.

'Gary' was aged 22 years, and a competitive body builder. He was taking steroids at the time of the interview. He had been body building for five years. He started taking anabolic steroids when he started to compete in body building competitions when he was 20.

'Alan' was a 38-year-old male body builder. He trained for one-and-a-quarter hours four times per week. He had been body building since he was 18 years old. He had never competed as a body builder. He was a contract worker who used anabolic steroids frequently, and was using at the time of the interview. He began using steroids when he was 23 years old.

'Mark' was a 21-year-old male body builder. He usually trained for two hours, four times per week, although when preparing for a competition he increased his training to three hours, twice per day. He started lifting weights when he was at primary school, although began serious body building when he was 16 years old. He had competed as a body builder, and in the previous year to the interview had competed in 11 competitions. He was a final year undergraduate student. He was originally a natural body builder although began using anabolic steroids in the two years prior to the interview.

'Peter' was a 20-year-old male body builder. He trained for one hour, five times per week. He began body building when he was 15 years old. He had never competed in a body building competition at the time of interview, but was planning to compete in the near future. He was an undergraduate student, who worked part-time in the gym where the interview took place. He began using anabolic steroids when he was 16 years old. Therefore, he had been using anabolic steroids for four years on and off when interviewed.

'Paul' was a 42-year-old male body builder, who trained for two hours, five times per week. He began body building when he was 20 years old. He had competed in body building when he

was younger, although he stopped competing when he felt he had peaked in his level of success. He was taking steroids at the time of the interview.

The interviews

The interviews were semi-structured. The semi-structured interview format enabled the researcher to cover the most relevant interview topics, without controlling the interview too much. The researcher responded to and followed up on any issues raised by the interviewee taking care to avoid leading respondents in any particular direction. Interviewees were asked general information about their body building history, before assessing their attitudes towards body building generally, and more specifically attitudes towards anabolic steroid use with body building. Topics were as follows: reasons for starting body building; how long it was before they saw results; how their friends and family responded; whether they had ever competed as a body builder (any experiences of competitive body building, reasons why they had not competed); health effects of body building; why they maintained body building; experiences of steroid use; why they started using; whether their friends and family knew they used steroids; responses from friends and family; advantages and disadvantages of using steroids; and their fitness and health since they started using steroids.

Procedure

All interviews took place at the gyms where participants trained, at a mutually convenient time for researcher and interviewee. The men were interviewed by the first author (aged 39 years at the time of the interviews, a white woman who exercises regularly but does not body build), or by the second author (a 22-year-old, white woman who exercises regularly but who does not body build); and the women by the third author (aged 39 years at the time of the interviews, a white woman who exercises regularly but does not body build), except for 'Sharon', who was interviewed by 'Paula', who is her training partner. The formalities of the interviewee reading the information letter and signing the consent form took place at an introductory meeting before the actual interviews took place, so the interviews were relatively

informal. On meeting for the interview, the researcher had a coffee with the interviewee in the communal cafe area of the gym. This meant both the researcher and interviewee could settle down after their journey to the gym, and rapport could be established before the interview commenced. All the interviews took place before the participants commenced a training session. The tape-recorded interview took place in quiet rooms and interviews were conducted with no interruptions. Before the taped interview commenced the researcher recorded each participant's age, job and training history. The researcher explained that the interview would be tape-recorded, and reassured that the interview would be entirely anonymous, although not confidential, as quotations from the interview would be used in the write-up. At the end of the interview, contact details were given for any follow-up queries. The interviewees were also offered the chance to be sent the interview transcript and information about anabolic steroids by email or post.

Results

All speech (including that of the interviewer) was transcribed, and the interviewees' speech was submitted to a 'thematic decomposition' (Stenner, 1993). This is a close reading that separates the transcript into coherent stories or 'themes'. Particular attention was paid to similarities and differences in accounts presented by the participants. These will be addressed here under theme headings. 'I' is used here to denote the interviewer's speech.

Steroid use vs abuse: 'No one's ever died from taking steroids'

Participants argued that using steroids was a rational decision that they had made, on the basis of careful research, to gain muscle mass and contrasted this 'good' use of steroids with misuse (abuse) of steroid drugs. Misuse was characterized as taking ('stacking') too many steroid drugs at once and not being knowledgeable about interactions between drugs. Users frequently referred disparagingly to public misperceptions of steroids and their effects. They positioned themselves, and some other steroid-using body builders, as experts on steroid effects; well informed, knowledgeable

about physiology, pharmacology, body building and as having experience of steroid use, whereas people who were anti-steroid drugs were represented as ignorant and unknowledgeable. For instance, 'Gary' reports that he knows about steroid use, and how to maximize the muscle building properties while minimizing the risks because he has read widely:

Before I even took any steroids or any kind of sport enhancing drugs, I took time to you know, buy books, lend books, magazines, to read up about drugs, to see all the . . . Everybody can listen to the good side of drugs, but you've got to see both sides. I'd sooner look at the bad side of drugs. Everybody knows what drugs can do, but you look at the bad side of drugs, you know, to see the side-effects, you know, the adverse effects of a drug.

Participants argued that steroids taken in moderation serve a useful function and are safe. Peter argued that all drugs (including steroids) are potentially dangerous if taken in huge quantities, likening anabolic steroids to alcohol, which he argued would be equally dangerous if taken in large quantities.

I: Do you have any other opinions about the use of steroids for body building?

Peter: I mean it's up to people what they do really. I mean I do think they are dangerous, I think they're very dangerous, but then it's like anything else, any other drug is dangerous. Even drinking's dangerous, smoking's dangerous, it all depends how much you do and how often really. I mean if you drink every day, you are going to mess yourself up doing that really, so it's just the same. With anabolics, well if you use common sense you will be OK.

Gary presented a very similar argument, saying that he only took steroids in moderation. Steroid use is linked here to over-the-counter analgesics, and to alcohol use (common, legal and relatively safe drugs). This functions to normalize the use of steroids, and to position Gary as a safe/informed steroid user, distancing his behaviour from unsafe/uninformed use which is presented here as dangerous:

Everybody can have side-effects with any drug. I'm not condoning any drugs but it's in

moderation. If, for instance, you had a headache you wouldn't take a full box of Anadin. If you wanted a drink of whiskey you wouldn't go and drink 10 bottles of Jack Daniels.

Mainstream media were accused of misrepresenting the risks of steroid use. There was a general focus on short-term side-effects, and long-term serious side-effects tended to be downplayed, as seen here in the interview with Sharon: 'No one's ever died from taking steroids. They died from taking diuretics, yeah, but people put it down to steroids. It's just bad press you see.'

Our reading of the accounts presented by these participants suggests that steroid users may underestimate the health risks of use. Likening steroids to over-the-counter analgesics and alcohol ignores the fact that continued use of steroids, even at relatively low levels, may lead to serious health risks (Drugs and Sport Information Service, 1997; Pope et al., 2000).

Trusted information sources: 'He knows more than his doctor'

All respondents in our interviews expressed a lack of faith in health care professionals, especially in their GPs. Health professionals were represented as unknowledgeable about steroid use, risks and side-effects, supporting suggestions that steroid users often question the legitimacy of medical claims around the dangers of steroid use (Monaghan, 1999; Wright et al., 2001). Most users had a story to tell demonstrating the lack of knowledge of their GP. For instance, Samantha, when talking about her steroid-using partner's experiences with his GP:

If they only knew how hard we worked and how intelligent you have to be about nutrition. He [steroid-using partner] knows more about them than his doctor. Do you know what I mean? He knows more than his doctor. He'll tell his doctor everything he takes and he'll say 'What is that then?' He hasn't got a clue so he tells him what it is and what it does.

Having 'hands-on experience' was represented by several respondents as a prerequisite to being a credible source of information about side-effects. For instance, Gary:

The people who are often, you know talk about things like this are people who have

never probably trained a day in their life, who don't understand, you know the first thing about body building. Ninety per cent of people who are lecturing about steroids have never taken them themselves anyway, so I can't see how they can lecture on something without having the first, you know, hands-on experience.

This meant that negative opinions about steroid use could be undermined and rejected in favour of information and recommended dosages found in the various 'steroid bibles' (guides to effective steroid use found in the gyms or bought by mail order) and hard-core body building magazines available at the gyms. All our interviewees had great faith in the steroid guides that they obtained through the gyms, and the websites that they searched for information. Mark's account is typical:

I: And with the steroids, do you feel quite well informed?

Mark: Yeah I do now, because I study everything you see. With me, I write everything down, right, what I eat, at what time I eat and, these steroids what I took called Ristandol, Ristandol and Dianabol. Ristandol they say there is hardly any side-effects at all.

And Alan was confident that he had all the information that he needed to make informed choices about his steroid use:

I: Mmm, the only thing is really, is do you find out about which are the good steroids to take. Do you like read the magazines and stuff?

Alan: Well yeah, I've got books at home, underground books. I go on a website as well. Anyway, I read up on the new stuff on there.

Users tended to use the websites, magazines and so-called 'steroid bibles' that they read to define the benchmark levels for safe use. Unfortunately, dosages recommended in these sources of information may not be safe levels. Dosages are recommended based on their effectiveness for muscle building rather than their safety. For instance, in *The anabolic edge* (1995), written by an anonymous body builder, widely available in British gyms, and read by our male and some of our female respondents, the author suggests that when taking veterinary

products (usually designed for horses) such as Equipoise (Bolderone Undeclylate), they should take a huge dose (which will result in flu-like symptoms, which they are told to ignore) to get the required level of muscular development:

I am not supportive of veterinary products for human consumption, but this is one of the exceptions. It is still pretty weak. This is because it isn't the right format for our receptor sites. You have to take a lot of the stuff. Doses of 50mg per week for males are not unheard of. It also produces an allergy response until tolerance is achieved. This feels like flu and lasts 7–10 days ... If you get a good bottle then it is worth using but you will need a good 200 mg a week at least and 75 mg a week if you are female. (p. 153)

While sources such as *The anabolic edge* give useful information on how to get clean needles from the needle exchange, and the importance of using a new needle for each dose and not sharing needles, they promote negative attitudes in relation to advice from those outside the body building community such as GPs, which may exacerbate an already low level of confidence in health care professionals. For instance, talking about liver function tests, the following potentially dangerous advice is given:

I would be more concerned if this reaction in enzyme level didn't occur. It would mean either that the gear was rubbish or your body wasn't working. The truth of the matter is that these elevations return to normal when you come off. Liver damage should not be totally overlooked. It is important to give your body the chance to repair itself from any possible damage that may occur. The way to do this is to take breaks from cycles and to take good liver detoxifiers during these breaks. (p. 66)

The author also advises readers not to use the antiseptic swabs given to them at the needle exchange (which may help users to avoid the abscesses commonly associated with steroid use; Drugs and Sport Information Service, 1997):

I know that the drug centre will give you a thousand swabs, but forget it. They are useless and it is a practice out of habit and no actual use in stopping infection. Swab the area only if it makes you feel better.

Health Professionals need to be aware of the sources of advice on steroid use used by body builders, and of the nature of the advice supplied in these in order to be able to challenge this information and present a viable alternative. They also need education on safer steroid dosages and injecting practices, so that when body builders refer to them they know enough about steroid use to be able to challenge some of the potentially dangerous information produced from within the sub-culture.

Side-effects: 'They're not, you know, they weren't life threatening'

The respondents in this study had all experienced some side-effects of steroid use. Male body builders described kidney pain, water retention and headaches resulting from steroid use. However, these were seen as irritants rather than major deterrents to steroid use. For instance, Gary:

The kinds of effects of side-effects that I've noticed are lower back pain, you know, kidney pain, itchiness round the nipple, high blood pressure, water retention, etc., headaches, but nothing really major. They're not, you know, they weren't life threatening.

Some respondents had experienced psychological side-effects such as panic attacks, memory loss, anxiety and depression in addition to physical side-effects. For instance, John:

I had terrible memory loss. The side-effects of the drug use were acute anxiety and depression. They are the biggest side-effects. I had massive panic attacks during the end. Physical side-effects, I had high blood pressure. Really high blood pressure. High heart rates. I had skin infections, headaches, bleeding. My skin stretched at my biggest point to a point where it ripped urm slightly ripped and bled. I had skin infections down my leg.

Women were generally critical that there was so little information available on side-effects and use of steroids for women. The 'steroid bibles' and steroid websites tended to assume a male audience, so that it was difficult to get useful information on side-effects specific to women. For instance, Sharon: 'There is information but very limited not as much as men and I think that

women are more likely to damage themselves from use than men 'cause they don't know enough about it.'

The side-effects that caused most concern among the women we interviewed were those relating to fertility, body image (baldness, hair growth on body and face) and changes to the pitch of the voice. For instance, Sharon was concerned about disruption in her periods caused by steroid use, and the impact that this might have on her ability to conceive: 'I don't have regular periods. Body fat levels, dieting and steroid use. My periods are practically non-existent right now.'

The main problem voiced by women in relation to steroid use was the masculinizing effects of some steroids, such as lowering of the voice, male pattern baldness and increased hair growth on the body and face. For instance, Sharon talks about increased hair growth on her face and skin problems:

I've found I have been quite lucky on the hair side as in on my body my hair hasn't grown but I have found on my face umm I had what you would call downy hair which was like fair downy hair when I competed it was noticeable and it was the steroid use and it was my own fault for shaving it off a couple of years back which caused my hair to grow back even worse. You could argue whether it was or it wasn't steroid use that. But I do have hair problem now so I do have to shave in certain areas, which is a disadvantage I feel. Skin, my skin has never been particularly good either on steroid use.

No women reported concerns about liver or kidney damage. This may be because they felt that they were taking doses that were too small to impact on their health in these ways rather than because they did not believe that these were potential side-effects. For instance, Sharon:

I: If you are talking about your GP, umm what about regular health checks, liver function checks?

Sharon: The amount of steroid I use I don't feel I would have any liver problems.

Nor did they express concerns about contracting HIV/AIDS through infected needles. The only side-effects that were experienced as significant

deterrents were those that had a direct effect on body image and fertility.

Although it might be expected that a full knowledge of the potential side-effects might have acted as a disincentive to use, participants reported that knowing about side-effects would not have stopped them taking steroids because being more muscular was such a strong motivator. For instance, John:

I: If you knew how it would, all the side-effects before you first started to take steroids, do you think that would have stopped you taking them?

John: No, I would still have took them. I don't think that knowing about side-effects would have had any influence on me then. Looking back, if I knew then what I know now I'd probably have still took them. If I had known the side-effects I experienced and suffered I would probably still have taken them. I was, I felt so strongly about taking them.

Clearly the desire to get more muscular outweighed the importance of any health concerns. It is perhaps not surprising that short-term gains (increased muscularity) would have outweighed long-term health risks (kidney and liver damage, heart disease, risk of HIV infection from injecting). It is well established that people tend to focus on short-term gains, and ignore even serious threats to health if they are not seen as immediate threats (e.g. Conner & Norman, 1996). However, this tendency needs to be borne in mind by professionals working with body builders using steroids. It cannot be assumed that they will consider even potentially serious health risks as sufficient disincentive to avoid use. Women may be likely to be more concerned about overt masculinizing effects of the steroids they are taking. However, these (and fertility problems) may be outweighed by the importance of wanting to gain muscle for competition.

Social pressure: 'I think in order to compete as a body builder it is necessary'

All participants reported that social pressure influenced their decision to body build, and to take steroids. Gary cited the body building gym culture as being influential in his decision to

take steroids, because steroids were available and because people talked about them at the gym. He was able to access information about dosages, which drugs to take together for maximum effect and ways of avoiding side-effects. For instance:

In a hard-core body building gym you are going to see steroids readily available, you know, you are going to hear them talked about. You might see them you know. So yeah, people will talk to you about steroids to you, you know different things you can take. So yeah, if someone starts off at the gym intently just to train they could be influenced by taking steroids because they can see, you know, they are in an atmosphere where people are taking steroids.

John identified several different sources of social pressure (the media, other men at the gym) as influential in his decision to take steroids:

The more I trained, the more magazines I looked at, the bigger I wanted to be . . . and there was an ITV programme [about body builders] and when I watched these people it made me feel really depressed. I didn't look as good as them. And it had a massive effect on my decision to take steroids. In fact it was probably one of the biggest reasons why I did take them seeing other people bigger than me.

The women and men who had competed in body building competitions represented steroids as a 'necessary evil', and were essential if they are going to compete. The use of steroids was clearly linked to competition. Participants argued that they could not compete unless they took them, because they would be in competition with other body builders who would be using them. For instance, Paula:

I think to compete as a body builder it's necessary but you have got to draw the line between how much and I think the main thing is to get away with as little as possible, the amounts that people do take are not called for I don't think.

Both Samantha and Sharon represented an ideal world where there would be no need to use steroids to compete, but both felt that they needed to take steroids to stand a chance in competition. For instance, Samantha:

You've got to be competitive with everybody else who is competing. In the ideal world most body builders would like it if nobody did it. But there would always be that one. Do you know what I mean? But I don't think now with the nutrition system there's a need to take as many.

And Sharon said that she feels pressurized to take steroids in order to compete, and wishes that she could compete 'naturally' (i.e. without steroids):

You see there is part of me that if there was a magic wand to wave and everybody was absolutely totally the same and there was a test that could test for everything I would be absolutely happy to compete naturally so therefore you could say there is part of me that feels pressurized to take steroids.

Paul reiterates the fact that it is necessary to take steroids if you are going to compete in body building competitions:

I: When did you start using them and why?

Paul: I started using them because I wanted to compete, and if you want to compete as a body builder you've got to take steroids and that's it. It's as simple as that, everybody on the stage takes them. It's not classed as cheating in the body building scene, it is in other things, track and field events and stuff like that, but in body building if people want to see big guys, very muscular, and in very good condition, then that's the only way to do it.

Accounts presented by men and women differed in that all the women reported that they would stop using steroids as soon as they stopped competing. For instance, Paula: 'I will stop when I stop competing yeah.' However, none of the men who competed would stop taking steroids when they stopped competing:

I: Can you imagine a time in the future when you would stop taking steroids?

Alan: Mmm. It's difficult, 'cos when I'm training, I love my training. So whilst I'm training it is a part of me. It's a bridge I haven't come to yet.

In general, users reported that friends and family of steroid users had been uninterested

and unconcerned about their steroid use. Although they had expressed concern about steroid use when users started to take them, they had been reassured when they found that their expectations about 'roid rage' (aggression caused by steroids) were not confirmed:

I: How did they respond?

Paul: A lot of people who don't know anything about steroids, think its very bad and think you are gonna turn into some kind of monster or something, but then when they find out that you don't, and that smoking and drinking is probably worse for you then, well it was just something I chose to do at that time and nobody really said anything.

Participants reported that relevant people in their lives outside the gym (friends and family) had been unconcerned and uninterested in their steroid use. None of the participants had encountered conflict with family and friends over their use of steroids:

I: Yeah, do other people know you use?

Peter: Yeah, yeah. I mean I think err . . . all my friends definitely know I use them. My family, well, they probably, I reckon they do know, but they don't say anything about it.

I: How do people react?

Peter: They don't really bother, No they don't. No-one says anything to me about it anyway.

The picture that emerged from the interviews suggested that the body building culture encouraged anabolic steroid use, and that important people in their lives outside the body building world were mostly indifferent to their use after some initial concerns. We have found in other work that many (63%) of the body builders who completed our questionnaires felt that they would need to take steroids in order to be able to have any chance of competing in body building competitions (Wright et al., 2000). Respondents who took part in this study clearly felt that the culture of the body building gym encouraged steroid use, particularly when gains in muscularity through weight-training alone had slowed down. Steroids were easy to access, and other body builders were open about the fact that they took steroids, including giving advice about dosages and the minimization of side-effects.

Under these conditions, there is very little disincentive for use.

Conclusions and implications

Obviously any conclusions drawn from these interviews need to be tentative. Although an attempt has been made here to access the experiences of men and women of a variety of ages, occupations and training histories, this is a relatively small number of participants and their experiences may differ from those of other users. However, the findings of this study do lead to some suggestions for harm-minimization strategies in the short term and for prevention strategies in the longer term.

It emerged that serious side-effects were de-emphasized relative to short-term gains. Health professionals working with steroid users need to recognize that health risks that might scare other groups cannot be assumed to represent a significant disincentive to body builders who may feel that gains in muscularity are worth the long-term risk. Like other drug users such as smokers, and ecstasy users (Conner & Norman, 1996), these interviews (coupled with evidence from Wright et al., 2001) suggest that steroid users are likely to focus on the short-term gains of drug use rather than long-term risks. Participants minimized the importance of side-effects relative to the positive effects on body image, and positioned critics (including health professionals) as unknowledgeable. Their main sources of information were 'steroid bibles' (magazines and books from within the steroid-using community as to 'safe' doses and combinations of steroids), websites aimed at steroid users and word-of-mouth recommendations from other users at the gym. These may not be reliable sources of health information. Other authors have also suggested that steroid users mistrust medical warnings about side-effects. Ardito, Goldstein, Bahrke and Sattler (1994) found that one belief which distinguished steroid users from non-users within their small sample of sportsmen, was that 90 per cent of non-users believed medical information had established that steroids were harmful, whereas 70 per cent of users believed not enough research had been conducted to support this. Monaghan (1999) has also suggested that steroid users have an ambiguous relationship

with medicine; disavowing medical pronouncements on the use of steroids, while accepting medicine as a potential source of information at some points in their careers. As we have suggested previously (Wright et al., 2001) there is an obvious need for reliable, non-judgemental and credible sources of information, which will directly tackle steroid users' mistrust of medical information, and their belief that only ignorant people criticize steroid use. If medical professionals could establish a credible identity with steroid users, then the high dosages of steroids recommended by other users and/or 'steroid bibles' could be challenged.

The other clear message from the accounts provided here was the power of the body building culture in promoting the importance of muscularity, of body building as a sport, and of the use of steroids to promote greater size and to ensure success in competition. Any harm-minimization or prevention programme needs to recognize the strong sub-cultural roots of steroid use. Social support from within (and outside) the body building culture was cited as an important incentive for continued use, as was the perceived indifference of family and friends. While the body building culture supports steroid use and while many body builders feel unable to enter competition without using steroids, it is unlikely that steroid use will stop. Work in the USA has shown that peer education programmes can be effective in reducing intentions to use steroids, and in preventing use (e.g. Goldberg et al., 2000). Health professionals in the UK might be well advised to involve natural body builders with positive, high-profile images within the body building community in presenting health promotion messages. Carefully targeted role models from within the body building community are less likely to be dismissed by users as lacking in relevant knowledge and experience than are health professionals from outside the community.

Most previous work has not considered that fact that British women are increasingly using steroids for body building. The women interviewed here were very concerned not to look 'masculine', and the masculinizing effects of steroids (increased hair growth on the face and body, deepening of the voice) were significant disincentives to steroid use. No women reported concerns about liver or kidney damage or

concerns about contracting HIV/AIDS through infected needles. This may relate to pressures from wider society to maintain an obviously 'feminine' appearance (to contradict the masculinity implied by the muscles), and also to pressures from within the body building community for women competitors (including those competing in the Physique class) to look 'feminine'. Choi (2000) and St Martin and Gavey (1996) argue that women body builders are placed in the paradoxical position of being expected deliberately to cultivate muscle bulk while maintaining a stereotypically 'feminine' appearance. Judges tend to emphasize conventional femininity as a crucial component for winning. This presents a particular conflict for those who take steroids, because they exert a masculinizing effect on the body. Women used steroids in small amounts, and only at times leading up to competition, to keep these negative effects to a minimum. Stressing the likelihood of masculinizing effects, and effects on fertility may be as useful in dissuading women from use as focusing on objectively more serious side-effects such as liver and kidney damage in prevention strategies aimed at women.

Clearly, attempts to minimize the harmful effects of steroids and to prevent use need to be based in an understanding of the body building sub-culture, and the social pressures on users from within the body building community. Support from within the body building community is necessary to enable the development of realistic and credible health promotion strategies for use with this group, and for the development of viable prevention programmes.

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