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Budget hormone holidays taking off

Hormone holidays are increasingly popular amongst growing populations of steroid injectors who can travel overseas for cheap cycles of performance and image enhancing drugs (PIEDs).

A career harm reduction worker in a busy primary Needle and Syringe Program health service is learning that some clients travel on "steroid and peptide tours to places such as Thailand".

"I had a client yesterday who explained that he and some mates go to Thailand for a course of human growth hormones. He said it cost them about $11 a day for the drugs as well as the syringe," she said.

She said that for many, a 10-week cycle spent in a low-cost environment with ready access to advanced drugs, including peptides, was affordable.

Coordinator of Australia's Needle and Syringe Program (NSP) survey and analysis, Jenny Iversen, has kept a close eye on the rapidly increasing use of NSP by steroid and other image/performance enhancing drugs.

Her analysis of NSP data finds that people injecting PIEDS and collecting from NSP outlets are predominantly young men, most of whom are new initiates (less than three years since first injection) to injecting. PIEDs are primarily injected intramuscularly, or subcutaneously.

"Services must continue to engage with performance and image-enhancing drug injectors in order to prevent blood-borne viral infections and injection-related injuries and disease," Ms Iversen told the Bulletin.

As reported on page two of this Bulletin, Queensland Health has introduced a new scheme to boost access to sterile equipment, including specific steroid packs, through pharmacies.

Melissa Virtue from SHARPS in Frankston told the Bulletin that she and her colleagues had made a conscious effort to learn about the ever-changing human growth hormone field so that they could relate to a generally "shy" population of clients.

"They are a hard group to get to know and get their trust," said Melissa who has been working with all manner of injecting drug users for many years.

An increasing number of girls, often young, were picking up 1ml needle and syringe for injection of the tanning drug melanotan, she said.

Most PIEDS injectors do not identify as drug injectors, even though they actually are, and "they don't even want to be here…it's mostly in and out quickly."

But over time, and through learning from experts such as steroid peer educator Kay Stanton, she and her colleagues had learned some simple and easy to remember conversation starters.

"How long is your cycle?" was probably the most useful way to start chatting to new steroid clients who, she said, were often unsure of what they needed.

"Try to be informed and try to use their language and make them feel welcome, because a lot of these clients are really scared (of coming into an NSP)," she said.

"It is simple to learn and simple to say, and they feel like we know them and what they are about," she said.

She had gone out of her way to learn about steroid and peptide use so she "wouldn't sound like a dill" and be able to provide a good service "because assistance is our job".

There was a difference between oil-based and water-based formulations which had implications for syringe types, she said.

"When they ask for a 25 gauge needle I ask if it is oil base or water base. I let them know that the 23 gauge is the best for injecting intramuscular as it gets in deeper. The 23 gauge is longer - it's 1¼ inch and the 25 gauge is only 1 inch in length. Also, the 23 guage has a larger bore which allows for thicker liquids to pass through.

"Going in deeper means there is less likelihood of crystalisation (of the steroid) less likely to bruise or abscess and less likely for drip back(that's what I call it but they seem to know what I mean) that's when the steroid liquid runs back out the injection hole losing some of the drug."

A formula to help a person unsure of how many needles to ask for, or for a worker to provide sufficient equipment, was to ask the number of injections per week and the number of weeks in a cycle, she said.

"So a two injection per week over 10 week cycle is 20 injections, and we usually include another 10 or so syringes to be on the safe side," she said.

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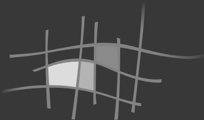

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Anex's vision is for a society in which all individuals and communities enjoy good health and wellbeing, free from drug-related harm. A community-based, not-for-profit organisation, Anex promotes and supports Needle and Syringe Programs (NSPs) and the evidence-based approach of harm reduction. We strive for a supported and effectively resourced NSP sector that is perceived as being part of the solution to drug-related issues.

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Briefs

Hep C virus can survive for weeks

A new study showing the hepatitis C virus (HCV) can remain potentially infectious on inanimate objects at room temperature for six weeks reinforces the need for injecting drug users to know that it's not only a needle or a syringe that poses transmission risks.

Assistant Professor Elijah Paintsil from Yale School of Medicine tested the hepatitis C virus' (HCV) survivability in conditions simulating hospital settings, and said the findings formed "a biological basis for recent observational studies reporting increasing incidence of nosocomial [hospital-acquired] HCV infections and continued high incidence among people who inject drugs" [19].

He wrote that "fomites" - a term for inanimate objects which could include a table surface, a syringe or mixing spoon "could, therefore, be an important vehicle for transmission".

Head of the Kirby Institute's Viral Hepatitis Clinical Research Program, Professor Greg Dore, told the Bulletin that it was already well known that HCV can survive for weeks at ambient temperatures.

Professor Dore said that "just because a virus is 'viable' does not mean there is significant risk of infection" generally speaking, because "irrespective of how long HCV can survive, it would still require blood to blood contact for infection, therefore contact with skin, etc. would not be an issue."

With regards to HCV transmission between people who inject drugs - whether it be via shared injecting equipment or otherwise, Professor Dore believes "the vast majority of HCV infection involves blood to blood contact with HCV that has not been outside the body for more than minutes."

Redesign to pack "his and hers" health messages

Sharing of injecting equipment by drug-using couples has sparked a project to design equipment for needle and syringe programs (NSPs) [1, 6].

Sharing of injecting equipment can reflect and nourish the ties between partners, but a refusal to do so can be taken as a sign of mistrust and cause friction, regardless of any health concerns. Therefore influencing the dynamics inside drug-using relationships and changing entrenched behaviours requires well-crafted responses.

A project by Curtin University's National Drug Research Institute (NDRI) is attempting to help reduce the risks faced by injecting couples by devising a needle and syringe container just for them.

The project is proto-typing a variation on the Fitpack® distributed by the NSW Department of Health since the early 1990s.

So far the NDRI project has advanced to the prototype stage. The prototype consists of a paired "his and hers" unit which can be broken apart for use.

"The aim is to afford the rewarding aspects of sharing while minimising the possibility of blood-borne virus transmission," says project leader Associate Professor Suzanne Fraser.

"The Fitpack® will be accompanied by textual material designed specifically to address issues of transmission between partners, including content on negotiating equipment use between partners."

Steroid pack in Queensland pharmacy scheme

Hundreds of Queensland pharmacists are joining the State's Needle and Syringe Program which now includes a capped $3 pack offer which includes special kits for steroid injectors.

The Pharmacy Guild is promoting the move. Equipment is provided to pharmacies free of charge through the Queensland Department of Health. Clients pay $3 for the kits.

The range of kits include: 5 x 1ml pack, 20 x 1ml pack, 5 x 3ml pack, 5 x 5ml pack. Each pack contains swabs, (and sharps disposal units) and all but the steroid pack contains filters.

The steroid pack, which also costs $3, include 20 x 3ml syringes, 20 x 18 inch gauge tips (for drawing up), 20 x 23 inch gauge tips (for injection) and 40 alcohol swabs. The steroid pack also includes a 1.4 litre disposal bin.

Prior to the new program Queensland pharmacists who sold equipment to injecting drug users procured materials through normal commercial channels and sold them at market prices.

"It is expected that the range of injecting kits available, also available in government programs, and the service fee of $3 per kit, will make the pharmacy program more accessible to those that most need this service," said Meghan Hayes of the Queensland branch of the Guild.

The tan in a syringe - Melanotan

For centuries suntanned skin was reviled as a sign of the farm labourer while pale skin was considered the mark of wealth and status. The suntan as a lifestyle statement is commonly attributed to that trailblazer of modern style, Coco Chanel, who returned from a holiday in the south of France in 1924 a noticeably darker shade.

The tan became synonymous with exercise, youthfulness, boundless health and tropical holidays and largely remains so. The idea that beauty and health are reflected in a suntan has acquired deep roots, making fake tans a popular alternative to the earned-by-burning variety.

Protecting people against skin cancer spurred the research behind the injectable tan. The definitive work was conducted by researchers at the University of Arizona, who believed that making the body's natural pigment system produce a protective tan without ultra-violet light exposure would reduce skin cancer rates.

The first version, or analogue, was named Melanotan but is now called afamelanotide. It is a synthetic version of the hormone responsible for controlling skin pigmentation and is between 10 and 1000 times more potent than its natural equivalent [7]. It remains in trials for use as a dermatological treatment.

An 'improved' version called Melanotan II has taken off among Australia's bold and beautiful set, with a whole new demographic (often young women) injecting themselves, according to NSP sources.

In 2012 Menanotan II was scheduled in Australia as a prescription-only S4 drug, but anyone who attempts the importation can buy the synthetic hormone online for about $100 for a 10ml ampoule.

The drug received wide publicity in early 2013 when it was revealed that AFL Essendon coach James Hird experimented with Melanotan. Hird told the Australian Sports Anti-Doping Association (ASADA) that he stopped taking the drug after his skin turned an unnatural colour and became acutely sun-sensitive and he developed other unpleasant symptoms [8]. Clinical studies on Melanotan II were halted after it was found to produce immediate penile erections, which was felt to disqualify it for serious dermatological use [7].

How many people are using the drug is hard to judge. Queensland NSP staff say client reports point to Melanotan II really taking off over the past 12 months.

"It's been massive in the last year. Twelve months ago you never heard of it, but now we get 10 clients a week," said one worker, preferring not to be identified.

Reportedly, Melanotan users will collect boxes of 100 Terumo 29-gauge syringes at a time, pointing to group distribution. The worker told the Bulletin that the possibility they were using in hens'-party environments was concerning from a blood-borne virus perspective.

"It's fine if people are organised and it would seem they want to use a clean needle every time. But if they are using in company they need to understand the risks.

"And we do worry a bit about disposal because, unlike the steroids boys, they don't bring equipment back so we don't know what they are doing with their used needles. We're not sure they have a vested interest in keeping the service going."

Meanwhile, pharmaceutical company Clinuvel Pharmaceuticals is moving down the road to obtaining approval for its product afamelanotide (Melanotan) as a treatment for chronic skin disorders.

The company sees its SCENESSE® drug as a potential treatment for erythropoietic protoporphyria (EPP), a condition in which the skin is so photo-sensitive that exposure to the sun is accompanied by a burning sensation. The company is also optimistic about the hormone's use for treatment of vitiligo, a disease in which the skin's pigment cells die off, often on the face, leaving a damaged, peeled paint look.

However, the early promise of the value of afamelanotide has been clouded by case studies in which users had moles grow alarmingly during use of the drug.

Medical reviewers have conceded the drug may have a role to play in providing relief to people with chronic skin disorders, but also urged caution in light of the cases of rapid mole change [7].

The Australian Medical Association (AMA) consequently has warned against unregulated use of the drug.

"People should not be messing with something that's unproven and theoretically increases the risk of skin cancer, particularly melanomas," said Queensland AMA president Dr Richard Kidd.

Steroids dealer pushes harm minimisation as business tool

A steroid dealer talks about supplying users of illegal performance and image enhancing drugs (PIEDs). Part of his marketing strategy is to stress to customers that they need to heed the lessons of blood borne virus prevention strategies for other illicit drug injectors - don't share needles and make sure other paraphernalia is sterile.

Plastic canisters, ampoules, measuring cups, esoteric electrical equipment and pharmaceutical-grade filters cluttered Leo's (not real name) kitchen, making it look like a science lab. The dining area is piled haphazardly with cardboard boxes spilling bubble-wrap and foam pellets. The living room is as tidy as any 20-something bachelor's living space. But the bedroom is uncharacteristically tidy.

This is where Leo's steroids business comes together, he said. He's opening the built-in wardrobe. He throws the doors wide open to reveal shelves neatly lined with scientific-looking plastic storage trays filled with dozens and dozens of sealed ampoules stacked in shiny rows. On shelves below and in drawers that he pulls out to show are box after box of syringe barrels and needles, as well as swabs.

He has made up a whole batch of ampoules that day. Each ampoule he sells for $250. And he has trays full.

"Everybody is on them, so I'm just giving them what they want. If I don't sell it to them, someone else will. At least I try and give them clean stuff," he says.

Leo sources illegal steroids from websites and imports them in small amounts. Sachets of steroid powder arrive in letter-rate mail a few grams at a time from an international supplier who's proven to be reliable.

He says buying online is a lottery and he has wasted several thousand dollars on dud drugs.

"There are a lot of fakes. The rate of good suppliers to shit ones is about one in four. Silk Road used to be more reliable because the sellers there wanted to protect their reputations."

Each sachet costs about $10-12 to buy online. Mixed with a carrier fluid, often grape seed oil, and sold as an injectable liquid in an ampoule, that same sachet has a market value of $250.

Leo filters the mix carefully to avoid contaminants. "Wheel filters from needle exchanges work well, but lately I've bought commercial ones and those you can just leave alone to do the filtering instead of doing it by hand with the manual ones. Using wheel filters you can't do much product at a time and you really have to watch it, but with the new set-up I can go to the gym, go out visiting.

"Most of the powder dissolves easily, but small particles invisible to you or me can still be in there and they can make trouble."

Filtering is important because he does not want his clients to get infections.

"If anybody gets an infection I lose a customer, so it's in my interests they are safe. It's very easy to get an infection, so I make sure they swab everything, keep it clean," Leo said.

> *"…be prepared to do a fair bit of studying. Basically you shouldn't put something in your body if you don't know what it is."*

Reflecting a view common amongst NSP staff encountering steroid users, Leo said: "Most people don't care. They have no idea how important it is to have everything sterile."

He said he educates his customers about safe injecting and carries clean equipment with him when he goes out to visit them. It's similar in a way to a form of outreach, with the exception that Leo is a drug dealer and not a health worker.

Leo's bedroom wardrobe is kept well stocked with boxes of clean injecting equipment.

"They know me well down at the needle exchange now." Secondary distribution of injecting equipment, where a person who collects from an NSP and provides to other people, is a standard feature of the national system.

Some people get repeated infections by taking unnecessary risks, Leo said. He gave the example of a friend, a long-time amateur bodybuilder, who gave his father a list of illegal steroids to buy overseas.

"He gave his dad a shopping list and he went to a pharmacy and got it. But then [to smuggle the drugs back into Australia] the dad emptied out a massage oil bottle and put the steroids in without properly cleaning it or sterilising it or anything.

"So what happens? - he gets an infection. His arm is weeping pus, but he's still using the stuff and hasn't even now tried to filter it. Who knows what was in the massage oil in the first place? Jeez."

Leo is quick to admit that PIED knowledge among gym-goers is generally sketchy, and informed as much by rumour as science.

"A lot don't know what they're doing. It's all bro-science - people say 'take this or that and you'll get jacked' (big muscles)," said Leo, adding that bigger people's opinions tended to carry more weight regardless of the quality of the information.

"The general rule is: if they're bigger then it must work. Never listen to someone who's smaller than you," is one of the cultural norms he has observed.

How much people are taking is impossible to say, though, because individuals are urged to go on and come off through a cycle of about 10 weeks and then allow time for the system to recover before starting a new cycle, says Leo.

"Cycling" has become code for being a PIED user, with some enthusiasts even sporting t-shirts with slogans referring to "cycling".

Then again he knows of others who just don't stop.

He acknowledges the potential for long-term harm and believes some of the allowable training supplements are outright toxic. But then again, he claims to know people who have taken PIEDS for 30 years without apparent ill effect.

"Prohormones, for instance, you can buy, but they screw with your liver. So you gotta be prepared to do a fair bit of studying. Basically you shouldn't put something in your body if you don't know what it is. People just think you can take something and it'll make your muscles grow. But you've gotta put in the work, do the training as well."

He says reported problems like 'roid rage' are the results of poorly judged cycles or coming off too quickly.

"Roid rage is a massive myth - it just gets bad raps. If you're doing it right it doesn't happen, in fact you're more mellow. Still, hormones like testosterone control your whole system and if someone comes off too quickly that's when you get depression, suicidal thoughts and stuff like that. You need good PCT [post-cycle therapy], which can involve medications for breast cancer or fertility.

"I've even heard of people going to their doctors and getting PCT from them, being honest and saying: 'I've taken it, I need to come off it'."

Steroid users muscle in on illicit drugs big time

Lean, toned, muscular bodies are capturing the aspirations of a generation, shaping ideals only achievable through drugs.

The abs in magazine advertisements for Calvin Klein underwear may be to blame or maybe it is muscle-bound GI Joe toys which are making men dissatisfied with their bodies [9]. Whatever the cause more and more men are taking to the gym to build bigger muscles and trying to boost their results with supplements.

Reports say muscle size anxiety - 'muscle dysmorphia' or 'reverse anorexia nervosa' - is affecting even teenagers. A survey of 2793 US high school-age students, for instance, found more than 40 per cent regularly exercised to build muscle mass, 38 per cent said they used protein supplements, and nearly six per cent had experimented with steroids. The average age of the group was 14 [10].

Gym training was once an irreproachably healthy activity. But the use of steroids for bodybuilding has created a murky underworld of sly dopers and also raised serious questions as to whether their use is risking people's health.

Steroids are the injectable answer for impatient body-builders and, both anecdotally and as found in surveillance, needle and syringe program (NSP) workers are noticing a strong increase in requests for equipment to inject performance and image enhancing drugs (PIEDs) [11].

The 2012 Australian Needle and Syringe Program Survey bears this out with more than two thirds (68 per cent) of men who had started injecting within the previous three years (recent initiates) reporting that they were doing so to use PIEDs [12].

Nationally PIEDs injection increased from 2.4% in 2010 to 4.6% in 2011. In NSW and Queensland the numbers doubled [11].

Law enforcement has also noted strong increases in steroids seized. The Australian Crime Commission reported that between 2011 and 2012 the weight of illicit steroids seized increased by 141.9 per cent [13]. Nearly all the steroids were intercepted in the mail. The US was the main source, although other originating countries included Thailand, China and the United Kingdom.

Among Australians overall steroids users do appear to be a small sub-culture. In the 2010 National Drug Strategy Household Survey just 0.1% of people (14 years old or over) claimed they had used steroids for non-medical purposes.

Compared with other people who inject drugs, PIED users are a secretive, even 'invisible' group. As one NSP worker recounts: "When I've asked whether they talk to their friends they say nobody wants to admit they're using steroids and that their muscle gain isn't just the result of hard work and genetics".

At the NSP level, the silence among the steroid-using community is made more worrying by the number of newcomers to body-building starting out injecting with minimal knowledge.

One NSP worker at a beachside suburb said steroids users have been coming in for years, but there was always an upsurge in newcomers getting into summer.

"There's a regular crew and there are those taking up the habit when they're going to go to the beach and take their shirts off. The numbers in that group seem to be growing," she told the Bulletin.

Injectors of performance and image enhancing drugs are at risk of blood borne viruses as well as injuries from injection. Here are some key points for staff unfamiliar with steroid injection to remember.

Avoid blood-borne viruses

- Blood-borne viruses such as hepatitis B, C and HIV can be spread by injecting steroids if the syringe or the drug has been in contact with infected blood.
- Sharing needles, syringes or injecting from a shared steroid container puts people at risk of getting BBVs.
- People should never share needles and syringes, swabs or steroid vials, even with friends.
- Remind clients to wash their hands in warm soapy water or swab them before and after injecting. If someone else is going to inject another, the person should wash their hands too.

Injecting sites

- Backside - Imagine the buttock is divided into four areas. Injection should be in the upper outside area, as this will minimise the risk of hitting the sciatic nerve that runs down the middle of the cheek. Hitting this can cause permanent injury.
- Outer thigh - The best place to inject in a thigh is on the outer side, about mid to upper thigh.
- Shoulder/medial deltoid - Injection should be into the middle shoulder muscle. Lumps can form if a person injects large volumes of steroids into this muscle.

Preparation tips that can be passed to clients

- Wash hands with soapy water.
- If injecting water-based steroids, swirl to mix in any sediment - do not shake as this may cause excessive air bubbles.
- Swab the rubber cap of the steroid vial.
- Use an 18 guage or 21 guage needle to draw up, 23 guage is okay too. Heavier gauge sizes (eg: 21 guage) are more suitable for oil based steroids.
- On the syringe, replace the drawing up needle with a lighter gauge needle for injecting (21 guage or 23 guage, or sometimes a 25 guage).
- Steroid injection should be into muscle, so the needle must go through skin and fat. Clients should use a needle that's at least an inch long (2.5cm).

Be blunt about blunt

Some ampoules have a rubber stopper on them. Using a blunt tip to draw up - if done often enough - can make little bits of rubber get into the drug. It is better that a bevelled (normal) needle is used.

Packs for bulking

There are variations on what to give out - here's a standard kit from a busy Sydney NSP:

- Drawing up needle - 30 x 21 guage.
- Injecting needle - 30 x 23 guage intra-muscular.
- Swabs - 60 (30 to clean vials and 30 to clean skin).
- Disposal containers - 800ml or 1.4 litre (plastic containers for protein drinks are a handy tip).
- Barrels - 30 x 3ml.

Queensland's steroid pack is slightly different. See story on page 2.

Steroids outreach worker ahead of her time

Kay Stanton is the steroids outreach worker with the Steroid Education Project. She said that while her clients were keen to learn about safe injecting some of the advice passed around training circles was dubious.

"They want to get it right but lots of information is word of mouth which may or may not be accurate," said Kay who has found that the most immediate problem for steroids users was infections.

"Plenty of people get infections, usually through not cleaning themselves properly (before injecting). Also there's some not quite clean stuff on the market, so I recommend they go easy with dosages at first, because there may be bacteria (in the drug) and it's better to have a little (bacteria) than a lot."

"I say if any site gets sore and gets red and hot and swollen get it attended to, don't muck around. But because it's illegal they don't want to just rock up to a doctor."

Ms Stanton said that because they didn't identify as drug users bodybuilders also saw little need to take protective measures against blood-borne viruses (BBVs). "They say: 'I train with him, he's healthy, he's got nothing'."

Bodybuilders often train in groups and use steroids with their training partners. They may all use the same bathroom and not realise the importance of cleanliness for all surfaces - such as the basin - as well as all the equipment.

Ms Stanton said that with intramuscular injection there could be a lot of blood flowing and loss and they may just wipe it off, unaware of the possibility of transmitting BBVs.

Where are the harms?

Short-term problems from steroid use such as 'roid rage' and impotence are widely talked about outside the bodybuilding world. But experts such as Kay Stanton and steroid users interviewed for this story say roid rage is overstated.

"It can heighten the personality, so if they are a-holes before (using steroids) they'll just be bigger a-holes after," says Ms Stanton.

And a man who is a regular steroid user asserted that impotence was more a sign of an ill-conceived regimen than an automatic by-product of "getting 'gassed up'" on PIEDs. With hormones controlling so many functions, bad reactions can happen, especially when taking several substances at once, he said.

It is also acknowledged that some of the modern steroids, like the popular Trenbolone, are so strong they need to be used with a lot of care.

"Trenblone is five times stronger than testosterone and while if it's good (quality) it gives really rapid muscle gain and also leans them up, some individuals have anxiety and panic attacks and that can bring on aggression," Ms Stanton said.

Other side-effects of steroids include:

- insomnia,
- excess sweating,
- night sweats,
- rapid heart rate,
- anxiety,
- loss of libido and
- erectile dysfunction. [14]

Meanwhile the long-term harms possibly arising from steroid use have yet to be quantified because they are comparatively new materials. The people who started using them in the 1970s and 1980s are still being studied.

Some early work appears to have shown a higher than normal fatal heart attack rate among power-lifters who competed between 1977-1982, but the link is still considered speculative. [15] Other studies have also reported significant differences in heart function among steroid-using weightlifters versus control groups [15, 16].

One English study suggests that long-term high-dose steroids use may cause cognitive deficits, notably in visuospatial memory, the ability to remember the location of objects [17].

Infertility and serious depressive illness are also touted as potential consequences of extended steroid use. But ultimately there is a consensus that the long-term problems with PIEDs are virtually unknown.

Researchers say the illegal steroids market is unregulated and therefore little is known about what is in them. Illegally imported steroids can arrive from overseas in unlabelled ampoules, with no indication of the contents.

Some say steroid users are on the whole healthy people and that cases of heart problems or liver toxicity, or violence or suicide are exaggerated [18].

What are they taking?

Testosterone remains the long-standing cornerstone PIED, but steroid users often take several simultaneously (this is called 'stacking'). Quantities administered vary greatly but an equivalent to 600-1000mg of testosterone a week is common, with amounts rising sometimes to even as high as 3000-5000mg a week (which is 50-100 times more than what the normal male testes produces). Illicit users typically take PIED in courses, or cycles, of between several weeks to several months (normally with 4-6 week breaks).

Testosterone was first isolated in the 1930s and synthetic versions soon followed. In the 1950s athletes began to discover steroids could enhance muscle mass. Soviet weightlifters reportedly adopted them for competition first in the mid-1950s. They remained a closely-guarded secret until the 1970s when they started entering the bodybuilding world.

The range of substances used to gain muscle, lose fat, or otherwise affect body mass is wide.

- Testosterone forms the base, but other closely related variants include Nandrolone and Trenbolone (which is five times stronger than testosterone);
- peptide hormones (such as human growth hormone, somatomedin-C, thyroid hormones, insulin, and human chorionic gonadotropin). Peptides are more like amino acids, they make the body produce more human growth hormone (GHRP 6) but many also make the organs work harder;
- beta agonists (clenbuterol). Clenbuterol is an asthma treatment but also rapidly metabolises fat;
- stimulants (amphetamine, ephedrine, pseudoephedrine);
- drugs for weight or fluid loss (diuretics, laxatives),
- drugs to modulate developing female sexual characteristics (cyclofenil, clonidine, tamoxifen, nolvadex), and
- fertility drugs (clomiphene and other agents) and
- EPO (erythropoietin) for red blood cell production and wound healing [18].

Finding strength in couples who inject drugs

To have and to hold from this day forward, for better or for worse, for richer, for poorer, in sickness and in health.

Darren and Rachel felt strongly that the traditional marriage vows applied to their loving partnership. The rosy picture of trust and fidelity was, however, complicated by the drugs they took. Darren was an injecting drug user when he met Rachel, a 21-year-old student who had never injected.

"Rachel wanted to try injecting heroin because she wanted to share my history," Darren told the Bulletin. Within a year of them meeting, she had started being injected with heroin by Darren. By the two-year mark, she was injecting herself. Within four years, they were both on methadone, but had started injecting cocaine and misusing benzodiazepines.

After having been together almost a decade, they separated with a great deal of mutual pain and many regrets. They split because they thought there was no future for couples who use drugs. They believed that the concepts of co-dependency and enabling would condemn them to a miserable future.

Their example illustrates many of the problems associated with couples who inject. Darren initiated Rachel into injecting, and studies have shown male-to-female initiation is often the case. They also show that couples often share equipment and thereby run great risks in terms of contracting hepatitis C [1]. In 2012, IDU surveillance data in Australia indicated that about half of the needle sharing amongst respondents surveyed occurred between sexual partners [2].

"She asked me to inject her, and at the time I felt it was right because we were together and sharing everything. In the beginning, I scored and mixed up. We shared fits because it was part of our relationship," said Darren.

Research shows that women in relationships where there is injecting drug use are less likely to inject alone, are more likely to have a partner who is also a person who injects drugs and are more likely to go 'second on the needle' when sharing with a male sexual partner [3].

"I don't believe this line about 'once an addict always an addict', but the fact is it becomes ingrained even though I know it's not true," said Darren who stopped injecting a decade ago (apart from an occasional dabble).

Historically, relationships in which drug dependency is a factor were seen through the experience of alcohol abuse in families. Most commonly these were relationships in which one party was the problematic user and the other was seen as a willing victim [5].

The principle was labelled "co-dependency", and it saw family members of alcoholics and addicts as part of a dysfunctional system, supporting and perpetuating destructive behaviour.

Co-dependency in its most commonly understood form is often embraced by supporters of self-help groups like Alcoholics Anonymous and Narcotics Anonymous, as well as by treatment program staff in abstinence-based programs.

More recently, studies have suggested that the mutual support offered in relationships can be a positive factor for treatment rather than an impediment. Disregarding the love and affection between people may be adding further layers of shame, blame, guilt and stigma to drug users.

> *"…it's not solely the man or the woman, it is a negotiated practice based on protecting the health of the couple."*

A study of female injecting drug users in Scotland found that their patterns of injecting and needle sharing were strongly influenced by their sexual relationships. Among the drug-using women in the study, almost all shared needles with their partners and most were injected by their partners [4].

Darren and Rachel broke up in 2004, but even now they still struggle with the idea that their relationship was fatally flawed. Neither is very happy that the negativity of ideas around co-dependency forced them apart, and keeps them that way. Both still miss the other, and neither has embarked on lasting relationships. "We both still care deeply about each other, and part of us wishes we could be together. But we are both nervous about it because we are worried we could be doomed to more of the same," said Darren.

Professor Carla Treloar, deputy director of the Centre for Social Research in Health at the University of New South Wales, says it is time to recognise the strengths of the couples. Her work suggests drug and alcohol services' focus on dealing with individuals needs to take a more nuanced approach.

"The relationship has been seen as a problem rather than as a source of support. But if you or your partner had a heart attack and you both turned up at a health service they'd say: 'Isn't it wonderful you have a partner that supports you?'. When you have a partner who injects drugs with you, often it is: 'Oh god, there's two of them and they're co-dependent on each other or the drugs are the third partner in the relationship and you [health staff] can't do anything until the drugs are dealt with'."

Professor Treloar says the idea that a partner is a supporter is discounted; yet that is the very reason most people are with a partner.

And, although research has well documented problematic scenarios - for instance where couples share injecting equipment - Professor Treloar's work has shown that the power dynamic does not always hinge on male dominance.

"The scenario of the vulnerable woman is not always the case. There are definitely relationships where the woman is the organiser. In some couples where they are serodiscordant - the man has hepatitis C and the woman does not - there are clear strategies the couple take to protect the woman's health. And they're both involved: it's not solely the man or the woman; it is a negotiated practice based on protecting the health of the couple."

Dinah was one woman who had been in a long-standing injecting relationship. She told the Bulletin that the stereotypical image of a compliant female partner going second was not necessarily always the case.

"He always injected me first because he believed in 'ladies first', which I thought was quite sweet. But he was pretty casual when it came to hep C, and once I learned about how you could get infected, it was up to me to make sure we always had clean needles and everything was separate. I insisted on separate water, everything. He wasn't very happy with that so I had to be firm. He saw it as me not trusting him, thinking he was diseased. But I really didn't want to catch anything."

Professor Treloar says stereotypes of couples who inject drugs should be debunked.

"There are a range of experiences and does our work, our policy and our practice speak to those? I'd say no."

She says one message for health promotion targeting any group is inadequate and cites the marketing undertaken by big companies, where the approach varies according to the demographic. The messages delivered by alcohol and drugs workers need to reflect this imperative, and Professor Treloar said her work is probing the question of how best to do this.

"Messages have to be both authentic and credible, [and] if health promotion messages are only ever written with an individual in mind, it doesn't reach couples or their social group. It doesn't resonate with them [and] they tune out.

"The workforce requires a range of strategies for both individuals and couples for both men and women in a range of different circumstances. So we're exploring couples as a way to talk about hepatitis C risk and prevention."

Professor Treloar said health workers in frontline services haven't really been able to develop skills around working with couples and figuring out the best way to approach what could be complex scenarios.

"Hopefully our research will address that."

Farm life pains generate opioid needs

Rising overdose death rates linked to opioid-based medications are linked to increases in painkiller prescriptions in places such as the United States and Australia, including in rural areas [20-22].

According to workplace injury expert, Professor Tony Lower, workers' compensation statistics reveal that agriculture is second only to transport for workplace injury and death.

Addiction Medicine Specialist at drug treatment agency The Lyndon Community in regional NSW, Dr Rod Macqueen, sees patients coming into the therapeutic community whose opioid dependency started from painkiller prescription.

Dr Macqueen said that injuries from farm accidents and the general wear and tear that the body endures through work, such as from shearing, was often a contributor.

Professor Lower's analysis of Work Safe Australia data showed that the rate of serious injury in agriculture was 21 per 100,000 people, compared with 26.7 for transport.

"The injury rate in the construction sector is 18.7 and mining 14.2 per 100,000 employed," he told the Bulletin.

"In agriculture, the injuries are generally musculoskeletal, such as back strains, upper limb strains, and a whole range of others including pinching and crushing hands or feet, and quite a lot of foreign bodies in the eyes," he said.

"For example, they might be angle grinding and get something in their eye."

Shearing was a classic industry for injuries to backs, arms and shoulders, he said.

Recent research into drug and alcohol use amongst farming and fishing workers noted that amongst some farmers there was sense of self-sufficiency when it came to treating some injuries. Work demands were often given as a reason for not seeking medical attention. A rural community nurse said farmers "tend to look after their own health. If they cut themselves down to their bone, they'll just wrap it up with a bit of duct tape and leave it for a week until it festers." [23]

Lyndon Community deputy CEO Julaine Allan led the research into farming and fishing industry alcohol and drug use, and has observed that insufficient access to on-going advice for patients on pain (and other) medications is a particular problem in rural areas.

It is known that the strongest of the prescription opioids, fentanyl, is an increasing problem in regional and rural NSW [24, 25].

Lyndon Community is noticing increased numbers of people entering treatment and reporting fentanyl use. According to Julaine: "Between January 2011 to January 2012, 195 individuals (assessed at the withdrawal unit) reported oxycodone use and 41 individuals reported fentanyl use. Between January 2012 to June 2013, individuals reporting non-medical use of oxycodone increased to 205, and reports of fentanyl use also increased to 79."

Dr Mulqueen explained that across regional NSW pharmaceutical opioid misuse had risen since the early 2000s, with less heroin available but rising opioid diversion.

Dr Mulqueen said: "We had MS Contin® for a while, then we had Oxycontin which has continued on, and more recently we have had fentanyl patches. All of these are problematic for all the same reasons that injecting opioids can be problematic."

And, "with these fentanyl patches you have the unreliability of the dosage and given fentanyl is such a potent drug, it doesn't take a lot to shift from being a good buzz to a potential fatal overdose."

He said it reiterated the need for increased access to harm reduction services, including treatment options such as Opioid Substitution Therapy.

Methadone should therefore be more readily available in rural areas, Dr Mulqueen said. "We are not asking for a space station, we are not asking for an MRI machine, or a linear accelerator. What we are saying is that for between $3000 or $4000 a year per person we can help people become safer, less at risk of overdose, less at risk of HIV and hep C."

Dr Mulqueen said rural communities' access to specialist alcohol and drug services had been declining.

"In most (small) towns we visit, alcohol and drug services don't exist, or it's just one person working on their own with a high likelihood of staff burnout, hence staff turnover."

Safe Work Australia Workers' Compensation: Serious Injury

Industry	Group	2011-12 rate/100,000
Agriculture		***21.0***
	Horticulture/fruit growing	16.7
	Grain, sheep, beef	21.2
	Dairy	20.5
	Poultry	23.9
	Other livestock	60.4
	Other crop	19.2
Mining		***14.2***
Construction		***18.7***
Transport	Road transport	***26.7***
All		***12.2***

Source: Safe Work Australia.

Time inside allows hep C clearance

Cyril was released from Canberra's Alexander Maconochie Centre (prison) recently. The 25-year-old has cleared hepatitis C through treatment while in Australia's only prison currently considering a needle exchange program. He shares some reflections with the Bulletin as he prepares for life in the community.*

A lot of people don't find out they have hepatitis until years after they got it. You found out early it seems, how?

I contracted the virus when I was 17 and was diagnosed about a year later in Canberra at a residential drug treatment service for young people. I was lucky to be diagnosed early I suppose, but like many people with hep C I didn't get offered treatment after the results came back.

Another year later I was starting a prison sentence at the Symonston Detention Centre [the predecessor to the Alexander Maconochie Centre] when I bumped into the hepatitis nurse who did my liver health check-up. We talked for a fair while and she helped me realise that this prison sentence gave me a sort of window of opportunity in what was an otherwise chaotic lifestyle. It could be the best chance I had to treat hep C.

The tests showed that I had genotype 3, which meant I faced six months of treatment with a combination of Interferon and Ribavirin. I knew that the next six months would be tough, but being treated in prison offers some benefits compared with in the community. For a start, I had support structures in place in prison to help me deal with the side-effects. In the community I would have had better access to illicit drugs and I knew they would look more appealing than Interferon if I got sick. I decided to go for it while I had the chance.

What about losing weight? Were you worried that would be a problem in prison?

People knew I was struggling and helped me out. Other prisoners were a big support. Sometimes they made sure I ate when eating was the last thing on my mind. Treating prisoners for hep C in the ACT was a new thing at that time, so I felt like a guinea pig in some ways. For example Justice Health didn't really know how best to support my loss of weight and appetite, so they gave me Sustagen and told me I could drink some salt water to replace minerals. My weight loss was dramatic and I bottomed out at around 49kg, having lost a third of my body weight.

Aside from weight loss, fatigue was the hardest thing to deal with. Sometimes I had just enough energy to clean my cell. I was into weight training and fitness back then, but I couldn't maintain that routine due to treatment side-effects. My muscle mass just slipped away but there seemed to be a clear choice between keeping body weight and beating hep C. I knew that to beat hep C I needed to choose the thing that was most important. It also helped to remind myself that some people have a worse time on treatment than me.

After five weeks of treatment the virus was undetected and I really wanted to stop. The Health staff encouraged me to continue though, to give myself the best chance, and I knew it was the right thing to do. Thankfully treatment was successful, and two or three months after completing treatment I was feeling 'normal' again. Hopefully I'll never need to do treatment again.

There is drug injection and needle sharing in prisons. Is it a risk for you?

Preventing reinfection is now the critical thing for me, and since finishing treatment I have declined every opportunity to share needles in the prison. Sharing needles does go on, as we all know. I remain vigilant about the risk factors. As prison is such a high-risk place, I get tested sometimes to assure myself that I'm still clear. It's not always as easy as it should be to access testing though, and Corrective Services and Justice Health can create barriers for when a prisoner wants to ask for testing. You shouldn't ever have to give a reason why you want to be tested for hep C in prison. That's just unnecessary.

In here there are a lot of blokes with hep C, but there's only about 10 people getting treated at any time. It would make sense for more people to be getting treated for hep C in prison.

What about a needle exchange?

A needle and syringe program could prevent infections and reduce sharing, and most prisoners support the concept. Many prisoners have a good general knowledge about blood borne viruses. Most know about transmission risks, but knowledge about treatment for hep C is generally low. Unfortunately for many people in prison the immediate benefits of using drugs outweigh the immediate benefits of hep C prevention. People don't have good access to clean injecting gear or tattooing equipment. Access to bleach is usually poor. If the cost of providing bleach is the reason why it's so hard to get, they should make it available through buy-ups (prison canteen system).

Freedom - what are you looking forward to, what next?

When I came into prison I had hep C, and I'll be going out without it. I know plenty of people unfortunately who do it the other way around, so it's a good feeling to know that I'm bucking the trend. It's also good to know that I'm not a transmission risk any more. I've got a daughter and lots of nieces and nephews, and I can't wait to get physically involved in their lives again. Playing sport and games, rolling around in the park, and not having to worry about scratching myself and potentially exposing them to infection - I know there's a very low risk from that sort of stuff, but it weighs on my mind.

My daughter and I have an amazing relationship now and I'm working towards resuming custody after I'm released. She's only young and she lives with my mother. We get to see each other often and we speak on the phone a lot too. She's one of the reasons why I'm loving life. Some people wouldn't think I could say that, being locked up in here, but it's true. I completed a drug treatment program in prison and have been abstinent from drugs for the longest time since I was 16 years old. I have self-esteem and the respect of others. I get treated differently now I think, and I have my health back.

Looking to the future, I just want to have a normal life. My vision for the next ten years is to remain drug free, hep C free, and to stay out of prison. I can see myself having a tidy place to live with my family around me. A stable job will be an important part too.

* Not his real name.

WIN A $250 CASH PRIZE FOR YOUR NSP!

Do you want to promote your service and the good work it does?

It is time for NSP workers and their services to take centre stage. We are looking for photos of NSP heroes engaging in what they do best, providing good support to their clients.

We all know that communications with photos are more engaging. People are more likely to stop and read the story, and a photo helps connect on an emotional level. We are asking you to help us improve our communications around the value of NSP services by building a better photo library.

All entries will go into the draw to win $250, to be awarded to the winning NSP service. Some ideas on what funds could be spent on are:

- an event for your clients
- Professional Development opportunity for a staff member
- a learning resource
- piece of equipment for the service

You can submit multiple images. The more entries the better chance you have of winning.

What should be in the photo:

- Interaction is the hero of the image
- Close up shots that have no more than 2 or 3 people
- Positive images that show at least one facial expression
- Images taken above the waist

In the image, you could be talking with a client in a formal setting such as the reception desk/office, or in a more relaxed setting like a lounge area or park. You could be going through an information brochure or explaining/demonstrating an item from your service. Or you could be engaging with a co-worker. The possibilities are endless.

Take photos yourself or use this competition as an interactive activity to engage clients; they could be photographers for the morning.

To download terms and conditions or further information go to www.anex.org.au/photo

Closing date: 9 April 2014