City gyms and human enhancement drugs

Jim McVeigh
Deputy Director
Reader in Substance Use Epidemiology

Centre for Public Health
Liverpool John Moores University
City gyms and human enhancement drugs
What do we actually know?

<table>
<thead>
<tr>
<th>Topic</th>
<th>Knowledge Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevalence</td>
<td>Very little</td>
</tr>
<tr>
<td>Characteristics of users</td>
<td>Some</td>
</tr>
<tr>
<td>Reasons for use</td>
<td>A bit</td>
</tr>
<tr>
<td>Efficacy</td>
<td>Limited</td>
</tr>
<tr>
<td>Methods of use</td>
<td>Basic</td>
</tr>
<tr>
<td>Harms</td>
<td>Virtually nothing</td>
</tr>
<tr>
<td>Effective drug prevention</td>
<td>Nothing at all</td>
</tr>
<tr>
<td>Effective harm reduction</td>
<td>Guesswork</td>
</tr>
</tbody>
</table>
16-59 year olds reporting use of anabolic steroids in last year

“Have you ever taken anabolic steroids (steroids) (not prescribed by a doctor) even if it was a long time ago?

<table>
<thead>
<tr>
<th>Drug (2010/11)</th>
<th>Last year</th>
<th>Ever</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anabolic steroids</td>
<td>70,000</td>
<td>255,000</td>
</tr>
<tr>
<td>Heroin</td>
<td>47,000</td>
<td>206,000</td>
</tr>
</tbody>
</table>

BCS, 2012
George Walker (Head of Sports Section of the Council of Europe) stated in 1993

“On the basis of the figures available one could estimate that in a city the size of London...there will be at least 30,000 and probably as many as 60,000 regular users of anabolic steroids”
Proportion of boys who have taken drugs in the last year, 2010

<table>
<thead>
<tr>
<th>Type of drugs taken in the last year</th>
<th>11 years</th>
<th>12 years</th>
<th>13 years</th>
<th>14 years</th>
<th>15 years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannabis</td>
<td>0.3</td>
<td>0.5</td>
<td>5.1</td>
<td>10.4</td>
<td>22.2</td>
<td>8.8</td>
</tr>
<tr>
<td>Any stimulants</td>
<td>0.8</td>
<td>0.5</td>
<td>1.7</td>
<td>3.4</td>
<td>5.0</td>
<td>2.5</td>
</tr>
<tr>
<td>Cocaine</td>
<td>0.1</td>
<td>0.2</td>
<td>0.9</td>
<td>1.1</td>
<td>1.5</td>
<td>0.8</td>
</tr>
<tr>
<td>Ketamine</td>
<td>-</td>
<td>0.1</td>
<td>0.2</td>
<td>0.6</td>
<td>1.2</td>
<td>0.5</td>
</tr>
<tr>
<td>Any opiates</td>
<td>0.1</td>
<td>0.1</td>
<td>1.2</td>
<td>0.7</td>
<td>1.1</td>
<td>0.7</td>
</tr>
<tr>
<td>Heroin</td>
<td>0.1</td>
<td>0.1</td>
<td>0.6</td>
<td>0.3</td>
<td>0.6</td>
<td>0.4</td>
</tr>
<tr>
<td>Methadone</td>
<td>0.1</td>
<td>0.1</td>
<td>0.7</td>
<td>0.4</td>
<td>0.8</td>
<td>0.4</td>
</tr>
<tr>
<td>Glue, gas, aerosols or solvents</td>
<td>2.7</td>
<td>3.0</td>
<td>2.5</td>
<td>4.5</td>
<td>3.3</td>
<td>3.2</td>
</tr>
<tr>
<td>Tranquilizers</td>
<td>0.4</td>
<td>0.2</td>
<td>0.3</td>
<td>0.4</td>
<td>0.4</td>
<td>0.3</td>
</tr>
<tr>
<td>Anabolic steroids</td>
<td>0.1</td>
<td>0.2</td>
<td>0.3</td>
<td>0.9</td>
<td>0.2</td>
<td>0.3</td>
</tr>
<tr>
<td>Other drugs</td>
<td>0.1</td>
<td>0.1</td>
<td>0.6</td>
<td>0.2</td>
<td>0.2</td>
<td>0.3</td>
</tr>
<tr>
<td>Any Class A drug¹</td>
<td>0.1</td>
<td>0.5</td>
<td>2.2</td>
<td>2.7</td>
<td>4.9</td>
<td>2.3</td>
</tr>
<tr>
<td>Any drug</td>
<td>4.0</td>
<td>4.1</td>
<td>8.7</td>
<td>16.1</td>
<td>26.5</td>
<td>13.0</td>
</tr>
<tr>
<td>Any drug (excluding volatile substances)</td>
<td>1.4</td>
<td>1.3</td>
<td>6.5</td>
<td>12.8</td>
<td>24.7</td>
<td>10.6</td>
</tr>
</tbody>
</table>

Unweighted bases (boys)²: 565, 771, 735, 707, 868, 3646
Weighted bases (boys)³: 551, 754, 716, 712, 926, 3659
‘All’ & ‘new’ clients attending agency based SEPs in Cheshire & Merseyside (1991 to 2011)

Number of Clients

Year of Presentation/Attendance

- New AS injecting clients
- New other injecting clients
- AS injecting clients
- Other injecting clients
Characteristics of users

Age of first use for anabolic steroids

No of Individuals

[Bar chart showing the age of first use for anabolic steroids]
Characteristics of users

But what about the ones we don’t know about?
### Reasons for use

**Pressures on males to initiate anabolic steroid use**

<table>
<thead>
<tr>
<th>External</th>
<th>Internal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Media pressure</td>
<td>Negative body image</td>
</tr>
<tr>
<td>Sporting influences</td>
<td>Self-esteem</td>
</tr>
<tr>
<td>Economic considerations</td>
<td>Pubertal timing</td>
</tr>
<tr>
<td>Parental influence</td>
<td>Body Dysmorphia Disorder (BDD)</td>
</tr>
<tr>
<td>Peer pressure</td>
<td></td>
</tr>
</tbody>
</table>

**Internal**

- Negative body image
- Self-esteem
- Pubertal timing
- Body Dysmorphia Disorder (BDD)
40 years of Action Man
Radio Times

London and South-East

September 2-8

BBC-1

BBC-2

DR. WHO

and his companions face their old enemies, the Cybermen

Saturday BBC-1, see page 3
BATTLE FOR THE WORLD
CYBERMEN V DALEKS

Doctor Who, Saturday BBC1

and

THE WORLD CUP FINAL,
Sunday BBC1, ITV1, UKTV G2 and Radio Five Live
‘Taking steroids is like receiving a new body, you can almost see your body grow, it’s that quick’ (Korkia & Stimson, 1993)

‘I feel more alive than I ever have and happier than I ever have.’ (Korkia & Stimson, 1993)

‘Steroids have allowed me to get a decent body which means more work. If there was another option which would get you the same results safely, of course I would use it.’ (Korkia & Stimson, 1993)

‘I started using [steroids] to build up my muscles and look better. In the group of lads I hang around with, the bigger you are the more respected you are and at my local gym everyone was doing it.’ (Flanagan, 2007)

It’s all about the way you look.’ (Gilliver, 2007)

“[Bodybuilding is] the purest form of sport … no external influences or arbitrary rules, the results are purely down to myself.”(Personal communication from steroid user, 2004)
“It’s like you could run through a wall, and shag anything on the other side”

(Kimergård, 2009).
“Supraphysiologic doses of testosterone, especially when combined with strength training, increase fat-free mass and muscle size and strength in normal men.”

Bhasin, 1996
Harmful effects of anabolic steroids

- Acne
- Androgenic alopecia
- Gynaecomastia
- Genitourinary
- Liver
- Cardiovascular
- Musculoskeletal
- Psychological & Behavioural
- Specific concerns for women
- Specific concerns for young people

Adulterated products
Injecting
Not just about anabolic steroids
<table>
<thead>
<tr>
<th>Category</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muscle</td>
<td>Anabolic steroids, growth hormones</td>
</tr>
<tr>
<td>Weight loss</td>
<td>Rimonabant, sibutramine, DNP</td>
</tr>
<tr>
<td>Skin &amp; hair</td>
<td>Mercury creams, melanotan II</td>
</tr>
<tr>
<td>Sexual behaviour</td>
<td>Sildenafil, bremelanotide</td>
</tr>
<tr>
<td>Cognitive function</td>
<td>Methylphenidate and modafinil</td>
</tr>
<tr>
<td>Mood</td>
<td>Paroxetine, fluoxetine</td>
</tr>
</tbody>
</table>
“My daughter calls them my Bambi lashes”

“This is my favourite stuff ever!”
WANT LONGER LASTING SEX?

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ADVANCED MEDICAL INSTITUTE

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writes
Mrs. H. H. Langley

NOW YOU, too,
can take off pounds
of ugly fat this safe,
easy, quick, way!
NO DIETING...
NO SELF DENIAL...
NO STRENUEOUS
EXERCISES!

You May Eat What
You Wish and As
Much As You Want!

Sounds too good to be
true? Yet it is true.
Dilex-Redusols increase
your metabolism; that is,
they turn food into energy
instead of fat. You will
be amazed at your in-
creased vitality!

REDUCE
12 Pounds
... in five Weeks
... or no Cost

MAXMAN
COFFEE

Orange Juice

MAXMAN
COFFEE
Location: /Melanotan 2/Melanotan II 20mg Package

MELANOTAN II 20MG PACKAGE

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Make Your Mother Even More Beautiful This Mother’s Day With A 20mg MT2 Package For Only...

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PRODUCT INFORMATION

Melanotan 2 - 20 mg Package

Includes 2 needles/wipes to get you started.

This 20mg package tan injections is a favorite for our new customers who have heard about the great results they can achieve and want to try this fantastic product for the first time. The first 10ml vial of Melanotan will take you through the LOADING PHASE and the second vial will start your MAINTENANCE PHASE which will help you keep your desired color for months.

Each 10mg vial contains 10 injections.
Sean Cleathero dies after taking 'gym drug'

The family of a man who died after taking a drug used by bodybuilders have spoken of their loss of a "fun, loving and caring" man.

Sean Cleathero, 28, is believed to have taken the substance 2, 4-Dinitrophenol (DNP) which he got from a gym, according to police.

The father-of-one was taken ill and died at hospital in High Wycombe, Buckinghamshire, on Wednesday.

The coroner has been informed and police are investigating.

His family said in a statement: "Sean was very loved and popular. His death has come as a complete shock to his family and friends.

"He was a fun, loving, caring son, grandson, brother and nephew."

"As a father he leaves behind a three-year-old daughter who will carry on his infectious personality which made him so popular to all of his friends and those who knew him."

A police spokesman said: "His death was referred to Thames Valley Police by the coroner's office on Wednesday.

Warning over DNP

"It is believed he may have taken a substance called 2, 4-Dinitrophenol, which is believed to be a performance-enhancing drug which he got from a local gym."

A post-mortem examination was inconclusive.

The spokesman said: "The investigation into the cause of death continues and further tests are required."

"Police are currently exploring any potential link between the drug and the man's death but while the investigation progresses is advising anyone who may have bought DNP tablets through unofficial sources, not to take them."

DNP is used to help burn fat but can have side effects such as extreme body temperatures leading to brain damage and blindness.

More on This Story
What do they have in common?

- Products purportedly manufactured legitimately in middle-income countries (e.g., China, India, Pakistan, and Eastern Bloc) where drug regulation/enforcement is weak.
- Products manufactured and/or packaged in clandestine ‘underground labs’
- Legitimate products manufactured in high-income countries that are:
  - purchased over-the-counter/internet where this practice is lawful or regulation/enforcement is weak;
  - diverted to illicit market through theft;
  - prescribed/dispensed as a result of fraud...
What should we do?

What shouldn’t we do?
Say NO to drugs!
Searches on Google in the UK for: ‘smart drugs’ (blue line) & ‘buy smart drugs’ (red line)
Jim McVeigh
Deputy Director
Reader in Substance Use Epidemiology

Centre for Public Health
Liverpool John Moores University
0151 231 4512
j.mcveigh@ljmu.ac.uk
www.cph.org.uk