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New Trends in Steroids and Image Enhancing Drugs

User Demographics When Steroids began being misused.

- Likely a competitive athlete or bodybuilder
- Often used AAS when at or near peak performance naturally

User Demographics Today

- Survey of 771 male self-reported steroid users (2011)
- Mean age 25 years
- 70% exercise recreationally
- Often use multiple drugs (avg = 11 different agents)
- 2x as likely to meet criteria for substance dependence disorder (23% vs. 11%)
- 2x as likely to have used cocaine within past year (11% vs. 5%)
- 2x as likely to report a history of sexual abuse (6% vs. 3%)
- More likely to have anxiety disorder (10% vs. 6%)

Pharmacotherapy. 2011;31(8):757-766. Data collected 2009.

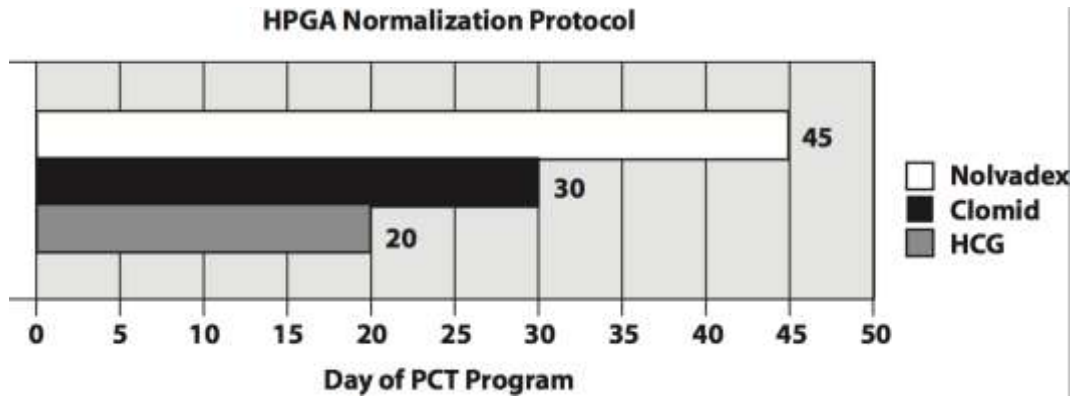
Observations

- Younger users
- Less experienced
- Less likely to be informed about drugs

Changing Practices

- Higher Doses
- Longer Cycles (bridging, cruising)
- Spot Injections
- More Injections

PCT



- *hCG*: 2,000 IU, EOD for 20 days
 - *Clomid*: 50 mg, 2x per day for 30 days
 - *Nolvadex*: 20 mg, 1x per day for 45 days
- hCG, Nolvadex, Clomid
 - Important for helping to restore testosterone post-cycle

Drug Supply is Changing

- Counterfeit/Underground medicines now 80% of black market
- These drugs are rarely made under sterile conditions
- Bacteria is common
- Often stored in multi-dose containers (10, 30, 50 mL)
- May be contaminated (heavy metals, other chemicals or drugs)

Underground Arms Race

- Higher concentrations
- Unapproved steroids



New Drugs

- **SARMs (Selective Androgen Receptor Modulators)**
 - S₄ (acetamidoxolutamide)
 - Ostarine

GH Releasing Peptides/Compounds:

- HGH fragment 176-191
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- CJC-1295
- Mod GRF (1-29)
- Sermorelin
- Tesamorelin
- Triptorelin acetate
- Ipamorelin
- Hexarelin
- GHRP-6

IGF-1 Family

- IGF-1 (Recombinant)
- IGF-1 LR₃
- IGF-1 Des (shortened analog)
- MGF (Mechano Growth Factor)
- PegMGF

Other Anabolics

- Thymosin Beta (regenerative protein)
- Cloprostenol Sodium (PGCL) Prostaglandin F_{2a} analog

Tanning Agents:

- Melanotan:
- Melanotan II: analog of the alpha-melanocyte stimulating hormone (α -MSH)
- PT-141 (Bremelanotide)

Increase in Infections

- Abscess infection
- Sterile abscess
- Bacteria and technique

Syringe Filtration



- Can remove all bacteria from a solution



**Limitations: Cannot remove other drugs,
pyrogens, or heavy metals.**

HRT (Hormone Replacement Therapy)

- Men 35+
- Clinical symptoms: loss of libido, reduced energy, loss of muscle mass, increased adiposity, osteoporosis, and depression.
- HRT shows consistent improvements in CVD, diabetes, metabolic syndrome, and cancer risk.

The Need for Needle Exchange

- Proper Injection Equipment
- Interact with healthcare workers
 - Information
 - Access to counseling

Word of Advice

You don't have to be a steroid expert to help