Adverse Psychiatric Effects

- Mood swings from mania to depression
- Suicidal thoughts and behaviors
- Marked or violent aggression ("roid rage")
- Homicidal thoughts and behaviors
- Grandiose or paranoid delusions
- Addiction



When do symptoms begin?

During use

- Mania
- Aggression
- Homicidal behavior
- Delusions

<u>During withdrawal</u> (within 3 months)

- Depression
- Suicidal behavior

Adolescents

- May be particularly vulnerable
- Already subject to the normal surge of sex hormones with expected mood changes
- Suicide is the 3rd leading cause of death in 15-24 year olds
- Steroids can increase suicide risk in age group already at risk

How Common?

Estimated occurrence with illicit use

Mania or hypomania 5%

Major depression 3-11%

Suicide attempts | 4%

Malone et al (1995)
Pope & Katz (1994)
Schmidt et al (2004)
Thiblen & Petersson (2005)



Fortunately

- Most users do not have psychiatric effects
- Most psychiatric effects are reversible with proper monitoring and treatment

Unfortunately

Suicides & homicides are obvious exceptions



Psychiatric effects influenced by:

- Patterns of illicit use including dose
- Genetics
- Social context
- Stress
- Personality characteristics
- Past psychiatric history
- Expectations



Addiction

- At least 165 cases in nonmedical users reported in medical literature
- No cases reported with medical use at therapeutic doses

How do they work?

- Alter hormone levels
- Alter brain chemistry and functioning
 - Øe.g., dopamine, serotonin, endorphins

Summary

- Steroids alter brain chemistry causing profound psychiatric effects
- Adolescents especially vulnerable
- True rates of adverse psychiatric effects influenced by drug and non-drug factors
- Addiction occurs with high-dose nonmedical use only