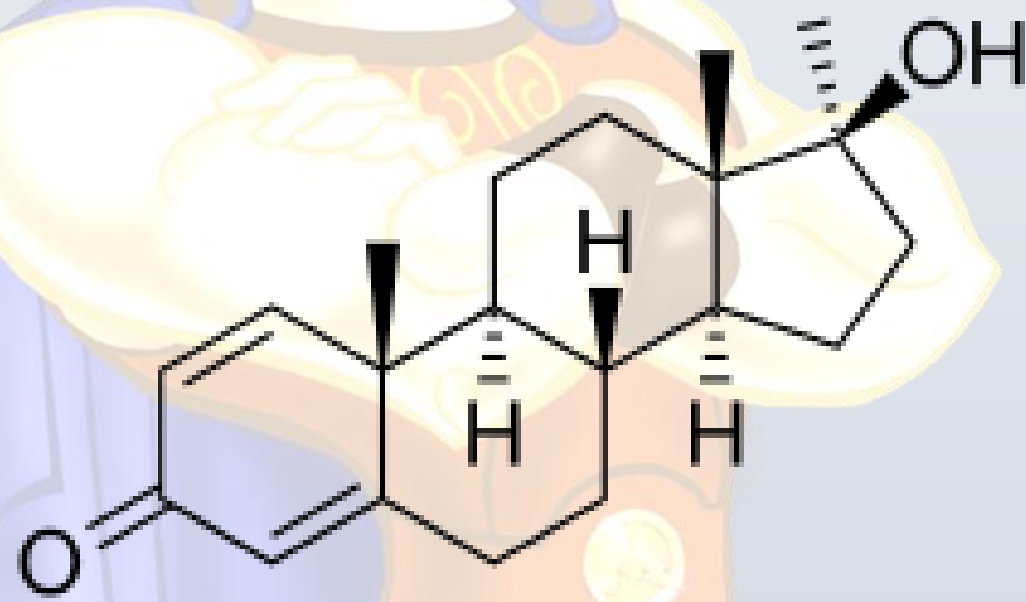


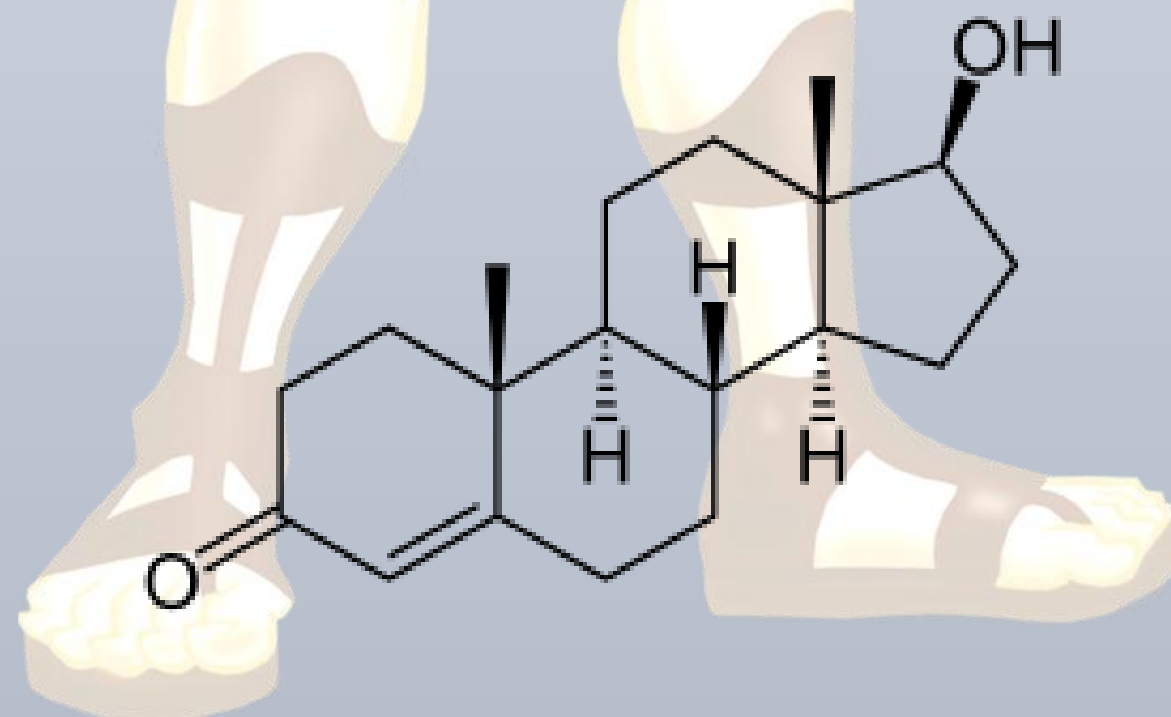
Anabolic steroid

Any of a group of synthetic hormones that are derivatives of testosterone, are used medically especially to promote tissue growth, and are sometimes abused by athletes to increase the size and strength of their muscles and improve endurance¹



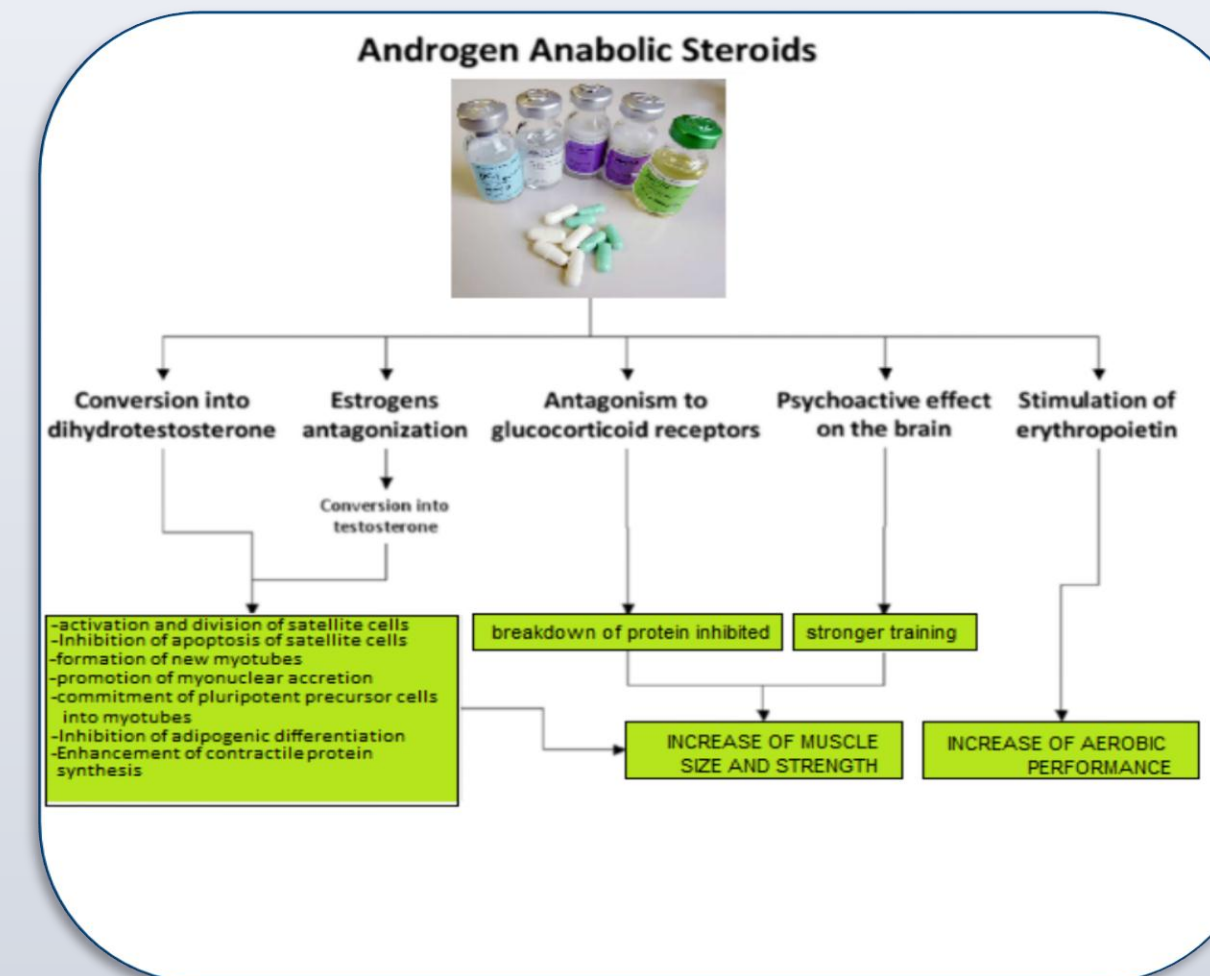
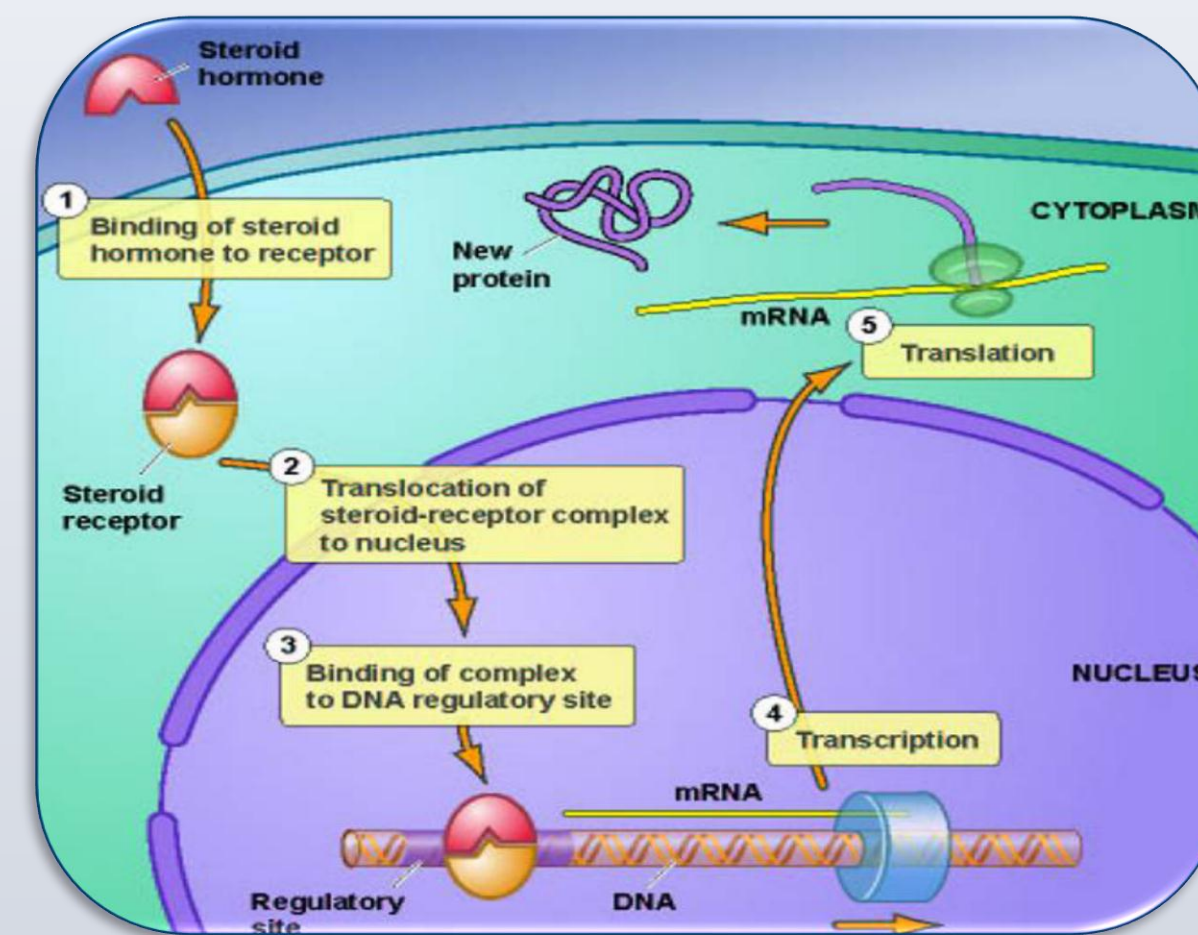
Testosterone

Is the primary male sex hormone, In male humans, testosterone plays a key role in the development of male reproductive tissues such as testes and prostate, as well as promoting secondary sexual characteristics such as increased muscle and bone mass¹



Mechanism of action

AAS binds to the androgen receptor, a nuclear receptor which binds the androgenic hormones testosterone and dihydrotestosterone. Once bound, the receptor/ligand complex localizes to the nucleus and acts as a DNA binding transcription factor, regulating gene expression²



Effect of AAS on the body

Men

- Infertility
- Breast development
- Shrinking of the testicles
- Male-pattern baldness

Women

- Enlargement of the clitoris
- Excessive growth of body hair
- Male-pattern baldness

Musculoskeletal system

- Tendon rupture

Cardiovascular system

- Increases in LDL
- Decreases in HDL
- High blood pressure
- Heart attacks
- Enlargement of the heart's left ventricle

Liver

- Cancer
- Peliosis hepatis

Skin

- Severe acne and cysts
- Oily scalp
- Jaundice

Psychiatric effects

- Rage, aggression
- Mania
- Delusions²

Bright side of AAS

- Recovery from hip surgery and TKA
- Replacement therapy for men
- Given to HIV-positive individuals increase their appetite, maintain muscle mass and enhance their sense of well-being
- Treatment of certain breast cancers
- To prevent hereditary angioedema⁴

Conclusion

Athletes should be told that very few individuals are known for certain to have become seriously ill or to have died from steroid abuse and that habits such as smoking tobacco or driving while intoxicated are probably far more deadly. On the other hand, they should also be told that few, if any, steroid abusers escape all of the potential harmful effects of these drugs.

References

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- 4-NSW Health Department, 1999 www.health.nsw.gov.au