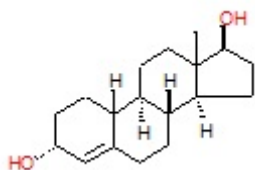


Drug Status Report

Drug: Estren

Drug Name Status: 4-Estren-3 α ,17 β -diol

Chemical structure:



Molecular Formula: C₁₈H₂₈O₂

Pharmacological class / Application: steroid

International status:

US: The substance is not listed in the schedules to the CSA and is not mentioned on the US DEA website.

United Nations: The substance is not listed on the Yellow List - List of Narcotic Drugs under International Control. The drug is not listed on the Green List - List of Psychotropic Substances under International Control.

Canadian Status: Estren is a synthetic steroid that was developed as a potential bone anabolic agent for the treatment of osteoporosis¹. While estren has been proven to preserve bone mineral density and strength, the specificity² and effectiveness of the substance as an anabolic bone agent is disputed in the literature and remains poorly defined³.

Estren is not currently listed in any of the Schedules to the CDSA. While “Anabolic steroids and their derivatives” are controlled substances under Item 23 of Schedule IV to the CDSA, there is presently a lack of unequivocal scientific data to support that estren is an anabolic agent or that the steroid behaves as an androgen. Accordingly, estren is not considered to be included under Item 23 of Schedule IV to the CDSA.

¹Kousteni, S., *et al.* (2002) Reversal of bone loss in mice by nongenotropic signaling of sex steroids, *Science*, **298**:843-846.

²Islander, U. *et al.* (2005) Estren promotes androgen phenotypes in primary lymphoid organs and submandibular glands, *BMC Immunol.* **6**:16-28.

³Neill, US. (2006) You say estren, I say estrogen. Let’s call the whole replacement off! *The J. Clin. Invest.* **116**:2327-2329.

Recommendation: Estren is not included in item 23 of Schedule IV to the CDSA and is not a controlled substance.

April 6th 2010.