

# Ergogenic Aids (Performance Enhancers?) & Athletics: Creatine, Andro & Steroids

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<b>Product</b>	<b>Claims/Facts</b>	<b>Risks/Benefits</b>	<b>Conclusions</b>
<p><b>Creatine</b></p> <p><b>Where:</b> internet, health food &amp; retail stores, supplier, team staff</p> <p><b>How:</b> powder, liquid, tablets, capsules, gum</p> <p><b>Cost:</b> \$15-60/month</p>	<p><b>*increases lean muscle mass &amp; muscle cell hydration</b></p> <p><b>*increases muscle strength</b></p> <p><b>*speeds muscle recovery</b></p> <p><b>*improves endurance by reducing lactic acid buildup</b></p> <p><b>*improves performance</b></p> <p>*Increases available muscle energy stores ( phosphate)</p> <p>*improves high-intensity, short duration exercise capacity but not endurance or stamina</p>	<p><b>*water retention/weight gain (modest for most)</b></p> <p><b>*muscle cramps, abdominal pain, nausea, &amp; dizziness (mild for some)</b></p> <p><b>*kidney &amp; liver damage? (few case reports)</b></p> <p><b>*contaminants</b></p> <p>*Enhanced muscle functioning during repeated brief intense physical activity like sprinting or lifting</p>	<p><b>*readily available legal, &amp; cheap</b></p> <p><b>*minimal benefits in most sports beyond a good fitness routine</b></p> <p><b>*minimal short-term risks for most athletes</b></p> <p><b>*possible kidney damage reported in wrestlers cutting significant weight</b></p>
<p><b>Andro/DHEA</b></p> <p><b>Where:</b> internet, health food &amp; retail stores suppliers, teammates</p> <p><b>How:</b> capsules, tablets, powder, lozenges</p> <p><b>Cost:</b> \$30/month</p>	<p><b>*increases testosterone</b></p> <p><b>*increases muscle mass</b></p> <p><b>*increases strength</b></p> <p><b>*increase exercise capacity</b></p> <p><b>*increases sense of well being &amp; sexual function</b></p> <p>*no effect on testosterone levels</p> <p>*no effect on lean body mass or strength</p>	<p><b>*decreases good cholesterol</b></p> <p><b>*increases female hormone levels</b></p> <p><b>*unreliable dosage levels &amp; contaminants</b></p> <p>*no proven benefits for athletic performance</p>	<p><b>*available, cheap, legal, banned by some sports (nfl, ncaa, ioc &amp; mlb)</b></p> <p><b>*no proven benefits beyond a good fitness routine</b></p> <p><b>*minimal risks for most users(low dose)</b></p>
<p><b>Anabolic Steroids</b></p> <p><b>Where:</b> physicians, internet, black market</p> <p><b>How:</b> injection, pills skin patch</p> <p><b>Cost:</b> expensive (\$60-300/month)</p>	<p><b>*rapid muscle growth</b></p> <p><b>*improved strength</b></p> <p><b>*enhanced exercise performance</b></p> <p><b>*increased intensity &amp; aggressiveness</b></p> <p><b>*increase sexual potency</b></p> <p>*positive effect on skeletal muscle size with resistance training</p> <p>*limits muscle breakdown with intense exercise</p> <p>*changes mood/mental state</p> <p>*enhanced sex drive</p>	<p><b>*increased blood pressure, elevated liver enzymes, addiction, muscle tendon tears, baldness, lowers good cholesterol, reduced height, breast development, testicular shrinkage, depression, hostility, paranoia, contaminants, HIV/hepatitis with needle use, cancers?</b></p> <p>*minimal at prescription or low dosages</p> <p>*moderate at super dosages</p>	<p><b>*illegal, banned in all sports, expensive, restricted availability</b></p> <p><b>*most risks are reversible when use is discontinued</b></p> <p><b>counterfeit products with poor quality control are common</b></p> <p><b>*claims often match actual benefits</b></p>