



RANGER TOP 20 Supplement List

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The Intent



The list is designed to be an easy to use guide that looks at many of the popular supplements used as a stand alone supplement or combination ingredients in many of the popular supplements being sold on the market currently.

The list will be updated regularly to account for new research and changes in the dietary supplement market.

The date listed at the bottom of the intro slide will reflect the last date updated.



Ginseng



Supplement	Claimed Effects	Proven Effects	Risks
Ginseng Other names: Panax Ginseng Asian Ginseng Chinese Ginseng Korean Ginseng Asiatic Ginseng Ciwujia	Improve Health Increase mental and physical performance	No improved performance associated with use.	Reports of hypertension, nervousness, sleeplessness, acne, edema, headache, and diarrhea have been associated with ingestion of >3 grams of ginseng root or 600mg of ginseng extract.



Arginine



Supplement	Claimed Effects	Proven Effects	Risks
Arginine Main ingredient in NO products.	Builds muscle by increasing growth hormone level. Increase vasodilation via nitric oxide production.	No studies showing improved athletic performance. No conclusive evidence of improved blood flow in healthy individuals. Has been shown to improve blood flow in patients with heart disease.	Competes with absorption of lysine by competing for absorption and reducing lysine levels. Potentially could aggravate herpes simplex virus. Could cause pancreas inflammation via formation of paroxynitrate.



Creatine



Supplement	Claimed Effects	Proven Effects	Risks
Creatine	Increases muscle strength and muscle mass.	<p>Creatine has been shown to both increase strength and muscle mass.</p> <p>Creatine Monohydrate is currently the most proven form of creatine.</p> <p>Liquid creatine is a worthless product as tests have revealed it is mostly creatinine, which is a waste product.</p>	<p>Weight gain from creatine can serve as a possible detriment in endurance activities such as distance running.</p> <p>Creatine has only been shown to increase performance in activities of short, explosive duration such as sprinting and weightlifting and does not increase performance in endurance activities.</p>



Hydroxycitric Acid



Supplement	Claimed Effects	Proven Effects	Risks
Hydroxycitric Acid Also called: Garcinia cambogia	Reduces body weight and body fat. Reduces Appetite	No proven efficacy to reduce body fat/body weight or reduce appetite.	Popular product containing Hydrocitric Acid called Hydroxycut has been pulled off of the market due to documented cases of liver damage and other adverse events. No long-term studies to evaluate safety



Glucosamine



Supplement	Claimed Effects	Proven Effects	Risks
Glucosamine	Relieves osteoarthritis pain	Research suggests that glucosamine may improve symptoms of osteoarthritic patients .	No serious adverse effects.



Glutamine



Supplement	Claimed Effects	Proven Effects	Risks
Glutamine	Aids recovery. Keeps immune system strong during times of stress.	May help prevent impaired immune function associated with strenuous exercise.	No serious adverse effects. No long term studies.



Superdrol



Supplement	Claimed Effects	Proven Effects	Risks
<p>Superdrol: Other names: 2a, 17a-dimethyl- 17B-hydroxy-5a- etiocholan-3-one. “etiocholan” can also be call “andro” or “androst”.</p>	<p>Anabolic Testosterone Stimulator.</p>	<p>Classified at the anabolic steroid methasteron. Documented cases of liver toxicity.</p>	<p>Serious adverse effects. Use of supplement constitutes serious health risk.</p>



HMB



Supplement	Claimed Effects	Proven Effects	Risks
HMB Other names: Beta-Hydroxy- Menthylbutyrate.	Increases muscle strength. Increases lean body mass and reduces body fat. Decreases muscle breakdown after exercise.	No conclusive evidence that it increases strength. Evidence that it can help preserve lean muscle mass.	No reported serious adverse effects in short-term studies.



Androstenedione



Supplement	Claimed Effects	Proven Effects	Risks
<p>Androstenedione</p> <p>Other names: Androstenediol 4-Androstene-3B, 17B-dione 4 or 5-Androstene-3B, 17B-diol</p>	<p>Increases testosterone production</p> <p>Increases muscle mass and strength</p> <p>Enhances recovery from exercise</p> <p>Improves libido</p>	<p>Most research does not suggest that adrostenedione/-diol supplement raise testosterone levels in men. Two studies showing that reported increases in testosterone also reported increases in feminizing hormones estradiol and estrone.</p> <p>The androgen supplements do not appear to affect muscle size and strength or body composition of athletically or untrained males</p>	<p>Products are now banned and considered illegal however can still be available on internet. Product to be avoided.</p> <p>May increase risk of heart disease by adversely affecting lipid levels.</p> <p>May promote masculinization hormonal effects in women and feminizing hormonal effects in men.</p>



Beta Alanine



Supplement	Claimed Effects	Proven Effects	Risks
Beta Alanine	Improves muscular endurance by increasing muscle buffering capacity of hydrogen ions thus delaying fatigue.	Positive research showing that it increases muscular endurance in a 3-6 gram dosing range with a buildup period of 28 days.	No long term studies completed on safety. No adverse reactions currently reported. Believed to be safe because product is natural occurring amino acid.



Ginkgo Biloba



Supplement	Claimed Effects	Proven Effects	Risks
Ginkgo biloba	<p>Enhances memory</p> <p>Improves memory and concentration</p> <p>Improves circulation</p> <p>Strong antioxidant.</p>	<p>Several studies suggest ginkgo may slow progression of dementia, particularly in Alzheimer's disease.</p> <p>Some studies suggest improved blood circulation in those with compromised circulation.</p> <p>Has demonstrated strong antioxidant properties in vitro and some animal studies.</p>	<p>Very seldom mild gastrointestinal upset, headache, or allergic skin rash have been reported. Because the ginkgolides act as inhibitors of platelet-activating factor, supplementation could affect clotting time. This is a serious concern in a deployed setting.</p> <p>Surgical patients should discontinue use of ginkgo at least 36 hours before surgery due to potential increase risk of bleeding.</p>



Gamma-Oryzanol



Supplement	Claimed Effects	Proven Effects	Risks
Gamma-Oryzanol Other names: Phytosterols Gamm O	Anabolic agent- converted into testosterone and growth hormone for bulking up.	There is no evidence that gamma-oryzanol builds muscle by acting as an anabolic agent. In fact one review suggested the opposite effect.	No reported serious adverse effects. No reported adverse interactions



Glycerol



Supplement	Claimed Effects	Proven Effects	Risks
Glycerol	<p>Improves hydration status and enhances exercise.</p> <p>Improves exercise in hot and humid conditions.</p>	<p>Preliminary evidence that glycerol ingestion results in a state of hyperhydration for exercise lasting less than two hours.</p>	<p>May cause headache, nausea, or blurred vision.</p> <p>No reported adverse interactions.</p> <p>If planning on using glycerol it would be wise to try it out during training before using it for a competition in case extra fluid retained causes a decrease in athletic performance.</p>



N-Acetylcysteine



Supplement	Claimed Effects	Proven Effects	Risks
N-Acetylcysteine Other names: NAC	Prevents free radical damage from exercise. Prevents and treats flu.	Currently lack of well-controlled clinical trails demonstrating that oral NAC supplementation in humans has a favorable effect on exercise. Several studies show NAC improves immune function and is used in Europe to treat bronchitis, acute respiratory distress.	NAC has been used for three decades with few side effects(mild side effects include nausea and skin rash). No adverse events reported in HIV patients who used 6,000mg to 8,000mg of NAC/day for one year.



Whey Protein



Supplement	Claimed Effects	Proven Effects	Risks
Whey Protein	<p>Builds Muscle</p> <p>Improves Exercise Performance.</p> <p>Superior source of protein.</p>	<p>Preliminary trails suggest that whey protein may increase muscular strength in some laboratory measures but not all.</p> <p>Is equivalent in protein quality to other dietary protein sources including nonfat, low-fat dairy, and lean meats.</p> <p>Has been shown to help increase muscle mass when used as part of a recovery drink post work-out.</p>	<p>Should be avoided if individual is allergic to cow's milk.</p> <p>Excess protein intake >1gram per pound of bodyweight unlikely to contribute to increase muscle mass but rather can be a source excess calories and lead to increase in fat mass.</p>



Conjugated Linoleic Acid



Supplement	Claimed Effects	Proven Effects	Risks
Conjugated Linoleic Acid. Other names: CLA	Enhances weight loss and reduces appetite.	Although animal studies suggest CLA supplementation reduces body fat and increases lean body mass. Current human research does not demonstrate this effect.	CLA at 3.9grams/day had no adverse effects in a study lasting 93 days. However long-term safety of CLA supplements has not been tested.



Dehydroepiandrosterone



Supplement	Claimed Effects	Proven Effects	Risks
Dehydroepiandrosterone Other names: DHEA	Slows aging Increase muscle mass Converts to testosterone in the body.	DHEA can alter hormone levels however alteration has not been shown to be beneficial in athletic performance or increase muscle mass in healthy males.	The safety of long term administration of DHEA is unknown. Altering hormone levels could have unknown adverse effects.



Fish Oil



Supplement	Claimed Effects	Proven Effects	Risks
Fish Oil Other names: Omega 3 fatty acids.	Lower triglycerides Improves lipids Lowers blood pressure Reduces risk of death from heart attack	Fish oil has shown properties that benefit cardiovascular health by improving lipid profile and lower blood pressure. Fish oil has properties of a natural anti inflammatory agent.	Fish oil may increase bleeding when taken with other blood-thinning drugs or supplements such as Coumadin, warfarin, garlic, ginger, ginkgo, vitamin E, and bromelain.



Caffeine



Supplement	Claimed Effects	Proven Effects	Risks
Caffeine	Improves endurance. Lowers perceived exertion. Increases vigilance in sleep deprived.	Multiple studies have shown benefits of caffeine in improving endurance. Military studies have shown caffeine increase vigilance in sleep deprived and one study showed improved shot group tightness.	Recommended dosing is 5mg/kg of bodyweight. Dosing of 200-300 mg has also been used. Higher dosing has been associated with side effects that would decrease performance. Serious adverse reactions have been seen at 2,000mg so this quantity of caffeine should be avoided.



Quercetin



Supplement	Claimed Effects	Proven Effects	Risks
Quercetin Other names: Q-chews	Strong antioxidant Caffeine-like effects(adenosine antagonism) Anti-inflammatory, anti-pathogenic, cardio-protective.	Studies have demonstrated immune enhancing anti fatigue properties. Researched by DARPA.	500mg/day used. No adverse effects reported.