NOOTROPICS

url: https://www.opss.org/infographic/brain-health-guide  
  
  
NOOTROPICS: DRUGS VS DIETARY SUPPLEMENTS FOR BRAIN HEALTH  
Nootropics also referred to as cognitive enhancers, smart drugs, memory enhancers, or brain boosters are substances intended to improve mental performance. The term nootropic originally referred to a chemical that met very specific criteria: enhances memory, helps brain function, protects the brain, and is relatively safe. No evidence exists to show that any dietary supplement product can satisfy all (or any) of these criteria. Today, however, the term is used more loosely and often refers to any naturally-occurring or synthetic (that is, created in a lab) substance that might act as a cognitive enhancer.   
  
Nootropic dietary supplements sometimes contain drugs and other ingredients that have not gone through the appropriate regulatory framework. Many lack sufficient reliable evidence to show they are either safe or effective.  
  
Some dietary supplements marketed as nootropics contain ingredients prohibited for use by Service Members.  
  
Nootropic products fall into two general categories: dietary supplements and drugs (prescription and over-the-counter). They contain substances (foods, herb, botanicals, dietary ingredients, pharmaceuticals) marketed to improve mental performance or functions including memory, focus, motivation, concentration, and attention and for overall brain health.  
  
The problem with nootropic dietary supplements is that they might contain drugs (approved, unapproved, or both) or potential new dietary ingredients.   
  
Nootropic dietary supplements  
Dietary supplements for brain health marketed as natural or herbal nootropics might include ingredients such as ashwagandha, Bacopa monnieri, Ginkgo biloba, ginseng, huperzine A, omega-3 fatty acids, rhodiola, and valerian. Even some vitamins and minerals are marketed as nootropics, such as the B-complex vitamins and magnesium. Although such ingredients seem to be safe when taken in low doses and for the short term, so far the evidence to show whether any non-drug substance can improve cognitive performance is insufficient.  
  
Some nootropic dietary supplement products contain multiple or mixtures of ingredients, with no evidence of how these ingredients might interact. Many contain proprietary blends that leave the consumer unaware of how much of each individual ingredient is in a product. And remember: More is not always better.  
  
Nootropic drugs  
Prescription nootropic drugs are FDA-approved for specific medical purposes, such as to treat attention deficit hyperactivity disorder (ADHD) or Alzheimer s disease. For example, modafinil, methylphenidate, and various drugs for Alzheimer s would be classified as nootropics. These drugs have been proven to be safe and are intended only for use under medical supervision.  
  
Over-the-counter drugs, like prescription drugs, must be approved by FDA, and several could be considered nootropic. For example, the product NoDoz is marketed to maintain alertness.  
  
Unapproved drugs are drugs that have not yet been approved by FDA, so we don t know whether they are safe or effective. Ingesting these substances, either knowingly or unknowingly, poses a risk to any individual. Currently, racetam drugs are not approved by FDA for use in the U.S. as drugs or dietary supplement ingredients, although some are approved drugs (currently or in the past) in other countries. Vinpocetine, sulbutiamine, phenibut, and huperzine A have been approved as drugs in countries outside the U.S., so they are additional examples of unapproved drugs often found in nootropic dietary supplements.  
  
Nootropic dietary supplements sometimes contain drugs  
FDA regulates dietary supplements differently than prescription drugs. Dietary supplements do not require FDA approval prior to marketing, so dietary supplement products can be misbranded or adulterated. FDA also has found some nootropic dietary supplements to be tainted with drugs or other ingredients that have not gone through the FDA regulatory pathway. Sometimes these ingredients are hidden that is, they aren t disclosed on the product label.  
  
Some nootropic dietary supplements are marketed with questionable claims. For example, some nootropic and cognitive-enhancing dietary supplement products claim they can enhance mental performance and make your brain healthier. By law, however, a dietary supplement cannot claim to treat or prevent any medical condition. When a dietary supplement product makes such claims, according to FDA, the ingredients are considered new drugs, and the product cannot be sold without going through FDA s pre-market approval process required for drugs.  
  
Many consumers believe dietary supplement products are natural and therefore safe but this isn t necessarily the case, especially when they contain drugs.  
  
Ingredients to watch out for  
  
Some ingredients in nootropics marketed as dietary supplements have not gone through the FDA regulatory pathway to actually be used in dietary supplements. Some of these could actually be drugs. Examples of some ingredients to watch out for and reasons for concern are noted below.  
  
Ingredients on the DoD Prohibited Dietary Supplement Ingredients List  
adrafinil\* (Olmifon, Noofon)  
DMHA (octodrine)\*  
DMAA\*  
higenamine\*  
methylphenidate\* (Ritalin, Concerta)  
modafinil\* (Provigil)  
phenibut  
racetam drugs: piracetam, aniracetam, oxiracetam, omberacetam (Noopept), phenylpiracetam\* (Phenotropil), pramiracetam (Nootropil), etc.  
sulbutiamine  
vinpocetine  
Other questionable ingredients ( natural and herbal ingredients)  
  
B-PEA (b-phenylethylamine or beta-phenethylamine)\*  
halostachine (N-methyl phenylethanolamine)  
huperzine A  
\*On the World Anti-Doping Agency Prohibited List  
  
For a look into the evidence about some of the ingredients marketed for brain health mentioned above, read the OPSS articles on ashwagandha, Bacopa monnieri, Ginkgo biloba, huperzine A, omega-3 fatty acids, phenibut, and vinpocetine.