

Disclaimer: The information in this guide is for educational purposes only please make sure to consult your doctor before acting on any of this information especially when it comes to prescription medication.

Intro

The nootropics industry has grown exponentially over recent years and for good reason. Nootropics are compounds that aim to improve our brains, productivity, and longevity, and users are reaping many benefits. The origin of the term nootropic comes from a psychologist and chemist named Dr. Corneliu Giurgea who coined it in the 1970's. His research was based on a compound he had synthesized called piracetam, which was shown to boost cognitive abilities, including memory, creativity, and verbal fluency. Since those days the modern definition of a nootropic has grown to include any synthetic or natural substance that enhances memory, concentration, or other cognitive functions and has very few side effects, neuroprotective qualities, and very low toxicity.



Common Misconceptions: Nootropic vs Cognitive Enhancers

Nootropics often get mixed up with cognitive enhancers and it's important to differentiate the two. While all nootropics are cognitive enhancers, not all cognitive enhancers are nootropics. Some cognitive enhancers are compounds that can enhance certain cognitive functions but are not neuroprotective and may have significant negative side effects.



For example, Adderall is a stimulant drug that can enhance attention and focus but it can cause damage to the heart and cardiovascular system and has been shown to be neurotoxic [1]. Furthermore, Adderall may actually impair cognitive ability for some individuals doing complex tasks [2].

Another big distinction is that the body will build up tolerance to certain cognitive enhancers and their effects will lose strength over time, whereas nootropics maintain their potency with regular use.

Popular Types of Nootropics

As interest in brain hacking grows, people are investigating new compounds and combining currently available ones to gain a mental edge. As a result, we have a lot of excellent information about nootropic substances. However, there is still a lot of poorly researched substances and misinformation online about cognitive enhancing compounds so always use caution and reputable guides when taking any new supplement.



The main types of nootropics tend to fall in one of the following seven categories- racetams, ampakines, natural herb and plant derived, choline, vitamin B derivatives, peptides, and smart drugs. We'll explore each category and show you the most popular compounds in each.

1. Racetams

Probably one of the more commonly known groups of nootropics, racetams are a class of synthetic drugs that include the original nootropic piracetam.

All racetams have similar mechanism of action and chemical structure, made up of oxygen, hydrogen and nitrogen. There are several drugs that have been developed in the racetam family with each differing slightly in function, dose, and strength. Overall, racetams may improve brain health, reduce anxiety, and improve mood, memory, and mental stamina.

One of racetams key functions for enhancing overall cognition is that they boost the amount of oxygen, glucose, and nutrients reaching your brain [3], [4].

Research has also shown that racetams can improve cell membranes which tend to deteriorate with age. Increasing fluidity of cell membranes allows better communication between cells which results in a boost in overall functioning [5].

Racetams have been shown to improve cognitive function in various studies and may also be effective for reducing symptoms of dyslexia, protect the brain from changes related to Alzheimer's, improve cognitive performance in dementia, and reduce seizures [6].

Common Types

- Piracetam, Aniracetam, Oxiracetam, Pramiracetam, and Phenylpiracetam

2. Ampakines

Ampakines are positive allosteric modulators of AMPA receptors which ultimately results in increased glutamate in your brain.

Glutamate is the most abundant neurotransmitter and is involved in pretty much every chemical reaction in your brain.

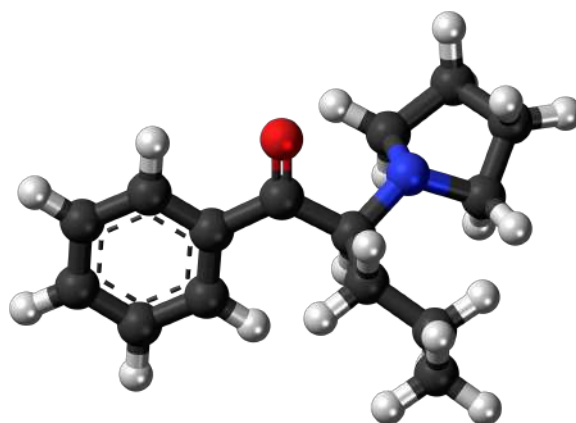
Ampakines have an excitatory effect and may improve communication in complex networks, facilitate long-term memory, and increase brain growth factors [7].

There are a range of ampakines that have been developed and are being investigated for use with conditions such as Alzheimer's, Parkinson's, Schizophrenia, treatment-resistant depression, and ADHD [8].

While some ampakines have been around a while and are commonly used as nootropics, others compounds are still being investigated.

Common Types

- Sunifiram, Unifiram, Ampalex (CX-516), CX-614, CX-546, CX-717 and LY-404187



3. Natural Herb and Plant Derived



Some of the most interesting nootropic agents grow in nature. For centuries, humans have used various plants and fungi for their medicinal benefits and scientists have uncovered that many of these natural substances have nootropic properties.

Mushrooms such as Lion's Mane have even been shown to increase Nerve Growth Factor in your brain which results in nerve growth and regeneration [8]. Herbs like Gotu Kola and Ashwagandha promote new channels of communication in the brain by causing growth of axons and dendrite branches on brain neurons [9], [10].

Tumeric's active ingredient curcumin has been shown to boost Brain Derived Neurotrophic Factor, which increases learning by producing new neurons [11].

Additionally, many other natural plant and herb nootropics reduce inflammation, improve focus, are neuroprotective, and can improve mood, reducing symptoms depression and anxiety.

Common Types

- Lion's Mane, Gotu Kola, Ashwagandha, Tumeric, Bacopa Monnieri, Rhodiola rosea, Caffeine, Omega-3 (EPA & DHA), Ginkgo biloba, Phenylethylamine, and Huperzine-A.

4. Choline



Choline is an essential nutrient that your body needs but does not produce on its own.

You will find a source of choline at the center of any good nootropic stack since many substances increase the use of acetylcholine, a key neurotransmitter essential to cognitive processes such as attention, focus, memory, and sleep.

Natural sources of choline include egg yolks, liver, beef, salmon, and cauliflower but most people find it best to take it in supplement form when using it as a nootropic.

Choline on its own can increase mental energy, focus, and result in faster memory recall. However, it shines most when used with racetams or other nootropics that boost acetylcholine [12]. Choline supplements will reduce the risk of racetam headaches and will also work synergistically with these compounds, enhancing their benefits.

Common Types

- Alpha-GPC, Choline Bitartrate, Choline Citrate, CDP-choline (Citicoline), and DMAE

5. Vitamin B Derivatives



B vitamins are necessary for maintaining a healthy brain and nervous system. The body cannot create enough B vitamins so they must be supplemented through the diet. They are also water-soluble which means they are depleted easily by activities of daily life.

Research has shown that depletion of vitamin B12 is associated with poor memory and decreased brain volume [13].

Supplementation with B vitamins can improve overall metabolism, blood-flow to the brain, mood, memory, and can reduce stress [14].

Supplementing with B vitamins is one of the most cost-effective ways you can improve your health and they safely stack with most supplements.

Common Types

- B1 (Thiamine), B2 (Riboflavin), B3 (Niacin), B5 (Pantothenic Acid), B6, B8 (Inositol), B9 (Folic Acid), B12 (Cobalamin)

6. Peptides



Peptides are short branches of amino acids linked by peptide bonds. In simpler terms, they are the building blocks of proteins.

One of the benefits of peptides is that they are delivered in a form that is already broken down and easy for your body to use. Current research on existing nootropic peptides has shown they can increase both Brain Derived Neurotrophic Factor and Nerve Growth Factor in the brain [16]. Both are key to growing new nerve cells which can enhance cognitive performance across the board [17].

Nootropic peptides may also offer potent antioxidant support, increased blood flow, and anti-inflammatory effects.

Studies have also found that there are beneficial anti-anxiety effects [18]. As more compounds are created and examined, peptides are quickly becoming one of the most exciting areas of nootropic research.

Common Types

- Noopept, Semax, Cerebrolysin

7. Smart Drugs

There are several classes of substances that don't fit in any of the former categories and have mainly been on the market for pharmaceutical purposes. Many of the “smart drugs” are only available by prescription but are worth discussing.

One of the most popular smart drugs is modafinil, sold under the name Provigil. It is generally used to treat narcolepsy but studies have shown that it reduces fatigue, improves memory, and can enhance cognitive functioning, especially in people who are sleep deprived [19].

Adrafinil and flmodafinil are research compounds similar in structure and purpose to modafinil which may have similar benefits. It is important to know that modafinil and adrafinil are both banned by the World Anti-Doping Agency.

Memantine is another common smart drug sold under the name Namenda. Memantine is used to treat Alzheimer's by binding to and blocking NMDA receptors which counteracts toxicity and preserves brain cells. It also acts on dopamine and serotonin. There is some evidence that it can help with ADHD [20] and PTSD while also improving mood, memory and concentration [21]. You may see cognitive enhancers such as methylphenidate (ritalin), and various methamphetamine salts (i.e. Adderall) listed as nootropics, however the serious side effects, tolerance build up, abuse potential, and potential neurotoxicity excludes them from inclusion as a nootropic.

Always use caution when taking any smart drugs and be aware of all possible interactions and side effects associated with use. **AND PLEASE MAKE SURE TO CONSULT YOUR DOCTOR BEFORE TAKING ANY MEDICATION.**



Common Types

- Modafinil, Adrafinil, Flmodafinil, Memantine, and Donepezil

Stacking Nootropics



Combining various nootropics can be an excellent strategy to optimize the benefits of individual compounds and capitalize on the various beneficial actions of the different classes of nootropics. Many nootropics are mild in their action and have minimal side effects so it is common to stack 3, 4 or even more compounds in order to have effects that are stronger and last longer.

For beginners, combining a choline source with a racetam is considered one of the most essential stacks for optimizing benefits and reducing side-effects. Many other compounds work together synergistically, for instance, vitamin B5 is used indirectly in the synthesis of acetylcholine so taking it with a choline supplement can further increase acetylcholine levels.

Another strategy would be combining anxiety reducing compounds like Noopept and aniracetam to enhance the anxiolytic effects of the compounds. The combinations of stacks are endless and you can target your specific goals, such as studying, by choosing nootropics that enhance specific abilities, such as memory, focus, and mental energy.

Many supplement companies offer pre-mixed stacks that target a specific mechanism of action and optimize the combination of supplements to take the guesswork out for you.

How to Identify What Works For You



When starting out with nootropics it's best to begin with more widely used and well-researched compounds.

Choose a compound based on your specific goal and begin to implement it into your life. Each one will have specific dosing recommendations which should always be followed. Since each person is unique, not everyone will experience each compound the same so sometimes you merely need to try it out for yourself.

It is also important before beginning your nootropic routine to have other elements of your life in order. A good sleeping schedule, regular exercise, and a healthy diet will work synergistically with these compounds in order to optimize their effects for you.

Check out our [Ultiself Habit Directory](#) and [Routine Guides](#) get you started and learn other habits that will help you reach your goals.

Conclusion

Whether you are an experienced user or just getting started, nootropics can offer you a mental edge and improved health in the most important organ you have- your brain. As research continues to uncover the exciting benefits of these compounds, users are happily jumping on the bandwagon and finding improvements in mood, memory, cognition, and overall brain health by implementing nootropics in their lifestyles. Always stay informed about the substances you are using and pay attention to how your body responds to individual supplements. As you continue to find ways to improve your productivity and well-being, nootropics can offer a healthy way to optimize your potential.

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