On the topic of "Brain Boosting" Supplements

Dr. Bruno’s Original Post: Study Discovers Multiple Unapproved Drugs in “Brain Boosting” Supplements. Could Over-the-Counter “Smart Drugs” Pose Health Risks? 17-Sep-2020 From Newswise, by American Academy of Neurology (AAN)

Supplements that claim to improve mental focus and memory may contain unapproved pharmaceutical drugs and in potentially dangerous combinations and doses, according to a new study published in the September 23, 2020, online issue of Neurology® Clinical Practice, an official journal of the American Academy of Neurology. Researchers found five such drugs not approved in the United States in the supplements they examined. The supplements are sometimes called “nootropics,” “smart drugs” or “cognitive enhancers.”

“Over-the-counter cognitive supplements are popular because they promise a sharper mind, but they are not as closely regulated as pharmaceutical drugs,” said study author Pieter A. Cohen, M.D., of Harvard Medical School in Boston, Mass. “Use of these supplements poses potentially serious health risks. Not only did we detect five unapproved drugs in these products, we also detected several drugs that were not mentioned on the labels, and we found doses of unapproved drugs that were as much as four times higher than what would be considered a typical dose.”

Cohen said the supplements could be especially risky if used in combination with prescriptions drugs or instead of seeking medical advice.

Unlike pharmaceutical drugs that must be proven safe and effective for their intended use before they are marketed to consumers, the law does not require the U.S. Food and Drug Administration (FDA) to approve dietary supplements for safety or effectiveness before they reach the consumer. The FDA takes action after the products reach the market if they are mislabeled or contain unapproved products.

For the study, researchers searched the National Institutes of Health Dietary Supplement Label Database and the Natural Medicines Database for cognitive supplements that listed drugs similar to piracetam, a drug previously found in supplements but not approved in the U.S. They were looking for analogs of piracetam, drugs with a similar but slightly different chemical structure. Analogs are sometimes introduced into supplements to circumvent laws.

Researchers identified 10 supplements, eight that promised to enhance mental function, one that was marketed as “workout explosives” and another that had the words “outlast, endure, overcome” on the label.

Researchers examined the contents of each supplement using various methods and measured quantities of each drug present. In the 10 supplements they examined, researchers detected five unapproved drugs. Two were analogs of piracetam called omeracetam and aniracetam. The others were the unapproved drugs vinpocetine, phenibut and picamilon. The FDA has issued a warning that vinpocetine should not be consumed by women of childbearing age. While all of the risks of these drugs are not known, side effects include increased and decreased blood pressure, agitation, sedation and hospitalization.

All 10 supplements contained omeracetam, which is prescribed in Russia for traumatic brain injury and mood disorders. A typical pharmaceutical dose would be 10 milligrams (mg). The doses in a
recommended supplement serving size were as high as 40 mg, four times greater than in pharmaceutical dosages.

Some supplements contained more than one unapproved drug. One product combined four of the unapproved drugs.

“With as many as four unapproved drugs in individual products, and in combinations never tested in humans, people who use these cognitive enhancement supplements could be exposing themselves to potentially serious health risks,” said Cohen. “The effects of consuming untested combinations of unapproved drugs at unpredictable dosages are simply unknown and people taking these supplements should be warned.”

Researchers also found that for those products with drug quantities provided on the labels, a majority of the declared quantities were inaccurate. “The fact that these supplements are listed in official databases does not mean the labeling is accurate or the dosage levels of ingredients in these supplements are safe,” said Cohen. “U.S. law does not permit unapproved pharmaceuticals to be introduced into dietary supplements, but the law places the burden of eliminating those products on the FDA. The FDA has issued a series of warnings to companies selling supplements with unapproved drugs, yet such drugs remain openly listed on databases as ingredients in supplements. Our study also raises concerns regarding the quality and legality of supplements listed in supplement databases.”

One limitation of the study was that it didn’t look at all unapproved drugs that are marketed in cognitive supplements.

https://www.newswise.com/articles/study-discovers-multiple-unapproved-drugs-in-brain-boosting-supplements#

**On the topic of CBD and Drug Interactions**

Dr. Bruno’s Original Post: **CAUTION**: CBD and Rx Drug Interactions. (Check you meds against the list of drugs to be watched at [www.drugs.com/drug_interactions](http://www.drugs.com/drug_interactions))

From Newswise and the **Penn State College of Medicine**

Newswise — Cannabinoid-containing products may alter the effects of some prescription drugs, according to Penn State College of Medicine researchers. They published information that could help medical professionals make safe prescribing choices for their patients who use prescription, over-the-counter or illicit cannabinoid products.

Kent Vrana, professor and chair of pharmacology at the College of Medicine, and Paul Koci, a pharmacist at Penn State Health Milton S. Hershey Medical Center, compiled a list of 57 medications that may not function as intended when used with medical cannabinoids, CBD oil (hemp oil) and medical or recreational marijuana. The list was published in the journal Medical Cannabis and Cannabinoids.

The medications on the list have a narrow therapeutic index, meaning they are prescribed at specific doses – enough to be effective, but not enough to cause harm. Vrana says it’s important for medical professionals to consider the list when prescribing medical cannabinoids and how it may affect other medications a patient is taking.

To develop the list, the researchers looked at the prescribing information for four prescription cannabinoid medications. This information included a list of enzymes in the body that process the active ingredients in those medications, which can include delta-9-tetrahydrocannabinol (THC) and cannabidiol (CBD). They compared this information against prescribing information from common medications using information available from regulatory agencies like the U.S. Food and Drug Administration to identify where there may be overlap, called a drug-drug interaction.
The list contains a variety of drugs from heart medications to antibiotics and antifungals. As one example, researchers identified warfarin, a common anticoagulant that prevents harmful blood clots from forming, as having a potential drug-drug interaction with cannabinoid products. Often prescribed for patients with atrial fibrillation or following cardiac valve replacement, the drug has a narrow therapeutic index, and Vrana cautions that medical professionals consider this potential drug-drug interaction both when prescribing warfarin to patients on prescription cannabinoids or prescribing cannabinoids to a patient taking warfarin.

The researchers say that medical professionals should also consider patient use of CBD oil products and medical and recreational marijuana when using or prescribing drugs on the identified list. Most of those products lack government regulation and there is little to no prescribing or drug-drug interaction information for those products.

“Unregulated products often contain the same active ingredients as medical cannabinoids, though they may be present in different concentrations,” Vrana said. “The drug-drug interaction information from medical cannabinoids may be useful as medical professionals consider the potential impact of over-the-counter or illicit cannabinoid products.”

Vrana advises that patients be honest with their health care providers about their use of cannabinoid products – from over-the-counter products to recreational marijuana. He says that doing so can help ensure the safe and effective use of prescribed medications.

In addition to the identified list of 57 prescription medications with a narrow therapeutic index that is potentially impacted by concomitant cannabinoid use, a comprehensive list of 139 medications that could have a potential drug-drug interaction with a cannabinoid is available online. Vrana and Kocis plan to routinely update this drug-drug interaction list as newer medications are approved and real-world evidence accumulates.

https://www.newswise.com/articles/cannabinoids-may-affect-activity-of-other-pharmaceuticals?sc=mwhn

On the topic of Diaphragm Weakness and Sleep Apnea

Question: Can sleep apnea be related to a weakened diaphragm? During my last surgery they kept waking me to breathe. I've never experienced this during any surgery.

Dr. Bruno’s Response: You need to remember that muscles are not damaged in polio survivors; it’s the nerves that turn on the muscles that are damaged. The nerves in your brain stem that make you breathe were likely damaged and can cause “CENTRAL” SLEEP APNEA, where your brain forgets to tell your diaphragm to move. Damage can also cause “OBSTRUCTIVE” SLEEP APNEA, which is when the muscles of your throat get floppy and close off your airway. Your problem during surgery was more likely obstructive apnea but could have been central as well. A sleep study could tell you which one it was, keeping in mind that you could have both kinds of apnea.

On the topic of the Herbal Supplement GABA

Question: Is the herb supplement GABA (Gamma-Aminobutyric Acid) something that could be beneficial for those sleepless nights? I currently take melatonin to help sleep but thought this could be a better option.

Dr. Bruno’s Response: There is no good research on GABA supplements aiding sleep. Researchers haven’t confirmed whether GABA supplements work or even if they reach the brain to have any effect. Save your money and the any side effects. I would recommend you talk to your doctor about having a sleep study to find out why you can't sleep.
On the topic of Medications like Adderall or Strattera

Question: Could you please tell me about this med Adderall or better yet Strattera which is atomoxetine (much higher cost, said to have less chance of addiction) for ADHD and to support weight loss.

Dr. Bruno’s Response: In my opinion, no stimulant should be taken to “support” weight loss or to treat fatigue. These drugs suppress dopamine receptors in the brain and will eventually increase fatigue and concentration problems. If you have ADHD as an adult you need to see a specialist and consider cognitive behavioral therapy instead of medication.

On the topic of the Medication Propranolol

Question: My neurologist put me on 80 mg propranolol ER a few years back for essential tremors. I still have tremors and don't feel it's doing me any good, except I'm more tired. I finally said I want to wean off this med. The PA sent in a script for 60 mg and told me after 7 days to stop it completely. They did tell me keep an eye on my blood pressure. I am so concerned about the after effects of going off this so rapidly.

Dr. Bruno's Response: First, propranolol causes fatigue in polio survivors and will decrease blood pressure. It’s one of the drugs polio survivors should question when prescribed.

Second, stopping quickly can cause a spike in blood pressure and heart rate. With any drug, weaning isn’t “take less and after 7 days stop it completely.” That’s cold turkey. The drug company’s recommendations are “when discontinuation of [propranolol ER] is planned… the dosage should be gradually reduced over a period of at least two weeks and the patient should be carefully monitored.”

I recommend you let the physician wean medications, not the physician assistant. I would call the doctor’s office and demand a prescription that allows you to taper slowly over the course of two weeks as the manufacturer of the drug recommends.

On the topic of Polio Infected Siblings and Neighbors

Dr. Bruno’s Post:

From THE POLIO PARADOX:

"In 5% to 20% of households where poliovirus attacked one family member, another was also stricken. From 1909 to 1955 more than 2000 family members in over 1000 households were surveyed in which at least one person had polio. On average if one child in a household became ill he "shared" polio with one other sibling of similar age. Just over half of those who became ill were paralyzed, while the others had flu-like symptoms ranging from a fever, sore throat and nausea to a stiff neck and muscle pain. This "minor illness" was caused by the poliovirus but may never have been diagnosed as polio at all, or may have been called "abortive" or "non-paralytic" polio. In three-quarters of the households, the first case of polio was paralytic and the second was "non-paralytic."

Bottom line: there’s about a 1-in-5 chance that if you had paralytic polio one of your brothers or sisters had non-paralytic polio and may not even have known it.

On the topic of Polio Compromising the Immune System
Question: Since we’ve had Polio and now PPS, are we classified as having a compromised immune system?

Dr. Bruno’s Response: NO. Having had polio does not mean you had a compromised immune system. And having PPS has nothing to do with a compromised immune system.

On the topic of Restless Legs at Night

Question: I’ve had restless legs for years. It feels like I need to get up and move my legs because they won’t stay still. My doctor prescribed 2 mg. of Ropinorole before bedtime. Is it common with PPS?

Dr. Bruno’s Response: “Need to get up and move my legs” is the definition of RLS, restless legs syndrome. Legs that “won’t stay still” is the definition of PLMS (Periodic Leg Movements in Sleep).

At the Post-Polio Institute, we discovered that about 1.0 mg of alprazolam 30 minutes before bed stops the leg movements. Search For: "Sleep Issues" in the ENCYCLOPEDIA of POLIO & PPS “Articles (by Subject)” and "Restless Legs" in the “Complete Encyclopedia Index” where you will find 17 entries. Subject)" at https://www.papolionetwork.org/encyclopedia.html

On the topic of Saving What you Have

Question: My wrists and arms are taking a beating, especially getting up out of a chair, couch, etc. I use KAFOs on both legs. I am trying to reduce my "ups and downs." Can you help me with other suggestions? I’m trying to avoid a wheel chair as long as I can.

Dr. Bruno’s Response: Perhaps you can raise the chair/couch with thicker/additional cushions or with "blocks" to raise the entire thing. However, avoiding a wheelchair as long as you can is THE recipe for post-polio disaster. If you wait "as long as you can" there will be no motor neurons or strength left. You need the wheelchair NOW to save what you have!

On the topic of Undiagnosed Polio

Question: I have a friend who at the age of 79 is now developing weakness in her hips. She was around me when I got polio and her cousin was the carrier. The question is can she have a normal EMG I still have had polio? The doctor told her that she could not have had polio because her nerves are fine.

Dr. Bruno’s Response: 10-15% of polio survivors have NORMAL EMGs because their nerves were damaged but not killed. So there are no sprouts to show up on the EMG.

From THE POLIO PARADOX:

“Almost 10% of patients who had a history of polio and with muscle weakness, and who were reporting new pain, fatigue or weakness today, had normal regular EMGs, meaning that there was no EMG evidence that they ever had polio.

On the other hand, it has been suggested that every polio survivor get an EMG to identify muscles that were NOT affected by the poliovirus to identify which limbs can be exercised without worrying that they will become weaker. One pre-exercise study using regular EMG found that almost 25% of paralytic polio survivors’ limbs had no evidence of motor neurons having been killed. Those limbs were classified as having "no clinical polio" and therefore could be exercised like anyone else's muscles. However, neurologist Carlos Luciano using a special "macro" EMG found oversprouted motor neurons in 85% of muscle that were thought to have had "no clinical polio." And research by David Bodian and Alan McComas showed that seemingly unaffected muscles had lost 40% of the motor neurons...."
Search "EMG" in the **ENCYCLOPEDIA of POLIO & PPS**, “Complete Index” and “Articles” which are listed (by Subject) at https://www.papolionetwork.org/encyclopedia.html

**On the topic of Rolling Walkers with Seats**

**SEATED WALKERS**

I know. “Seated walker” is an oxymoron. And so are most walkers with seats. You want support when you walk and a solid seat when you need a break. The problem is most walkers with seats have bars in the back to hold up the seat. Those bars prevent you from getting your body “inside” the wheelbase and handles of the walker. You end up having to lean forward so you don't hit your shins or knees on the seat support bars.

There are a very few walkers with a long wheelbase and adjustable handles that allow you to walk “inside” the frame and be supported, e.g., the Lumex Walkabout Allura/Allura LX Rollator (LX5000LX-3T) (LEFT). Less expensive is the OasisSpace Lightweight Aluminium Rollator Walker (RIGHT).

Whichever you roll (and test sit)

Bars hit shins/knees

Fancy, always good to test before you buy.

The Encyclopedia of Polio and Post-Polio Sequelae

contains all of Dr. Richard Bruno’s articles, monographs, commentaries, “Bruno Bytes” (Questions & Answer articles) and his Video Library.

The Encyclopedia of Polio and PPS is also available by a direct link from: [www.postpolioinfo.com](http://www.postpolioinfo.com)

**Are you looking for a specific topic?**

The Encyclopedia Index (By Subject) is available by clicking HERE