

Complementary and Integrative Medicine



What is Cowhage/Mucuna Pruriens?

It is a wild bean-like plant that grows in tropical climates. The bean, seed, and pod are all used to make medicine. It was first used by a Hindu system of medicine to treat Parkinson's disease. Allopathic medicine currently uses it for the same thing. It contains a chemical called L-Dopa which turns into dopamine in the brain. This bean is also used to treat arthritis, anxiety, low prolactin levels, and to induce vomiting, and snake bite. Unfortunately, in its natural state only a very small portion of it reaches the brain due to the human digestive system, unless it is mixed with other chemicals.

What Are The Side Effects of Cowhage/Mucuna Pruriens?

- **The most common side effects:**
 - nausea, bloating, vomiting, insomnia, and abnormal body movements
- **Less common side effects:**
 - “...headache, pounding heartbeat, and symptoms of psychosis including confusion, agitation, hallucinations, and delusions”.
- **Contraindications:**
 - pregnancy/breast feeding, heart or blood vessel disease, low blood sugar, diabetes, diseases of the liver, melanoma, ulcers of the stomach, mental illness, and upcoming surgery
- **Negative interactions with medications:**
 - MAOIs, blood pressure medication, diabetes medication, antipsychotics, tricyclics, anesthesia

Cowhage/Mucuna Pruriens



Reference

Author (2009). Cowhage. WebMD. From website:

[http://www.webmd.com/vitamins-supplements/ingredientmono-1020-cowhage.aspx?activeingredientid=1020&activeingredientname=cowhage.](http://www.webmd.com/vitamins-supplements/ingredientmono-1020-cowhage.aspx?activeingredientid=1020&activeingredientname=cowhage)

How Many Types of Dopamine Are There?

There are 5 types of Dopamine (D1, D2, D3, D4, D5) in the human brain. Each one has a very different function. Each one or combination may be related to different disorders.

Beaulieu, J.-M. et al. (February 8, 2011). The Physiology, Signaling, and Pharmacology of Dopamine Receptors. Pharmacological Reviews. DOI: 10.1124/pr.110.002642.

Subtypes of Dopamine Genes Related to AD/HD

1. **Dopamine Transporter Gene: DAT1**
2. **Dopamine Reuptake Gene: DRD4-7R**

Swanson, J.M., et al. (January 24, 2000). Dopamine genes and ADHD. Neuroscience Neurobehavioral Review. 24(1), 21-25.

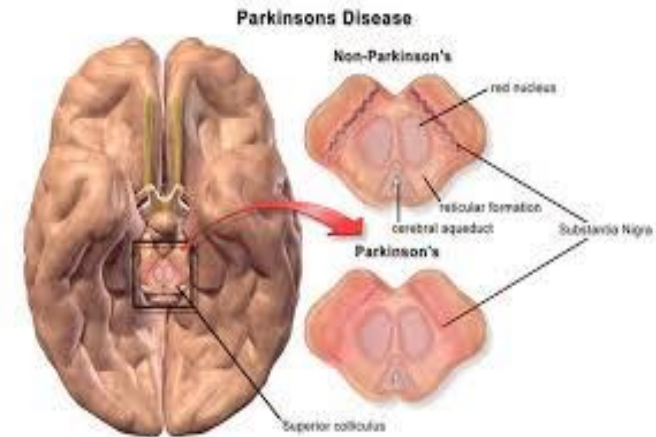
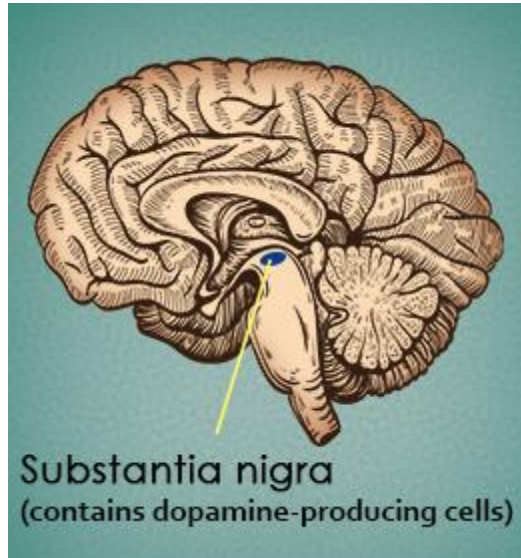
Dopamine Gene Related to Parkinson' Disease

Japanese researchers found the DJ-1 subtype gene is related to the amount of dopamine contained the substantia nigra of the brain.

Hiroyoshi, A. et al. (2013). Neuroprotective Function of DJ-1 in Parkinson's Disease. Oxidative Medicine and Cellular Longevity. DOI: 10.1155/2013/683920.

The substantia nigra is related to motor control, emotions and learning.

Pictures of the Substantia Nigra



Mucuna Pruriens and Parkinson's Disease

Scientist found that Mucuna Pruriens can be useful in treating Parkinson's Disease and can be well tolerated as well as offer a natural alternative to pharmaceuticals.

Katzenschlager, R. et al. (December, 2004). Mucuna pruriens in Parkinson's disease: a double blind clinical and pharmacological study. Journal of Neurology, Neurosurgery and Psychiatry. 75(12), 1672-1677.

Lewy Body Dementia and AD/HD

Argentine scientists discovered that a group of adults with Lewy Body Dementia had a high likelihood of having AD/HD previously. However, they could not say one caused the other.

Golimstok, A. et al. (January 18, 2011). Previous adult attention-deficit and hyperactivity disorder symptoms and risk of dementia with Lewy bodies: a case-control study. European Journal of Neurology. DOI: 10.1111/j.1468-1331.2010.03064.x

Russell Barkley & CAM Treatments

“We should all eat dung, because a thousand flies can’t be wrong!”

--Russell Barkley, PhD

Barkley, R.A. (1998). ADHD in Children, Adolescents, and Adults: Diagnosis Assessment and Treatment. New England Educational Institute, Cape Cod Symposia, August, Pittsfield, MA.



CAM Therapies

“Today’s complementary and alternative medicine is tomorrow’s mainstream, but first it must meet with rigorous scientific evaluation.”

Alan Leshner, PhD, National Advisory Council for Complementary and Alternative Medicine and CEO of the American Association for the Advancement of Science (p. 44)

Dittmann, M. (June, 2004). Alternative Health Care Gains Steam. *Monitor On Psychology*, 35 (6), pp. 44.

Who Uses CAM Therapies?

- **In 2007, 38.3% of adults and 11.8% of children used CAM therapies**
- **Adults age 50 to 59 were the highest users of CAM therapies with 44.1%**
- **Native Americans/Native Alaskans are the highest users by ethnic group to use CAM therapies at 50.3%**
- **4.5% of adults treated depression/anxiety with CAM therapies in 2002**

2.5% of children in 2007 received CAM therapies to treat ADHD

Author (December 2008). The Use of Complimentary and Alternative Medicine in the United States. Washington, DC: National Center for Complimentary and Alternative Medicine. From website: <http://nccam.nih.gov/news/camstats/2007/camuse.pdf>.

How Many People Use Alternative Therapies?

- **56% of those with anxiety use alternative treatments**
- **53% with Depression**
- **16% of hospital offer CAM therapies**
- **Highest rates used by those with serious and debilitating conditions**

Dittmann, M. (June, 2004). Alternative Health Care Gains Steam. Monitor On Psychology, 35 (6), pp. 42-44.

Why People Use CAM Therapies

- **Addiction fears**
- **Religious convictions**
- **Fears that putting their child on medication would preclude them from occupations when they grow up (i.e., military, airline pilot, etc.)**
- **Fears about medications in general because of recent problems with medications that treat other disorders**

Why People Use CAM Therapies

- **CAM practitioners use a holistic approach and spend more time with the patient**
- **CAM methods can be viewed as preventive**
- **CAM methodologies tend to be more customized for the patient**
- **CAM can be far less costly**

There is More to life than Symptom Reduction

- Can you meet your goals?
- Can you fulfill your roles?
- Do you have a good quality of life?
- Are you happy?
- Are you anxious and/or depressed?
- Etc.



Ramsay, R. (2010). Nonmedication treatments for adult ADHD. Washington, DC: American Psychological Association Press, p. 3.

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Evidence Based Practice



“Evidence-based practice is the integration of best research evidence with clinical expertise and patient values.”

Sackett, D.L., Straus, S.E., Richardson, W.S., Rosenberg, W., and Haynes, R.B. (2000). Evidence Based Medicine: How to Practice and Teach EMB (2nd Edition). London, Great Britton: Churchill Livingstone.

Things to Watch for When Reading A Study

When to question if a treatment is legitimate:

- **When no research in peer-reviewed journal is available;**
- **When they say, “traditional medicine, etc.” refuses to accept what they are saying;**
- **If most professionals would not use the method**
- **when the person pushing the treatment says, “...prove me wrong...” (p.4).**

Silver, L. (Summer, 2001). Controversial Therapies, Theme Editor’s Summary. Perspectives, 27 (3), 1 and 4.

What Does a Good Research Study Have?

- **Random assignment into groups**
- **A control group where everyone in the group gets no treatment and/or a
 - **placebo, or “sham” treatment****
- **The research subjects and researcher should be “blind” to which treatment subjects are receiving**
- **A large group of subjects: 1 is no good, 1000 is much better**
- **Have the results been replicated?**
- **Who paid for the study?**

References

- Ingersoll, B., and Goldstein, S. (1993). Attention-Deficit Disorder and Learning Disabilities: Realities Myths and Controversial Treatments. New York, NY: Doubleday.
- Silver, L. (Summer, 2001). Controversial Therapies, Theme Editor's Summary. Perspectives, 27 (3), pp.1 and 4.
- Arnold, L.E. (2002). Contemporary Diagnosis and Management of Attention-Deficit/Hyperactivity Disorder. Newtown, PA: Handbooks in Health Care.
- Rappaport, L.A., & Kemper, K.J. (2003). Complementary and Alternative Therapies in Childhood Attention and Hyperactivity Problems. Developmental and Behavioral Pediatrics, 24, pp. 4-8.

Guidelines for Evaluating Treatment Research

**“Guidelines should be based on broad careful consideration of the relevant empirical literature...Recommendations on specific interventions should take into consideration the level of methodological rigor and clinical sophistication of the research supporting the intervention...The evaluation of treatment efficacy places greatest emphasis on the evidence derived from sophisticated empirical methodologies, including quasi experiments and randomized controlled experiments or their logical equivalents.”
(1053-1054)**

Author (December, 2002). Criteria for Evaluating Treatment Guidelines. American Psychologist, 57(12), 1052-1059.

National Center for Complimentary and Integrative Health (NCCIH)

➤ National Center for Complementary and Integrative Health:

➤ www.nccih.nih.gov

➤ NCCIH Clearinghouse: 888-644-6226

➤ Some findings:

➤ St. John's Wort (*Hypericum Perforatum*) is no better than placebo with Major Depression. Now being studied with "Minor" Depression-There is some research that St. John's Wort can help with mild to moderate depression.

➤ *More research is needed!*

➤ Dittmann, M. (June, 2004). Alternative Health Care Gains Steam. Monitor On Psychology, 35 (6), pp. 42-44.

➤ Author (March 2004). Get the Facts: St. John's Wort and The Treatment of Depression. National Center for Complementary and Alternative Medicine, National Institutes of Health, NCCAM Publication #: D005: www.nccam.nih.gov/health/stjohnswort/.

Helpful Resources

- **Author (May, 2004). Dangerous Supplements: Still at Large. Consumer Reports, 69 (5), pp. 12-17.**
- **Muskin, P.R. (2000). Alternative Medicine and Psychiatry. Washington, DC: American Psychiatric Association Press.**
- **Field, T. (2008). Complementary and Alternative Therapies Research. Washington, DC: American Psychological Association Press.**
- **Ramsay, R. (2010). Nonmedication treatments for adult ADHD. Washington, DC: American Psychological Association Press.**

Helpful Government CAM Websites

- **FDA Center for Food Safety and Applied Nutrition: Dietary Supplements:**

<http://www.fda.gov/food/dietarysupplements/default.htm>

- **NIH Office of Dietary Supplements (ODS):**

<http://ods.od.nih.gov/>

- **FDA Food and Drug Scams Website:**

www.fda.gov/healthfraud

- **FDA Consumer Updates:**

www.fda.gov/ForConsumers/ConsumerUpdates/default.htm

Other Helpful CAM Websites

- **Cochrane Collaboration:**
www.cochrane.org
- **Quackwatch:**
www.quackwatch.com
- **Children (and Adults) with Attention Deficit Disorder:**
www.chadd.org
- **My ADHD:** www.myADHD.com
- **National Adult Attention Disorder Association (ADDA):** www.add.org
- **International Dyslexia Association website:** www.interdys.org.
- **Learning Disabilities Association of America:** www.ldanatl.org
- **National Center for Learning Disabilities:** www.ld.org
- **LD OnLine:** www.ldonline.org
- **Anxiety and Depression Association of America:**
www.adaa.org
- **American Psychological Association – Division 12 (Society Of Clinical Psychology) Research-Supported Psychological Treatments:**
<https://www.div12.org/psychological-treatments/>