

New study: Pine bark extract reduces ADHD symptoms in children

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Attention Deficit Hyperactivity Disorder (ADHD) is a prevailing issue in the United States, with millions of children getting diagnosed every year. A new study reveals that Pycnogenol, (pic-noj-en-all), an antioxidant plant extract from the bark of the French maritime pine tree, reduces ADHD in children. The study shows Pycnogenol balances stress hormones, which lowers adrenaline and dopamine, resulting in a decrease of ADHD.

The findings, to be published in an upcoming issue of the journal *Nutritional Neuroscience* is a spin-off of a 2006 study found in the journal of *European Child & Adolescent Psychiatry* that revealed Pycnogenol helped reduce hyperactivity and improve attention, concentration and motor-visual coordination in children with ADHD. The current study measures urine samples and blood samples of the children, which were not accounted for in the results of the original study.

“Pycnogenol’s ability to naturally treat symptoms of ADHD is what makes this extract exceptionally pleasing to parents who may be uneasy about medicating their children with stimulant medications,” said Dr. Peter Rohdewald of the Institute of Pharmaceutical Chemistry at Germany’s University of Munster and one of the authors of the study.

The study sampled 57 outpatients with ADHD with an average age of 9 years, from the Department of Child Psychology at the Children University Hospital in Slovakia.

Forty-one patients received Pycnogenol and 16 received placebo. Patients were not supplemented with any other drugs or with vitamins E or C during the study. Participants in the Pycnogenol group received 1 milligram of Pycnogenol or placebo for every kilogram of body weight, on a daily basis each morning, for one month.

Stress hormones were quantified from urine samples of the children taken before and after supplementation with either Pycnogenol or the placebo for a one-month period. After a one-month discontinuation of treatment, a third urine sample was taken that revealed that ADHD symptoms had recurred. The stress hormone levels had increased again during the period when children had stopped taking Pycnogenol, suggesting the effect of Pycnogenol on stress hormones accounts for the improvement of inattention and hyperactivity of the children.

The results reveal Pycnogenol lowers stress hormones by 26.2 percent in the case of adrenaline and decreases neurostimulant dopamine by 10.8 percent, which plays an important role in brain physiology involving learning, cognition, attention and behavior.

“The findings acknowledge that children with ADHD have dramatically elevated levels of stress hormones known to increase heart rate and blood pressure, causing excitement, arousal and irritability, as compared to children without ADHD symptoms,” said Dr. Rohdewald. “The findings of this study demonstrate a significant stress hormone lowering effect for a nutritional supplement for the first time.”

The results of the 2006 study that was published in the journal of *European Child & Adolescent Psychiatry*, also revealed ADHD recurrence after a one-month discontinuation of Pycnogenol treatment. Participants were given a basic psychiatric examination by teachers and parents one month after the study began and one month after the end of the study. After one month of treatment, the participants' teachers

compared the results with Pycnogenol or placebo scores. There was a significant drop in hyperactivity and inattention compared to the start of the study and placebo. The researchers also found that, one month after termination of treatment, symptoms returned to their levels as measured before the study started in the Pycnogenol group, strongly suggesting the antioxidant's effect on reducing ADHD symptoms.

Source: Financial Relations Board

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