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## ENZO: PROFESSIONAL

### Enzogenol® Pine Bark Extract : Head Tension Discomfort

#### Nutritional Benefits

Enzogenol® supports prevention, reduced frequency and reduced intensity of tension-type head discomfort.

**Dose Recommendation - Adults:** For the first week, take 2 capsules in the morning with a large glass of water, before or after food. In the second week, increase to 4 caps in the morning. In cases of severe discomfort the dose may need to be increased to 5 or 6 caps/day. With reduced discomfort continue on 2 caps/day for ongoing support.  
**Children below 12 years of age:** Half the dosages described for Adults.

Headache  
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#### Use of a Pine Bark Extract and Antioxidant Vitamin Combination Product as Therapy for Migraine in Patients Refractory to Pharmacologic Medication

Sirichai Chayasirsobhon, MD, FAAN

#### ENZO Professional

Supplement facts: per cap

**Enzogenol® 240 mg**  
(Extract of *Pinus radiata* bark)

**Vitamin C 30 mg**

Other ingredients:

Vegetable cellulose capsule,  
Tapioca starch  
Suitable for vegetarians, and  
diabetics.

The individuals in this study experienced high levels of tension-type head discomfort, and were greatly impaired in their everyday functioning, incl. the ability to work. After 3 months, frequency and severity of head discomfort was significantly reduced in 53% of the participants, and their ability to function was improved by greater than 50%.

Headache 2006, Vol. 46, p788)

#### Undesired effects:

No serious adverse effects are known for Enzogenol. Occasionally a bitter/acidic aftertaste, or a light stomach upset has occurred when taking the capsules with too little water. In rare cases, individuals taking 4 or more caps without dosing up slowly have reported a headache. Reducing the dose overcomes these complaints. Some people experience sleeplessness if taking the product in the late afternoon or evening due to increased levels of alertness. This can be avoided by taking capsules no later than 2 pm.

#### Nutrition Research

presented at International Congress of Neurology, Bangkok 2010  
Dr. S. Chayasirsobhon, MD FAAN, Dept of Neurology, Kaiser Permanente Medical Center, Anaheim, USA

#### Results

18 out of 34 patients (53%) responded to treatment.

Responders were defined as patients who achieved a 50% or greater reduction in the frequency of their migraine attacks during the 3 month treatment period.

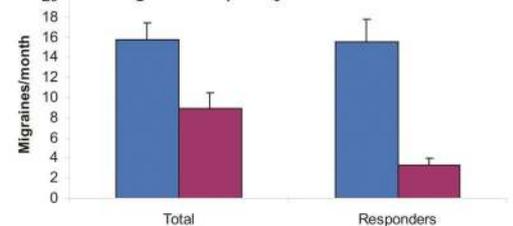
The treatment was associated with significant reductions ( $p < 0.001$ ) in number of headache days, headache severity score and MIDAS (Migraine Disability Assessment).

Amongst responders headache days were reduced by 79%, severity reduced from 7.9 to 3.9, and MIDAS score reduced from 32 to 3.5

Of the 35 patients enrolled one patient withdrew early in the study because of abdominal discomfort.

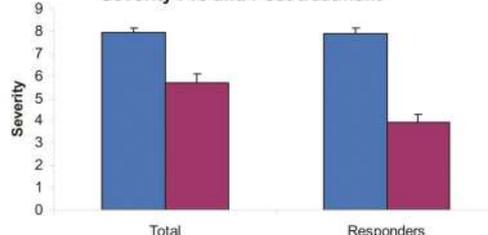
Legend ■ PRE-TREATMENT ■ POST-TREATMENT

#### Migraine frequency Pre and Post treatment



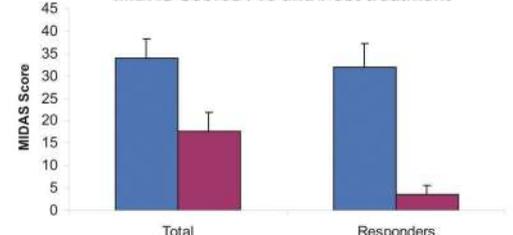
Mean number of headache days were reduced by 43% from 47.3 days at baseline, to 26.8 days over the 3 month treatment period.

#### Severity Pre and Post treatment



Mean headache severity score was reduced by 28% from 7.9 at baseline, to 5.7

#### MIDAS Scores Pre and Post treatment



Mean MIDAS score was reduced by 48% from 34.1 at baseline to 17.7 in the 3 months post treatment.

#### Conclusion



In a group of migraine patients refractory to current pharmacologic treatments, the pine bark extract in combination with vitamin C significantly reduced the frequency and severity of migraine and MIDAS scores over a 3 month period.

The product was well tolerated with only one withdrawal due to abdominal discomfort.

For more info please contact Dr. Matt Frevel, Chief Scientist, ENZO Nutraceuticals: [mattfrevel@enzo.co.nz](mailto:mattfrevel@enzo.co.nz), ph +64 21581933