



OLIGONOL

An innovative new compound

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IF YOU HAVEN'T already heard of it, well you soon will. Oligonol is a compound that has more benefits than Eskimos have words for snow. What is this stuff anyways? According to scientists, oligonol is a phenolic product derived from lychee fruit extract and green tea extract, containing catechin-type monomers and oligomers of proanthocyanidins, produced by a manufacturing process which converts polyphenol polymers into oligomers. Wow, that's a mouthful! I'm sure you've all heard of green tea extract. But what's lychee fruit? Oddly enough, I've actually eaten lychee fruit (it is native to the Philippines, my place of birth) and it is typically canned due to its very short shelf life. Well, interestingly, there are amazing benefits to oligonol, a new lychee fruit-derived polyphenol.

SPORTS PERFORMANCE

Perhaps the most interesting evidence for you sports lovers comes from a group of Japanese researchers (Ohno H et al. The supplementation of oligonol, the new lychee fruit derived polyphenol converting into a low molecular weight form, has a positive effect on fatigue during regular track and field training in young athletes. *Adv Exerc Sports Physiol* 13:93-99, 2008). They took undergraduate students and subjected them to 52 days of track and field training while also supplementing with 200 mg/day of oligonol. They discovered that oligonol reduced RPE or ratings of perceived exertion. What that means is the exercise felt easier in subjects taking the supplement. Also, oligonol decreased muscle pain and lower back pain too. This is the very first study to investigate the in vivo effects of this amazing ingredient in exercising humans. But that's only part of the story. Oligonol may just be what the doctor orders.

ANTI-OXIDANT

Scientists investigated the anti-oxidative effects of oligonol in adipocytes or fat

cells. The levels of reactive oxygen species (ROS) decreased with oligonol as compared to control cells; meaning that the ingredient had a potent anti-oxidant effect. But also, when mice were fed a high fat diet (HFD) for five weeks, the levels of epididymal white adipose tissue (WAT) mass and lipid peroxidation in WAT both increased, but oligonol intake clearly inhibited such HFD-induced increases. Furthermore, dysregulated expression of genes for adipokines in WAT of mice fed solely a HFD was attenuated by Oligonol intake. These results suggest that Oligonol has anti-oxidative effects and that it attenuates HFD-induced dysregulated expression of genes for adipokines in adipocytes.⁽²⁾ Or in English, there's a potential for oligonol to reduce body fat as well as promote cellular health via its ability to reduce free radicals.

ANTI-INFLAMMATORY AND CHEMOPREVENTIVE

Topical (skin) application of oligonol onto the skin of hairless mice 30 min prior to UVB exposure diminished the amount of skin damage. "Taken together, oligonol showed anti-oxidative and anti-inflammatory effects in UVB-irradiated mouse skin by inhibiting COX-2 expression via blockade of the activation of AP-1 and C/EBP, and upstream kinases including p38 MAP kinase and Akt.⁽³⁾" Oligonol also has potential for its chemopreventive effect and the ability to inhibit cell proliferation (e.g. cancer or tumor formation).⁽⁴⁾

IS IT SAFE?

In a single dose acute study of Oligonol, male and female rats were administered 2,000mg/kg body weight (bw) oligonol in water and they found that it caused no adverse effects; body weight gain and food consumption were within normal range. Also, no adverse effects were observed in mice fed Oligonol diets or 200mg/kgbw lychee polyphenol for 90 days. Thus, the results from these safety

studies and previous reports support the safety of oligonol for human consumption.⁽⁵⁾ It should also be noted that oligonol was approved as a new dietary ingredient (NDI) by the US Food and Drug Administration in May of 2007.

TAKE HOME MESSAGE

It isn't often that you have a dietary ingredient that has the potential to promote fat loss; but in addition, the health promoting benefits of oligonol include its anti-inflammatory, anti-oxidant, and chemopreventive properties. Don't be surprised if oligonol containing products are all the rage in the sports as well as the natural foods channel of trade.

BIO

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