

# Elderberry 36:1

(*Sambucus nigra*)

“The elder is my medicine chest.”—Hippocrates

The dark blue, almost black, elderberry has been used for thousands of years as a remedy for colds, flu, fever, asthma, rheumatoid arthritis, digestive problems, and constipation. Today elderberries and elderberry concentrate are garnering scientific attention for their ability to shorten colds and flu, boost immunity and inhibit replication of the influenza virus.

## Beating the “bug”

The common cold is the leading cause of visits to the doctor and in one year the US population gets almost 1 billion colds! There are also so-called “super viruses”, increasing the importance of immune system support. Dr. Madeleine Mumcuoglu, an Israeli virologist, discovered that constituents in elderberries prevent viral replication by neutralizing hemagglutinin spikes on the surface of viruses, without which the virus cannot enter new cells and replicate.

A placebo-controlled double-blind study conducted during an outbreak of influenza B/Panama tested the effect of the elderberry extract on the duration of illness in a group of healthy people, not previously vaccinated against the flu. A significant improvement in flu symptoms and fever was seen in 93.3% of the elderberry-treated group within two days. A complete cure was achieved within 2 to 3 days in nearly 90% of the elderberry-treated group.<sup>1</sup>

In another study, 60 patients beginning to experience flu symptoms were given 15 ml of an elderberry extract syrup or placebo four times daily for 5 days. The elderberry group responded with “pronounced improvement” within 3 to 4 days whereas the placebo group took 6 to 7 days to respond. According to the authors: “Elderberry extract seems to offer an efficient, safe and cost-effective treatment for influenza.”<sup>2</sup>

## Enhances immune function

Elderberry is rich in phytonutrients, including anthocyanins, vitamins A, C, B6 and calcium. It contains quercetin and rutin, and the hemagglutinin protein that stops viral replication. Elderberries have a high ORAC value. They are effective against cold and flu viruses thanks to anthocyanins that enhance immune function and have anti-inflammatory effects similar to acetylsalicylic acid, reducing aches, pain and fever.<sup>3</sup>

## Cardio Health, Stress Reduction and Night Vision

A Tufts University study showed that four elderberry anthocyanins are taken up by the membranes of blood vessel linings, for increased protection against oxidative stress.<sup>4</sup> Doctors Werner Pfannhauser and Michael Murkovic found that elderberry extract reduces oxidation of LDL cholesterol which is implicated in cardiovascular disease.<sup>5</sup>

Anthocyanin-rich fruits may play a role in weight reduction. In one study 80 participants were given either elderberry juice enriched with flower extract or *Asparagus officinalis* powder tablets. The mean weight, blood pressure, physical and emotional wellbeing of the participants significantly improved.<sup>6</sup>

“We only gave these people the elderberry for 10 days,” notes Austrian endocrinologist Dr. Sepp Porta, upon reviewing the effects of elderberry on markers of stress. “We put them through typical stress tests, all the usual physical challenges, and the results were so remarkable, I checked them over and over... What we found was that elderberry has this extraordinary effect for reducing stress.”<sup>7</sup>

Italian research shows that elderberry pigments enhance night vision. Substances in elderberry strengthen capillaries which may reduce risk of retinopathy.

## Elderberry presents very few safety issues

- **Allergies**—Anyone allergic to black elderberry should avoid supplementation.
- **Pregnancy and lactation**—Concentrated elderberry extracts have not been studied in pregnant and lactating women, so are not recommended unless directed by a health care provider.
- **Drug Interactions**—No known interaction.
- **Blood-thinning medications**—No known interaction.

## Inovobiologic Elderberry Concentrate

- Available as a 36:1 powdered concentrate
- A superior antiviral and immune booster
- All natural, non GMO extract
- No added sugar, preservatives, additives or excipients
- Standardized to NLT 0.4% anthocyanins

- ORAC approximately 8000 per 100 grams
- Cost-effective—less concentrate needed for similar or greater, benefits than juice.
- Superior quality control guarantees raw material stability and viability.
- Manufactured under GMP standards.
- Rigorously tested to ensure no heavy metal or other contamination.

### Applications

- **Capsules with guaranteed anthocyanin content as a stand-alone supplement.**
- **Powdered concentrate**
  - ingredient in anti-aging/antioxidant, antiviral, and cardiovascular formulas
  - cosmeceutical applications
  - ingredient in cereals, energy/protein bars, other functional foods
  - natural flavouring
  - natural colouring

### References

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- 4 Youdim KA et al. Incorporation of the elderberry anthocyanins by endothelial cells increases protection against oxidative stress. *Free Radic Biol Medicine* 2000; 29 (1) :51-60.
- 5 Murkovic M, Pfannhauser W. Analysis of anthocyanin glucosides in human serum. *Fresenius J of Anal Chem* 2000;366:379-81.
- 6 Chrubasik C, Maier T et al. An observational study and quantification of the actives in a supplement with *Sambucus nigra* and *Asparagus officinalis* used for weight reduction. *Phytotherapy Res* 2008 March; 22 (7):913-918.
- 7 Porta, S. Impact of Rubini treatment upon workload induced selected stress effects in human probands. Abstract of the pilot study. Unpublished 1999.