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C-12 Peptide

- Peptides that are naturally derived from milk's protein - casein.
- C-12 Peptide reduces both systolic and diastolic blood pressure – by inhibiting the body's Angiotensin Converting Enzyme (ACE) – the key enzyme in the regulation of blood pressure.
- Clinical studies report C-12 Peptide as generally safe, with no known reported side effects.

Q: C-12 Peptide, what is it?

A: C-12 Peptide is naturally derived from the milk protein, casein. The derivation process uses natural enzymes to reduce casein protein in milk into small fragments (so called peptides). These peptides are absorbed with or without additional digestion when taken by mouth. Peptides derived from the milk protein casein, have been shown to be effective in controlling blood pressure of mildly hypertensive subjects.

Q: C-12 Peptide, how does it work?

A: C-12 Peptide works by directly inhibiting both systolic and diastolic blood pressure. Much like many prescription blood pressure drugs, C-12 Peptide works by inhibiting the body's Angiotensin Converting Enzyme (ACE), which is the key enzyme in the regulation of blood pressure. ACE catalyzes the conversion of Angiotensin I into Angiotensin II. Angiotensin II causes the contraction of blood vessels (vasoconstriction), re-
resulting in elevated blood pressure. C-12 Peptide inhibits the release of Angiotensin II, preventing the vasoconstriction and thereby preventing blood pressure to increase by this pathway.

**Q: Is C-12 Peptide safe and are there any side effects?**

**A:** Since the peptides are naturally derived (i.e. they are isolated from a common food source bovine or cow's milk), and because the clinical experience with this compound is quite favorable to date, it is considered a "safe" product.

In regards to side effects, our experience with C-12 Peptide thus far would answer this question as "no". People who experience side effects from a blood pressure reducing drug generally feel something under two circumstances. In the first circumstance they may respond to the medication itself with a headache, a feeling of racing heart, itching, nausea and a variety of other complaints that are related to the medication and the ingredients used to 'compound' the medication so that it can be made into a tablet, or be absorbed. The second instance where side effects may be experienced when taking blood pressure lowering drugs results from rapid blood pressure reduction, which may cause lightheadedness, dizziness, sweating, nausea and even passing out (loss of consciousness). Clinical studies have not found this to be the case with consumption of C-12. The onset of blood pressure reduction is usually gradual with C-12, as opposed to abrupt. Research indicates that the degree of decline in blood pressure associated to C-12 consumption has not been large enough to cause any such symptoms.

**Q: Can I take C-12 Peptide with other medications?**

**A:** As far as we know from the clinical research performed, there are no known drug interactions, but it is still early in the scientific development of C-12 Peptide, so it is recommended that persons taking other medications to first consult with their physician.

**Q: Will C-12 Peptide interfere with my cholesterol medication?**

**A:** Proper studies of what are called 'pharmacokinetics' will need to be done to address this question completely. Based on our knowledge of the C-12 chemical structure (i.e. a peptide), it is unlikely C-12 would interfere with cholesterol medicines (statins). Statins are usually metabolized by specific units called cytochromes inside liver cells. Peptides like C-12 would not be expected to enter liver cells until they are reduced to the basic amino-acid components.

**Q: How long does it take for me to gain the maximum effect?**

**A:** Generally you should have noticeable blood pressure reduction in 2-4 weeks, however 6-8 weeks will yield the best results of showing how much blood pressure reduction C-12 Peptide can achieve.

**Q: In addition to taking C-12 Peptide, what other things can I do to help my blood pressure?**

**A:** There are five things a person can do. If overweight, lose excess weight (especially in body mass index > 27.5 kg/m²). Do not add salt to your food and try to eat most meals prepared from home, so that you can better control the sodium and saturated fat content. Exercise at least 30 minutes, 3 times a week (more is better). If you smoke cigarettes, you should quit and if you drink alcohol, try to drink no more than two glasses of wine (or the equivalent of any alcoholic drink) on average per day.