

Vitamin A Summary Sheet

Deficiency Symptoms: Skin changes i.e. dry skin or bumps on back of arms (hyperkeratosis), reduced vision, decreased resistance to infection, decreased secretory IgA and possibly vegetarians - 40% can't convert beta carotene to vitamin A

Vitamin A Therapeutic Benefits : Healthy epithelial tissue - gastrointestinal, respiratory and genitourinary tracts, including the nose and conjunctiva. Skin conditions - acne, eczema, warts, wrinkles, dry skin, hyperkeratosis (bumps on the back of arms). Prevention or treatment - bronchitis, burns, cancer, celiac disease, critical illness, diabetes, dysfunctional uterine bleeding, hyperthyroidism, night blindness and peptic ulcers. Affects the genetic transcription of more than 500 genes. Increases T regulatory cells. Helps to inhibit part of the adaptive arm of the immune system called TH1 when it becomes overactive.

Other Factors to promote the generation of T regulatory cells:

Vitamin A - 100,000 units per day for 2 weeks, then drop to 25,000 IU per day

Vitamin D3 - 50,000 units first dose, then 4,000 per day

Probiotics - BioDoph-7 Plus 2 capsules at bedtime on an empty stomach

Green Tea Extract

KappArest - 2 capsules tid

BIO-Ae-MULSION – contains 2,000 IU of vitamin A per drop (a small amount of vitamin E is added to prevent oxidation) in an emulsified form to increase assimilation and lymphatic absorption. Use with any condition involving free radical attack, kidney or bladder dysfunction, night blindness, skin disorders. 2 drops in a glass of pure water, 3 times a day just before meals. This product is recommended for children or long term use.

BIO-Ae-MULSION FORTE it contains 12,500 IU of vitamin A per drop. With Bio-Ae-Mulsion Forte, I use 6 drops, twice per day for one week; and then reduce to 3 drops, twice per day for another week; and then reduce again to 1 drop, twice per day until the problem abates.

If it is an immune condition, I also use **Bio-Immunozyne Forte** at 2 tablets, 3 times per day with meals to support the immune system until the problem subsides; then reduce to 1 tablet twice a day for maintenance. Use with immune problems (virus, colds, environmental allergy, flu and bacterial infection), acne, ringing in the ears, and as a vaginal douche for candidiasis and vaginitis. As a douche use 10 drops in one cup of pure water (body temperature) along with 1 capsule of **BioDoph-7 Plus** and 50 drops of **Liquid Iodine Forte**.

Caution: Studies suggest vitamin A is both positive and negative in excessive amounts during pregnancy. Therefore vitamin A intake should not exceed 10,000 IU during pregnancy or lactation unless carefully monitored.

High Dose Study: One study showing the safety of emulsified vitamin A was reported in the journal *Oncology* 48(2): 131-137) in the 1991 March/April issue. In a trial of 283 lung cancer patients in Milan Italy, 138 used 300,000 international units of **emulsified** vitamin A daily for 24 months. They showed that one liver enzyme gamma GT was more likely to be elevated in treated patients than controls. They also saw elevated triglycerides. They concluded, however, that emulsified vitamin A is a safe treatment and may be well tolerated for periods longer than 2 years. Obviously, we are not using 300,000 units a day; and if by chance long term use was appropriate, we should follow up with periodic blood tests specifically GGT, calcium and triglycerides. The point of this article is that these were already very sick people and yet 2 years of daily intense emulsified vitamin A therapy was not life threatening.

Beta-carotene notes: Beta carotene is primarily converted to vitamin A in the intestinal mucosa and depends on several enzymatic co-factors: iron, niacin, riboflavin, zinc and bile acids. Carotenoids are sources of provitamin A alpha-, beta- and gamma-carotene that our bodies convert into vitamin A and can be found in many vegetables and fruits. It is especially abundant in foods such as apricots, broccoli, cantaloupe, carrots, kale, liver, mangos, red peppers, spinach and sweet potatoes.

Factors that block conversion from provitamin beta-carotene to pre-vitamin A: According to Jon Wright MD, thyroid hormone specifically (Free T3) is necessary to help convert carotenoids into vitamin A. With the advent of subclinical hypothyroidism that is so prevalent today, many people may experience vitamin A deficiency even though they consume adequate dietary carotenoids.

Toxicity Symptoms: Headaches, bone pain, fatigue, dry skin, weakness, nausea, blurred vision, bone pain, muscle aches, hair loss, chapped lips, increase in liver enzymes especially GGT, hypercalcemia or elevated triglycerides for no apparent reason.

Article of interest: Vitamin A could potentially prevent 1-3 million childhood deaths annually. Sommer A et al. Vitamin A, infectious disease, and childhood mortality: a 2 cent solution? *J Infect Dis.* 1993 May;167(5):1003-7. Vitamin A was first discovered in 1913. Its deficiency was soon associated in animal models and case reports with stunting, infection and ocular changes (xerophthalmia) resulting in blindness. The ocular consequences dominated clinical interest through the early 1980s. A longitudinal prospective study of risk factors contributing to vitamin A deficiency and xerophthalmia revealed a close, dose-response relationship between the severity of mild preexisting vitamin A deficiency and the subsequent incidence of respiratory and diarrheal infection (relative risk [RR], 2.0-3.0) and, most dramatically, death (RR, 3.0-10.0). **Subsequent community-based prophylaxis trials of varying design confirmed that vitamin A supplementation of deficient populations could reduce childhood (1-5 years old) mortality by an average of 35%. Concurrent hospital-based treatment trials with vitamin A in children with measles revealed a consistent reduction in measles-associated mortality in Africa of at least 50%. It is now estimated that improving the vitamin A status of all deficient children worldwide would prevent 1-3 million childhood deaths annually.**