VITAMIN K2: The Alice in Wonderland Worlds
of the Medical Establishment & of the Health Food Remedy Peddlers

1. Vitamin K is an absolutely critical nutrient. However, it is probably the easiest nutrient to obtain in abundance. It is produced by intestinal microbiota in quantities far greater than anyone needs. The only people who have any liability as far as Vitamin K is concerned are those who eat nothing but trash and have deplorable intestinal microbiota. Within a very short time on the Nutri-Spec Fundamental Diet there is enough improvement in intestinal function to assure adequate Vitamin K.

2. The other people at risk for Vitamin K deficiency are those who take repeated broad spectrum antibiotics. Obviously, the problem is that the antibiotics kill the normal intestinal microbiota.

3. Vitamin K2 is exclusively a product of bacterial fermentation. It is absorbed from a healthy gut that has healthy intestinal microbiota, and even to a certain extent from an unhealthy gut with less than perfect microbiota. The food sources of Vitamin K2 are fermented foods --- there are no other food sources. That fact alone is sufficient to demonstrate that human beings are designed to get their Vitamin K2 from intestinal fermentation of undigestible fiber.

4. That Vitamin K is intended to be absorbed after production by intestinal microbiota is demonstrated in the almost zero efficiency of absorption of Vitamin K in foods. For example, the foods highest in Vitamin K are the green leafy vegetables, yet absorption of Vitamin K from those foods is less than 5%. In other words, there is no way we can get enough Vitamin K from our diet, and we are designed that way simply because we do not need to ingest Vitamin K. (Egg yolks may be a significant dietary source.)

5. POINT OF EMPHASIS: Vitamin K2, throughout nature, is produced exclusively by bacteria. How do human beings meet their daily need for Vitamin K2? It comes entirely from the gut microbiota. The only sure way, and the only natural way, to get enough Vitamin K is with IMMUNO-SYNBIOTIC supplementation.

6. You might expect that we would put a little Vitamin K in ACTIVATOR just to cover the needs of the patients suffering from McDonald's diets and/or frequent antibiotic use until NUTRI-SPEC gets them on the right track. The problem with that, however, is that many people cannot take Vitamin K. For example, if we put Vitamin K in ACTIVATOR none of our patients on blood thinners could take it, and that would leave out many of our patients with cardiovascular disease. --- So --- we leave Vitamin K out of ACTIVATOR for the same reason we leave out iron --- the few people who need Vitamin K can take it in the form of an extra supplement as an adjunct to NUTRI-SPEC. Any

patients low in Vitamin K will have it quickly replenished by Immuno-Synbiotic supplements.

Note also that when cardiologists have a fit over their patients on Coumadin/warfarin eating green leafy vegetables, their fear is unfounded. (--- See #4, above.) A patient would need to eat a huge quantity of spinach every day to block the effects of a blood thinner.

7. The other interesting point about Vitamin K is that there has never been any evidence that therapeutic doses beyond the levels absorbed from a healthy GI tract have any therapeutic benefit. In other words, all the studies that show benefits from Vitamin K were done on people or animals that were Vitamin K deficient.

8. MK-7 is only one of several forms of Vitamin K2. The 7 in MK-7 simply means there are 7 organic chains attached to the basic quinone ring shared by all forms of Vitamin K. The main difference between the various forms of K2 and K1 is that the K2 has a much higher degree of unsaturation of the primary carbon chain. The reason many "health food" people think MK-7 is synonymous with Vitamin K2 is because MK-7 is the one that is in the Japanese fermented dish that gets all the write-ups in the health food literature. But MK-7 is no more beneficial than the other long-chain forms of Vitamin K2.

9. There was some research a few years ago appearing to show that Vitamin K in therapeutic doses prevented calcification of the vascular system. Those studies have been proven to be over-rated. Many misguided nutritionists (even to this day) put their cardiovascular disease patients on Vitamin K, much to the alarm of the patient's cardiologist if warfarin/Coumadin has been prescribed.

10. The reason you may be familiar only with the clotting effects of Vitamin K1 is because Vitamin K2 does not have the same influence on clotting as does Vitamin K1. Vitamin K2 is more directly associated with osteocalcin and preventing arteriosclerosis. It probably plays a role in bone density too, but there are very poor results with increasing bone mineral density with Vitamin K2 supplementation, even though people with osteoporosis show a statistically significant lower level of circulating Vitamin K2. Apparently, only the K2 produced by gut microbiota is fully biologically active for reasons that have not yet been discovered.

Even though K2 does not have the same association with coagulation as does K1, it is still apparently antagonized by blood thinners like warfarin.

11. Blood thinners (except as short-term crisis therapy for up to 6 months) are a case of Alice in Wonderland bizarre medical/pharmaceutical insanity. --- Blood thinners are given to patients with cardiovascular disease with the idea that their anticoagulant effect will reduce the incidence of strokes and/or improve blood perfusion throughout the body and thus decrease the load on the heart. But the more significant truth is that warfarin/Coumadin blocks osteocalcin (the activation of which is one of the main functions of Vitamin K2). Without the osteocalcin, there is a significant increase in osteoporosis and incidence of fractures in patients on blood thinners.

Even more significantly, as the bone mineral density is going down, calcium is being deposited all over soft tissue throughout the body. There are a zillion studies showing that vascular calcification (arteriosclerosis) begins almost immediately in test animals when they are given anticoagulant drugs. One study shows that in humans the rate of arterial calcification is double in patients on blood thinners than it is in controls.

So now, in a misguided attempt to "protect" cardiovascular disease patients with blood thinners, we have an increase in arteriosclerosis, particularly aortic and coronary sclerosis, coronary insufficiency, and increased load on the heart --- contributing to congestive heart failure, and ischemia anywhere/everywhere in the body. Then, of course, with the arteriosclerosis, the rising blood pressure becomes impossible to control.

--- Other soft tissue calcium deposits such as in osteoarthritis and degenerative joint disease are also accelerated by blood thinners.

--- The solution to the problem of blood flocculation, with or without arteriosclerosis, is to correct Electrolyte Stress Imbalance. Formula ES & Taurine + some combination of dispersing agents Potassium Citrate and Phos Drops will assure free-flowing blood.

12. Vitamin K2 has no effect on thrombin generation in healthy subjects. But, it does appear to decrease the anti-clotting effect of anti-clotting drugs.

One study showing that K2 has no blood thickening effects in healthy subjects is:

Low-dose MK-7 supplementation improved extra-hepatic Vitamin K status, but had no effect on thrombin generation in healthy subjects. --- British Journal of Nutrition, November 2012.

But the study shows that while Vitamin K2 does not have a blood thickening or thrombin-generating effect in healthy subjects, it will to a certain extent reverse the anti-thrombin effects of the Vitamin K antagonistic drugs such as warfarin.

Another study:

Effective low-dose supplements of MK-7 on the stability of oral anticoagulant treatment: Dose-response relationship in healthy volunteers. Published in the Journal of Thrombosis in 2013, shows that when healthy subjects have their blood thinned with anticoagulant drugs, that blood thinning effect can be reversed with MK-7. The study concludes that MK-7 supplements should be avoided in patients receiving anticoagulant therapy. The quantity of K2 found to inhibit the effects of the anticoagulant drugs is as little as 10 mcg.

So --- you are stuck. Patients are given anticoagulants to thin the blood to protect their cardiovascular system, all the while the drug is causing calcium deposits in the cardiovascular system. But if you play the health food disease remedy game, supplementing with Vitamin K2, hoping to protect the vasculature from arteriosclerosis, you will thicken the blood to a degree which, probably is not as dangerous as some would think, but you would certainly be severely liable if a patient under your MK-7 care dies of a stroke.

Take the natural, physiological approach to Vitamin K:

- Supplement all your patients with Immuno-Synbiotic (--- as you should be in any case --- for innumerable reasons) and you will be assured their Vitamin K needs are met.

- Get your patients who are taking blood thinners off the drug after they have taken it for 6 months (--- that first 6 months is prudent crisis therapy in patients after stroke or MI). But during that 6 months and thereafter, ignore the question of Vitamin K as you treat the Electrolyte Stress Imbalance.

Addendum Re: Vitamin K2, the health food industry charlatan's flavor of the month …

If you look over this information on Vitamin K2 (and Vitamin K1), you will see that we do not dispute at all the common hype about Vitamin K2. We agree completely that Vitamin K2 is entirely different than Vitamin K1. We also agree that it is an extremely important nutrient with many functions. We also agree that many people are low in Vitamin K2.

One of the major problems with the Vitamin K2 hype is perfectly illustrated by the typical health food industry articles extrapolating from the medical literature the "need" to buy Vitamin K pills. All the "research" is based on epidemiological studies. Epidemiological studies are entirely unscientific garbage. These are not double-blinded placebo controlled studies performed under strictly defined conditions. They are nothing more than questionnaires distributed to thousands of people asking them what they (remember they) ate.

Then, the results of the participants' answers are correlated with what diseases they have.

--- So --- epidemiological surveys are done and lo and behold "researchers" make the wondrous discovery that people who get osteoporosis and prostate cancer and a few other diseases have very low intakes of Vitamin K2 on the average. There are two problems with that. First of all, if those conducting the survey had been looking at any other nutrient other than K2, they would have found the same thing. The same people who remember eating less Vitamin K2 would also remember eating less Vitamin C, or zinc, or chromium, or any other nutrient you can name. The findings related to Vitamin K2 have no specificity in connecting Vitamin K2 to particular diseases.

The second big problem with these studies is that all they show is that people who eat rotten diets tend to be deficient in important nutrients, and being deficient in important nutrients, they get sick more than people who eat well. --- What a startling discovery.

--- If you take 100 people with osteoporosis and then compare them with age and gender matching to another 100 people who have no osteoporosis, should it be any surprise that the people who have lived a healthy lifestyle will have much less incidence of osteoporosis, and the people who don't take care of themselves have a high incidence of osteoporosis? The same people who have a tendency to osteoporosis because their diet did not encourage intestinal microbiota that produces Vitamin K2 will also be the same people with a higher incidence of rheumatoid arthritis, and a higher incidence of diabetes, and a higher incidence of almost any pathology you can name.

Neither are we disputing that people who have pathologies associated with ultra low Vitamin K2 levels will benefit from Vitamin K2 supplementation. But unless the person corrects the lifestyle that caused the K2 deficiency to start with, there will be very little benefit gained. That same person is also deficient in countless other nutrients as well. IMMUNO-SYNBIOTIC is the happy-ever-after solution.

Addendum RE: Vitamin K deficiency bleeding in infants (VKDB) …

1. Clearly, God goofed again. He failed to provide adequate Vitamin K for newborn humans. Thankfully, we have the Center for Disease Control to protect us from God's incompetence. Better still, we have articles by the nurse who wrote one of the most nonsensical articles I have ever read (a nurse who cannot even do arithmetic) to be the voice of the CDC just as the CDC is the voice for the pharmaceutical industry.

2. If you do a literature search of the legitimate studies on VKDB, you will find

a clearer presentation of the facts. VKDB occurs with an incidence of somewhere between 1 in 10,000 and 1 in 16,000 births. Nearly half of those cases occur in infants who have some liver pathology. So, the medical literature shows clearly that among infants that do not have obvious liver pathology, the incidence of VKDB is on the order of 1 in 25, 000 births. Shall we inject the other 24,999 babies with a massive dose of Vitamin K, "just in case"?

3. Furthermore, despite the assurances of the nurse parroting the CDC propaganda, the intramuscular injection (Ouch!) of an infant with 20,000 times the amount of Vitamin K God intended it to be born with is not without potential consequences --- including perhaps cancer. Certainly, such severe consequences are extraordinarily rare, and would be worth tolerating in an infant at high risk for VKDB --- one with even a hint of liver pathology. But otherwise, such an unnatural assault on the infant body is unwarranted. Additionally, the evidence is that oral administration of Vitamin K, when administered properly, is every bit as effective as the IM injection.

4. The nurse CDC spokesman let the cat out of the bag in one line of her propaganda piece. She let it slip that, "… there is a link between insufficient amounts of breast milk in the first few days of life and VKDB." ----- In other words, colostrum is the key. If an infant is free of liver disease and born to a healthy mother, and receives adequate colostrum beginning shortly after birth, there is virtually zero risk of VKDB.

5. Picture a woman who uses heroin, has Hepatitis, gives birth by cesarean, and then does not nurse the baby. <u>That</u> is the infant at risk for VKDB. Regrettably, the birth of infants to such physically, mentally, emotionally, and spiritually sick young women has increased radically and tragically over the last several decades. But to extrapolate from that tragedy that <u>every</u> <u>infant</u> is a candidate for a massive Vitamin K injection is absurd.

6. In summary, anytime a baby is born to a mother in poor health or unable or unwilling to provide sufficient colostrum, or in an infant in whom liver disease might even be remotely suspected, oral Vitamin K administration should be begun immediately. Otherwise, it is unnecessary. Is oral administration of Vitamin K harmful? Probably not, so there may not be any reason to avoid it. But the intramuscular administration of Vitamin K is nothing but another pharmaceutical industry fraud.