The Founder, Cushing’s, Autoimmune & the Allergy Connection:
by Linsey McLean

With all the horse health related articles and magazines on the market today, you have probably been inundated with this, that or the other remedy for founder. Yes, it is a devastating disease, but it's not the end of the world as it was years ago, not even for a performance or show horse. We've come a long way in understanding the cause of this disease, but it has taken some personal experiences from my own life for me to put the whole picture together. That I did, and with some pretty remarkable results, I'm happy to say.

Let me explain . . .

I grew up as a somewhat hyperactive child and suffered the usual allergies (or what was thought to be so then), which finally culminated in bronchial asthma and severe edema, grossly distorting my face and body when I was a junior in college. I was one of the first to participate in hyposensitization, giving myself injections weekly. Needless to say, that routine quickly hit the pits of my mentalia, and I scouted for a better way. Being a sugar junkie didn't help either. It's no secret, to every science major's dismay, school cafeterias all close before the labs do. Being physically and mentally exhausted from the long day, and many times financially broke as students are, I found that my lunch and dinner often were a Coke® and candy bar. Several years later, voila! - a junk food junkie.

After suffering the plague of sorts for 18 months, I began to "smarten up” and apply my new knowledge of biochemistry to myself. It was tough. Physical symptoms of complete withdrawal from sugar, I believe, would rival those of most drugs. But after the initial "pain", I made a remarkable discovery - my allergies went away lock, stock and wheeze. I cooked most of my own food, avoiding artificial preservatives, colors, flavors and sugar as best I could and used only distilled water. I soon discontinued my supposedly lifelong commitment to the injections, and have not had a reaction since. That was in 1972 and my asthma nightmares have become but distant memories.

I began to work with others with the same history of allergies and asthma, and even applied the same principle to animals. You know, when it works on animals, it's not just attributed to "the mind". So let's now look at the factors that make up the cause of allergies to see how it can be applied to horses with founder.

The Cough, Wheeze, Itch & Swell Syndrome

To begin with, allergies are stress diseases. That stress may take the form of growing (young children and animals are very susceptible), emotional problems, physical stress to the body as in performance athletes, sickness or nutritional deficiencies, toxicities, imbalances or endocrine deficiencies - especially thyroid, the primary target and hardest hit of any tissue or organ in the body by environmental toxins.

Whatever the source of the stress, it's translated pretty much the same to the body when allergy is concerned. The symptoms are pretty much common. One added factor is that some bodies are more susceptible to symptoms and insults to the body than are others. The difference in the degree of manifestation of the symptoms lies in the body's translation of the stress, as stress causes the release of glucocorticoids, which tear the immune system to shreds. That goes for people too. And “personality” is involved. What appears as an insurmountable mountain to some, is only perceived as a mole hill to another.

Healthy cells can prevent harmful substances from entering them, but lack of nutrients or environmental toxin exposure increases cell permeability, allowing the cell less control over what goes in or out. Consequently, the body becomes more susceptible to the effects of foreign substances and toxins in the
environment, which can now enter more easily.

Foods that remain incompletely digested can act as a foreign irritant. Even many harmless by-products of digestion can also be acted upon by putrificative bacteria in the intestine to produce toxic and allergenic substances. So the major goal of controlling allergy nutritionally is to eliminate or at least reduce exposures to environmental toxins, increase the digestive efficiency of the body, protect the integrity of cell membranes, aid the body in eliminating the toxins already in the body, and control the growth of undesirable bacteria.

Stress increases the need for practically all nutrients, and persons suffering from allergies have been found to be woefully deficient in every body requirement except carbohydrate. When missing nutrients are supplied, allergies often disappear, as in my own case. In 1957 Antibiotic Medical Clinical Therapist, L.W. Smith documented a case of 32 allergic children and their response to nutritional therapy. All suffering from bronchial asthma and allergic eczema, they were given generous amounts of protein, no refined carbohydrates, adequate essential fatty acids, and multiple vitamins and minerals. Most of the children recovered in a single month, and all within two months.

The Etiology of Founder

Translating our knowledge of allergy into horse language, let's apply it to what we already know. Founder begins with heating and swelling in the laminae of the hoof, a very vascular area like lung tissue, where man's weakness lies. Founder can be triggered by many things: trauma to the hoof, surgical trauma, dietary imbalances, overeating, chemical toxins or drug therapy, all translating as stress with its large production of stress hormones.

We also know that certain bacteria associated with high carbohydrate grains like corn, scavenge through the lower intestine to ferment undigested carbohydrates, which the horse either could not digest or could not absorb after digestion. These troublemakers produce highly toxic and allergenic chemicals called "endotoxins" which readily affect the sensitive laminae.

Mineral oil given by stomach tube works by preventing the further absorption of the endotoxins. If the condition is left for a period of time, the laminae die due to oxygen starvation from lack of blood flow, and they can no longer hold attachment of the coffin bone to the hoof wall. Later, as the hoof grows out, a separation appears on the bottom of the hoof where the dead laminae appear. On x-ray, the coffin bone, lacking proper support, rotates downward, pointing toward the bottom of the foot.

Looking through a Different Pair of Glasses

What have we really described? Nothing more than allergy, even the fact that once a horse has foundered, he is more susceptible to a rerun of the episode. Once a body is sensitized to an allergenic stimulus, attacks become more frequent and often more severe.

Applying nutritional principles to our foundered friends was quite simple. I reduced carbohydrates while keeping an adequate supply of protein required for proper metabolism. I also added amino acid-chelated minerals according to the soil deficiencies present where the horse lived, and known toxicities of heavy metals. These minerals, particularly calcium, magnesium, copper, zinc, cobalt, selenium and iodine are necessary for adequate production of digestive enzymes and hormones, and the amino acid chelated form is already predigested and fully absorbable by the body. Make sure, though, that they are amino acid chelates,
as all chelates are not created equal. The supplements I find most effective today are Untie® at 5 scoops in the night feeding, with Nutrient Buffer® morning and night at 1/3 cup each.

In effect, we have now tuned up the horse's digestive system as you would tune up a car to get more miles per gallon (or in this case, better feed conversion efficiency). Less is left, then, for the bad bacteria to feed upon.

I also include vitamins with plenty of vitamin E to help with the oxygen carrying capacity of the blood.

Another very big help to the thyroid regulated biochemical pathways in the body are antihistamines and decongestants, and especially decongestants. The most common is Ma Huang or Chinese ephedra. Pseudephedra is the man made version and works well with antihistamine, as in the horse product Trihist Granules®. Using this product at the recommended dose often negates the use of NSAIDS (Non-Steroidal Anti-Inflammatory) which cause ulcers. This product is an effective anti-inflammatory for founder and autoimmune cases. Ephedra products have recently come under fire from the FDA, however, I understand that they are now back on the market. A common human cold remedy Like Contac® will also work well. Give 1 – 12 hr time release tablet, lightly broken, not pulverized, for every 150 lbs of body weight. This will help greatly for the inflammatory response while you get the digestion and nutrition under control.

There are syndromes that can be caused by xenoestrogens (estrogen mimic) environmental chemicals known to foul thyroid pathways, so that even thyroid supplementation will not work well. There are over 70,000 of these chemicals that both horses and humans are exposed to every day in air, water and food. Founder, Cushing's, Autoimmune responses and Allergy are all linked to this exposure:

**Concurrent Symptoms of this Exposure can include:**

- Non-sweating
- Obesity, fat deposits on rump & shoulder
- Hives, skin problems area, cresty neck, distended belly
- Founder/laminitis
- Abnormal milk production,
- Allergy enlarged mammary glands
- Non-shedding
- Low fertility in mares & stallions,
- Bloat poor sperm quality
- Heat intolerance
- Respiratory difficulties
- Stiff gait
- Tying up syndromes
- Chronic infections
- Behavior-anger, anxiety, fear,
- Low basal metabolism aggression, spookiness
- Below normal body temps
- Insatiable appetite
- Carbohydrate sensitive
- Stiff, sore muscles & back
- Easy keeper, insulin resistance
- Fatigue

*Vita Royal's "Xenodetox" is an herbal/mineral/probiotic combination that is known to aid in detox of*
thyroid pathways and aid restoration of normal biochemistry. Use daily for one or two months, then several times weekly for maintenance. Do not use this product, though, until the horse is well stabilized of the feed program first, as the basal metabolism needs to be supported well before any sort of detox is initiated, or you will end up just recycling the toxins around the body, flaring toxic responses all over again.

**Feed the Right Grain**

I also use a very high protein grain mix, but a small amount, to keep up the horse's protein needs which do not change, but greatly reduce the carbohydrate intake. For horses that need more carbohydrates for exercise in winter time, or for harder keepers, you can add steam rolled oat groats (like Quaker Oats) to this base mix, if needed. (Steam rolled oat groats are preferred, not common crimped oats, because they do not have hulls where the bulk of pesticide residues are found) Top dressing with a 50/50 mix of corn oil and canola oil if the horse is on the thin side and does not have a cresty neck, will also give extra richness and calories without the carbs to inflame the feet. Use 1/3 to 1/2 cup several times per day. If the horse has a cresty neck or is on the heavy side, use 1/3 cup pure canola oil without the corn oil. Of this high protein grain mix, I use two to three lbs per day, depending on the body size of the horse, and this is all. No alfalfa hay, pellets or cubes either to interfere with the thyroid. Grass hay or pasture only, but if pasture, begin slowly to acclimate, as horse can handle. Pasture is not advised for founder prone horses, however, horses that have trauma foundered rather than digestive founder can be transitioned more safely to pasture.

Other adjunctive therapies that I have found useful are 1- giving one tablespoon of pure fructose, two to three times per day. Fructose, by an indirect pathway has an anti-inflammatory effect and often diuretic effect on high insulin individuals, both human and animals.

This program works very well for Cushingoid and autoimmune horses too. It takes a long time to rebuild a hoof completely, but it can be done under the right conditions. Special and frequent trimming can help the outside of a hoof but remember, the inside conditions must be corrected to prevent the chances of founder recurrence. The more severe or elderly they are the higher the chances that they may actually have a pituitary tumor, which is incurable at this time, and not simply the biochemical manifestations that are Cushingoid in appearance. All Cushing’s symptoms horses do not necessarily have a tumor of the pituitary. It has been shown that the biochemistry has to be incorrect in an area for up to 2 years before a tumor is finally formed in response to that. That biochemical imbalance can be corrected.

With all this help and knowledge, the road back from founder is not nearly as rocky as it used to be. © 2006 Vita Royal Products Inc.