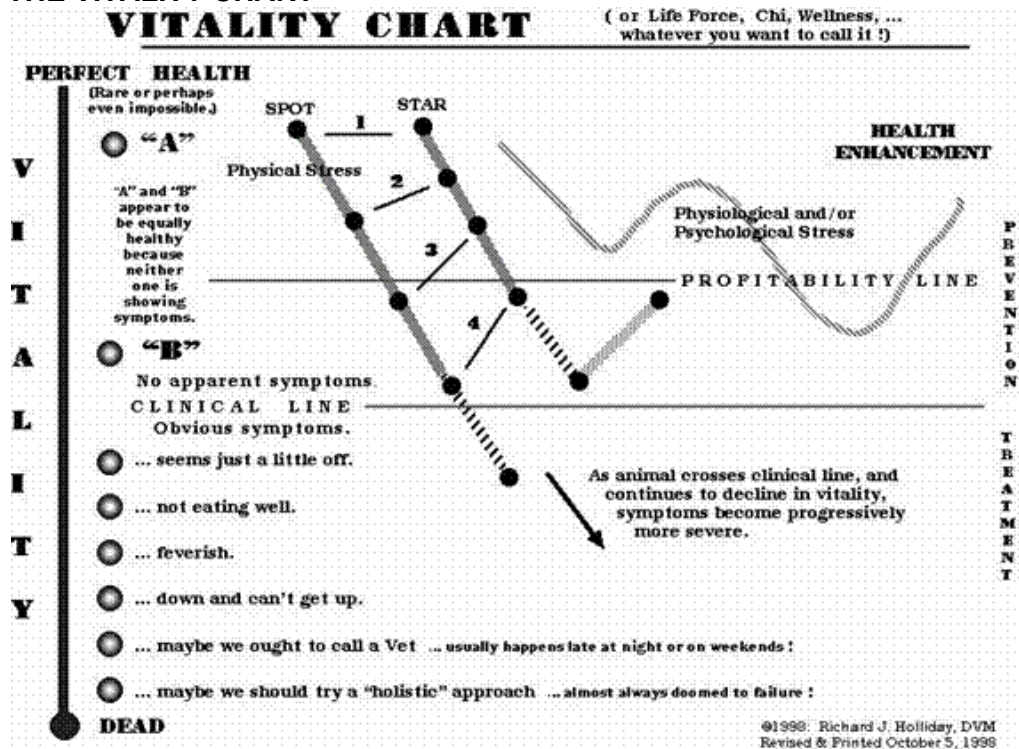


# Some Thoughts on Holistic or Alternative Veterinary Medicine

## Part 2 - SOME THOUGHTS ABOUT STRESS

- Stress is known to lower immune function and may be the primary factor that sets the stage for animal disease.
- There are three categories of stress.
  1. Environmental or physical stress, such as faulty nutrition, bad water, lack of sanitation, poorly designed and maintained equipment, unsuitable habitat, etc. Good management has some influence on most of these but can not control all of them. For example, weather cannot be controlled but the effects can be mitigated with proper housing.
  2. Physiological stress usually associated with reproduction and lactation. We can minimize some of the effects of this type, but we can not totally eliminate it.
  3. Psychological stress may occur when weaning, changing groups, establishing a new "pecking order", etc.. This type can be held to an acceptable level with good management.
- All animals vary in their ability to accommodate stress. Some differences are due to inheritance ... species, breed and sex. Others are associated with the individual's life history of health and disease. Older animals do not accommodate stress as well as younger ones do. A kid that suffers an episode of severe scours/pneumonia may survive, grow and appear thrifty even though some irreversible damage to heart, lungs and intestinal lining may forever impair it's ability to pump blood and absorb oxygen and nutrients. Under stress this animal will probably show earlier and more severe symptoms than others in the same group that did not go through the sickness
- Stresses are cumulative. A small stress has a greater effect in an animal already carrying a big stress load, than it has in another relatively stress free animal .

### THE VITALITY CHART



Over many years, I have developed a graph or map that allows me focus my thinking and helps me keep the various aspects of health and disease in their proper perspective. Any animal's relative health status can be plotted on this graph. Since this Vitality Chart also seems useful to illustrate certain principles of holistic thought. I would like to share it with you and will use it as the basis for this article and for almost all future discussions of health and disease.

On the chart, note that the “vitality” line on the left side (looks like a thermometer) runs from PERFECT HEALTH to DEAD. I purposefully do not assign any numbers because the positions are variable and I’d rather think in terms of relationships and not absolutes. I doubt we ever attain perfect health but “DEAD” is common.

The “profitability line” indicates a relative loss of production, profitability or performance. The “clinical line” by definition separates healthy animals from sick animals. Based solely on the presence or absence of symptoms. These lines are actually wide, gray areas and their position arbitrary and quite variable. It depends a great deal on how well the herdsman relates to and observes his animals.

Physiological and psychological stresses are represented on the chart as a wavy gray line. These stresses usually occur at predetermined times, such as parturition, weaning, and other routine changes or events.

If an animal progressively declines from good health to sickness or even death (going straight down the left side of the chart), it will first cross the ‘profitability line’ as it becomes less productive and then the “clinical line” when it begins to show symptoms of disease. These symptoms may be mild at first, ... “a little off,” ... gradually increasing in severity until “DEAD”. (See Vitality Chart) We know and accept that there are differing levels of illness but our management decisions frequently seem to be based on the premise that animal “B” is just as healthy as animal “A”. We all know that different levels of health do exist but in practice we tend to overlook this because “A” and “B” both look equally healthy even though there is great difference in their respective vitality. Production records and breeding records are a great aid to identify those animals that have lost productivity but are not yet showing symptoms.

Let’s compare the reactions of “Spot” and “Star”, both living a relatively stress free life and having a high level of vitality. (position 1 on the chart) If something happens to their ration and they are subjected to nutritional stress, they will probably both decline in vitality to position 2. Notice that Spot was affected more severely, possibly because she suffered a grave illness when young (as discussed earlier). Both still appear to be healthy and productive but some of their “reserve” is used up.

Adding another stress causes both to slip down to position 3. Star is still doing well but now Spot has dropped under the profitability line. She shows no clinical symptoms but performance or production testing may indicate problems. In a dairy animal this could be evidenced by lowered production, a change in SCC or an impairment of breeding efficiency.

Add one more stress and Spot and Star fall to position 4, both below the profitability line. Spot is dangerously close to the clinical line but still shows no obvious symptoms although a really close observer might see mild symptoms developing.

As one last insult, let’s expose them both to pathogenic bacteria capable of causing disease. Both suffer the same loss of vitality from this exposure (striped line). Star dips in vitality but does not go “clinical”. She is able to overcome the infection because she had some resistance left. Spot drops over the line and begins to show symptoms. Conventional medicine would diagnose the bacteria as the “cause” of her disease.

This example is obviously oversimplified to illustrate a principle, but does beg the question: “In this example, did the germs cause the disease? Or would it be more accurate to ask: “Did the bacteria trigger a disease in an animal that was already suffering from stress-induced, low vitality?” I go with the trigger theory. The deciding factor was not the presence or absence of a disease organism, but the presence of induced, low vitality?” I go with the trigger theory. The deciding factor was not the presence or absence of a disease organism, but the presence or absence of a strong immune system. Obviously, microorganisms do vary in their ability to cause disease and a highly pathogenic organism may be able to cause disease in relatively stress free animals. These epidemics however are probably not as costly in the long run as the day-to-day losses incurred by common infections.

I think we give germs way too much weight as the cause of problems. My guess is that a germ can’t tell if an animal is dead or alive ... but if an animal is so “stressed out” that it “tastes” dead to the bacteria, they

immediately begin the recycling process. In a dead animal we call it decomposition ... in a live animal we call it disease. In the grand scheme of things, the “bugs “ are probably only doing the job assigned to them.

## **SOME OBSERVATIONS BASED ON THE CHART**

- Let's go back to poor old Spot's predicament. We could give her some antibiotics and hopefully kill enough germs to get her back up over the clinical line. Or, we could treat her with herbs, or homeopathy or whatever and probably help her enough to shut off the symptoms. BUT, unless we eliminate the stresses that put her at the susceptible level in the first place, we have really only installed a big Band-Aid!
- Timing is critically important. If you start treatment early, a mild treatment has a greater chance of getting results. If this is not successful, you still have time to escalate to a more heroic treatment. Some conventional dairymen overlook the importance of timing when their hope for a spontaneous recovery leads them to withhold treatment of sick animals until the last possible moment in order to minimize the economic loss of discarded milk or meat. A holistic treatment does not have this disadvantage and can be used anytime.
- Generally speaking, the closer to the top of the chart we recognize a problem and begin to correct it, the lower the cost.
- If healing and/or health occurs at all, it is a function of the natural inclination of the animal to be healthy. Drugs, from whatever source derived, only aid this natural process.
- Just because an animal shows no symptoms does not mean it's healthy.
- The final stress that triggers symptoms is usually not the primary cause of the illness. For example, bacteria may “trigger” mastitis but the real “cause” may be nutritional deficiencies or other stresses.

## **A QUIZ!**

If you are already following holistic principles or aspire to do so, you should be able to answer these questions. If you can't answer them, you have some homework to do.

1. Is the ration adequate with no excesses, deficiencies or toxins? Were the feeds grown on fertile soil with little or no chemical contamination? Are the feed ingredients appropriate to the species, type and age of the animals?
2. Is the water pure? Has it been checked for nitrates and other harmful chemicals? What is the actual nitrate level in the water? Do you drink from the same water supply as the animals? Does the water taste good to you?
3. Are there any harmful electrical or electromagnetic influences on the premise? Do you ever receive mild electrical shocks when working in the area where the animals are kept?
4. If used, is milking equipment properly maintained and adjusted?
5. Are all procedures involving the animals such as milking, vaccinating, and routine surgery carried out in a timely and sanitary manner?
6. Do your animals have a clean, dry, well-ventilated environment when confined? Can you kneel down in the pens without getting wet knees? Is breathing uncomfortable or unpleasant to you when breathing at the same distance above the ground as the animal breathes in air?
7. Is there any evidence of mold, mycotoxins or aflatoxins in the feed? Some are not apparent until symptoms occur, ... have you checked?

Please feel free to contact me with any questions, comments or criticisms at [rjhdvm@rconnect.com](mailto:rjhdvm@rconnect.com) or [rjhdvm@aol.com](mailto:rjhdvm@aol.com)

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