

I started writing the below response to a colleague asking about ultra violet light therapy as a treatment for swine flu. Then it occurred to me that most doctors will have no effective paradigm for treating this contagion. The reflex will be to reach for the prescription pad which has been proven to be useless in this situation. Unfortunately, most doctors are impotent without it. Those of us who have mastered so called "alternative medicine"(I tell doctors "There is no alternative to good medicine"),have no fear of swine flu or whatever pigs it came from(he said sarcastically). Knowing that many physicians are in limbo land like Democrats who wanted Hilary, I decided to go more in depth.

This swine flu situation is a bit like the Katrina incident. I took care of many of those "refugees" at a Red Cross center in Gainesville, Texas. As they filed in, it was obvious that these were people on the physical and economic bubble long before Katrina. It later became known that the hurricane was not the cause of the catastrophic destruction of a major U.S. city. The hurricane was only a category 2-3 by the time it hit the Big Easy. The flooding that wreaked havoc, displaced many, and killed over a thousand people was caused by a breach in the levy. A breach that should have been girded by the Army Corps of Engineers using tax payer money. People paid their tax money and put their confidence into the hands of the politicians. The politicians and their minions took the money, but the incompetent levy was never fixed.

This is an allegory to "healthcare" in these United States. We spend more dollars than any nation on Earth on "healthcare" yet we have the weakest "levy". Why has our system failed? For the same reason given in business 101 for the failure of any venture "It was designed to fail". The current paradigm has us believing we can medicate our way out of diseases we behave ourselves into. That has proven to be folly. Reading between the lines of the current medical literature, its all to clear that restoring normal biochemistry is the boring, poorly compensated, most effective way to prevent and reverse disease.

If you want to practice good medicine, here's your opportunity. Since conventional medications will be as effective as lipstick on a pig in the current situation anyway, you won't be faulted for trying something different, like eyeliner and highlights. I've purposely refrained from putting dosages and references since most everything you need to know or vet is a keystroke away and there is no shortage of books and other media on this information. My intent is to get you thinking about the current paradigm of medicine, why it has failed, and an avenue to investigate effective options.

XX

Roby,

Thanks for all the emails. All of this is very disturbing. I am stocked up on vitamin D 50,000 for family and friends. My question is regarding ultraviolet blood irradiation.

I think that this would also be effective for treatment but of course not recognized by the FDA. What are your thoughts?

I went through a training course with Dr. Rowen a few years ago and I have all of the equipment.

Thanks,
Lynn

I think that will be a lifesaving intervention for those that need it. Most folks will survive with less intervention. When that sick individual walks in, assess them for "immune complex" integrity. The "immune complex" is the amalgam of defenses that keep us from succumbing to infection. The integrity of the immune system is, of course, of paramount importance, but a complete "systems analysis" is required to make the decision about how to treat each patient. You must consider age, functional integrity of physical barriers to infection, nutritional status, ability of the body to produce humoral defenses, and the status of microbial balance in the patient.

1) First consider their age. The immune system is immature in the very young and waning in the elderly. The immune system matures sometime around puberty. This is when we see children "grow out" of susceptibility to many infectious diseases such as asthma and other respiratory diseases. Children who have been breast fed will have stronger immune systems. Children born to hypothyroid moms will have weaker immune systems. If a child has a history of asthma or repeated ENT infections, this child should be considered high risk.

The immune complex takes a predictable functional drop around age 65. The primary reason is hormonal decline. Inadequate nutrition can be a complicating factor. Patients over 65 who have uncompensated hormonal decline, especially thyroid, should be considered high risk. These patients have cumulative risks with each breach of the

immune complex. If they have deficiencies of nutrients such as vitamin D (vitamin D turns out to be a steroid hormone with receptors on macrophage surfaces as well as other cells. Its interface at these sites causes DNA transcription that activates macrophage activity among many other functions), vitamin A, selenium, iodide/iodine, protein, iron, oxygen, zinc, vitamin C, or essential fats their risk increases. Behavioral patterns such as smoking, alcohol intake, and a high glycemic diet, increases their risk. Reductions in anatomical functional capacity such as loss of dentition, or lung capacity increases risk. If they are taking immuno-suppressing drugs such as steroids, monoclonal antibody drugs for autoimmune disease, chemotherapy etc, their risk is increased. You can't reverse a person's age but you can address hormonal/nutritional deficiencies and make them aware of behavioral modifications that impacts immune function.

2) After age, the next cohort most likely to sustain morbidity from infection are those that have an innate or acquired reduced immune complex capacity. Hypothyroidism is a big factor in this group. Thyroid hormone controls many facets of the "immune complex". Thyroid hormone controls collagen production needed for skin integrity. It also controls conversion of carotenoids into vitamin A. Vitamin A levels are critical for normal immune function and structural integrity in mucosal membranes such as the eyes, respiratory tree, and GI/urogenital linings. Thyroid hormone controls number and activity of immune cells. Thyroid hormone controls the production of glycoaminoglycans. These are the molecules found in mucin or snot. Viruses and other microbes use saccharide molecules as docking stations on cell membranes. Glycochemistry is an emerging branch of immunology. By producing glycoaminoglycans at mucosal surfaces of the respiratory tree, GI tract, and urogenital tract, the body gives microbes a decoy to attach to that then conveys them out of the body. Taking in sugars such as xylitol facilitates this process. Go to my website <www.drfit.com> to become familiar with the signs of hypothyroidism. This is a clinical diagnosis that won't be reflected in a blood test until later stages. Thyroid replacement has to be in place before infection happens, like a strong levy system before a hurricane.

The other hormone that declines with age and greatly impacts immune cell function is cortisol. Many times viral infections can be miraculously aborted by an IM injection of a synthetic glucocorticoid. If innate production of glucocorticoids is compromised, the patient will be at higher risk for infection. As with thyroid and other decline in hormone levels, the reduction is rheostatic. You must learn to recognize deficiencies before they show up on blood tests.

Patients can acquire immune complex dysfunction by their own devices or iatrogenically. Smoking affects most components of the immune complex from the action of cilia in the respiratory tree down to functional capacity of immune cells. Alcohol, in excess, also blunts immune function. A high glycemic diet will promote fungal overgrowth. Fungi produce immunosuppressing mycotoxins (gliotoxins etc) that target macrophage function. Normally, macrophages engulf microbes, digest them in lysosomes, then regurgitate the antigens to their outer cell membrane onto the major histocompatibility complex. Here the antigens are presented to T cells, so they know who to attack, and B cells, so that antibodies can be made to preempt future infections. Without normal macrophage function, the immune system is severely compromised in the area of cellular response capacity.

Interestingly, a high glycemic diet can cause auto-fermentation, as reported by several investigators. In some people, Candida yeast will ferment sugar into alcohol, the so called "auto-brewery syndrome". There are reports in the literature of this syndrome being so profound as to result in drunken behavior and elevated blood alcohol levels. The elevated blood alcohol levels are substantiated. The effect on behavior from these elevated alcohol levels is disputed. The disease currently known as non-alcoholic steatohepatitis(NASH) can be explained by this mechanism, although the association has yet to be established in the medical literature.

Patients can also sustain immunogenic compromise by being prescribed the drugs listed above. Again, immune compromise is cumulative, so the more risk factors involved, the more aggressive the therapeutic intervention needs to be. You need to start making this assessment as soon as you lay eyes on the patient.

3) Nutritional status is key to immune system functioning. The status of nutrients above should be evaluated by history. Selenium facilitates conversion of poorly active T4 into the more active thyroid hormone T3. Zinc promotes this conversion as well as wound healing, and having a virucidal effect. This is apparent from the popularity of many OTC zinc supplements proven to attenuate viral infections. Vitamin C also has virucidal as well as immune augmenting effects. Essential fats are critical to the integrity of every cell membrane. Proteins are the building blocks of most components of the immune complex from skin cells to antibodies. Assimilation of proteins is controlled by steroidal hormones such as testosterone, glucocorticoids and thyroid hormone. Nutritionally, the building blocks of proteins are

the essential amino acids. These must come from the diet and the body must have the capacity to absorb and assimilate them into proteins.

The halogen status of the body predicts risk for infection. Iodine and iodide are the halogens that have receptor sites on human cell membranes. These superb, broad spectrum antimicrobials ride shotgun on cell membranes at the site of DHA molecules and provide protection from viral, fungal, and bacterial invasion.

The ability to absorb and assimilate amino acids and other nutrients is underwritten by parietal cell production of hydrochloric acid. Dysfunctional HCl production happens predictably with age, as evidenced by the need to give B12 parenterally in the elderly. However, a reduced capacity to produce HCl can be present from birth. This capacity can be assessed by the Heidleberg test or by a clinical trial of titrated doses of betaine HCl. Acutely, HCl can be given as an IV push. The book *Three Years of HCl Therapy*, given to me by Jonathan Wright M.D., is a collection of articles from The Medical World Journal that recounts the experience of several physicians using HCl to treat everything from infections to cancer. The effect on viral infections can be almost instantaneous.

The final component of the innate immune complex I'll mention is gut fauna. The balance of the gut ecosystem confers risk of or protection from pathogenic microbe overgrowth. This should be addressed by minimizing exposure to antibiotics which kill beneficial gut fauna and having patients supplement with a probiotic or eat fermented foods such as yogurt. Physicians have played a major role in saturating patients with superfluous antibiotics. Antibiotics are also abused by the livestock industry and therefore exposure can come from eating the flesh of these animals. more details are found in the book the Antibiotic Paradox by Tufts professor Stuart B. Levy M.D.

The above are actionable before your patient presents with an infection and will greatly reduce their risk. However, what we are more likely to see is the patient that presents with an acute infection. Depending on the status of the person's immune complex, implement the appropriate therapeutic intervention. For the patient calling with no symptoms but in response to information in the media, you or your designate should assess their risk profile, instruct them on reducing their likelihood of exposure, and instruct them on implementing basic supplements proven to augment immune function. If, from questioning, they relate a deficiency that requires medical intervention, such as thyroid or adrenal insufficiency, recommend they be evaluated. For the patient in otherwise good health and competent immune complex status, augmenting nutritional components of the immune complex should suffice. Have them start vitamin C (follow the "bowel tolerance" protocol). Make them aware of vitamin C's role in innate immunity and recommend continued supplementation. Unless you have tested them and know they have good vitamin D levels(70-100ng/ml) have them take 50,000 IU of vitamin D3 for 3 days after you take their blood to assess their vitamin D status. Zinc must be taken in the form of lozenges to attenuate acute infections. Enough zinc for maintenance is contained in many multivitamin/mineral formulas. Elevated glucocorticoids will cause an immediate, albeit transient release of lymphocytes. This can be accomplished with an in office injection, a prescription for a prednisone dose pack or its naturally produced analog, hydrocortisone. Another very effective therapeutic intervention that follows the line of augmenting the innate immune complex is treatment with supplemental or prescription halogens. SSKI works wonderfully for the respiratory tree. 10 drops in water 2-3 times/day has kept many of my patients out of the hospital. Patients with respiratory compromise, as in COPD or cystic fibrosis, should be instructed how to use SSKI. Alternatively, Lugol's or its tablet analog, Iodoral, can be used. This is an opportunity to assess whether halogen deficiency may have facilitated the patient's illness. If so, instruct them on supplementation.

Once I started investigating clinical uses of halogens I was floored by some of the articles I read that had nothing to do with iodide as a substrate for thyroid hormone: The article *Effect of Iodide on Total Antioxidant Status of Human Serum* in "Cellular Biochemistry and Function" showed that iodide has the free radical scavenging capacity similar to vitamin C. Another eyebrow raiser was a 10 year review of the successful treatment of severe chronic obstructive pulmonary disease in using SSKI in 2404 patients;100 of whom were children. The journal *International Journal of Science* published an article titled "Iodide Alters Gene Expression in the MCF& Breast Cancer Cell Line: Evidenced for an Anti-Estrogen Effect of Iodine. The implications for prevention and treatment of breast cancer are profound. Similarly the journal *Cancer Research* published the article *"Nonradioactive Iodide effectively Induces Apoptosis in genetically Modified Lung cancer cells.* The prospect of non toxically inducing apoptosis-also profound. For a primer on benefits of iodine that you were not taught in medical school, the reader should retrieve "Extrathyroidal Benefits of Iodine" by Donald Miller-Journal of American Physicians and Surgeons Vol 11 No. 4 winter 2006.

High vitamin A is another part of the innate immune complex that can be augmented to treat acute viral disease. Vitamin A also helps restore structural integrity of mucosal surfaces. I often use 100,000 IU of vitamin A for a month in patients who have been chronically low thyroid as evidenced by palmar/plantar carotenemia. Viva is a brand of

vitamin A eye drops that I've found to mitigate symptoms of dry eyes or allergies. Maintenance dosages should be in the range of 10-25,000 as provided by many vitamin/mineral formulas. The supplement should contain actual vitamin A rather than beta carotene which requires thyroid hormone dependent conversion into vitamin A. This is a good opportunity to recommend a comprehensive vitamin/mineral supplement as these have definitely been shown to reduce the incidence of infection in the elderly.

The above are therapies that the body depends on innately. The patient is least likely to have an untoward response to these. Some patients, however, require the next level of intervention. These would be therapies not normally found as part of innate immunity in humans, but have been shown to be safe and effective. Many times these are substances produced by other eukaryotes in defense of enemy microbes. These substances are elaborated to fend off predators, so are more likely to have an untoward effect on human cells. Safe effective use of these compounds requires a higher level of expertise. Phenolic compounds have a long history in this regard. Those of you born in my era can probably recall the smell of Vick's Vapor Rub wafting from a humidifier into your congested sinuses. This and other phenolic based preparations have been safely used by grandmothers for many years. A more potent phenolic compound, oil of oregano, is effective in treating acute viral infections. I have had particular success with the line of products from North American Herb and Spice. These products are also fungicidal and bacteriicidal. Reducing fungal counts is an effective way of augmenting immune cell function, as fungi produce immunosuppressive mycotoxins.

Many times bacterial/viral infections are initiated by fungal overgrowth that "runs interference" for them. ENT physicians at Mayo recognized this infection cascade when they investigated refractory sinus infections. Through a series of investigations Dr. David Sherris and his team proved that 96% of the time, these bacterial infections had fungal overgrowth as an initiating factor. When they started treating patients with antifungals, they were able to break the cycle. Urologists are going through a similar learning curve with prostate infections reflected by rising PSA's. These also respond to antifungal treatment. Antimicrobials found in garlic and its plant relatives can be effective in mitigating mild infections. Whole cloves of raw garlic have worked best in my experience. Garlic oil drops work wonderfully for pediatric ear infections. The book *Natural Alternatives to Antibiotics* by John McKenna M.D. goes into more depth about antimicrobial phytochemicals and has the literature references. Another excellent reference is *Botanical Influences on Illness* by Melvyn Werbach M.D and Michael T Murray N.D.

The next level of treatment is with substances that are not produced by eukaryotes but have been found to be safe, effective antimicrobials. Silver is probably at the top of this list. Silver is used conventionally in newborns and in burn victims. It has virucidal, bacteriostatic and bacteriocidal properties. I tested 3 silver products for their antifungal properties and none of them created a zone of inhibition in petri dishes inoculated with *Candida albicans*. Silver should always be complemented by an antifungal as most infections have heterogenous fauna.

The above are all interventions that can be considered relatively safe in the hands of a competent adult. Be sure to give patients parameters, outside which they should seek a professional. You should also have in your arsenal the capacity to deliver some of these therapies parenterally. I mentioned the IV HCL above. Vitamin C, selenium, glutathione, silver, and other nutrients can be given IV with great success in the acutely ill patient. The Tahoma Clinic in Renton Washington is famous and infamous for these formulations. Clinic founder Jonathan Wright M.D. was raided by federal agents ostensibly for other infractions but substantially because he was administering these safe, effective, peer reviewed, natural therapies. Ultra violet light therapy as described in the book "Into the Light" by William Campbell Douglas is effective in treating infections refractory to OTC therapies. IV antimicrobial therapy is not something you learn on the day the patient presents with an infection. This should be learned from practitioners who have mastered it. Bastyr University offers periodic courses. I'm sure there are others.

Beyond this there are, of course, the conventional therapies. The report is that these are not effective with the current outbreak of swine flu.



An example of augmenting the innate immune complex. This child was given no medications and nothing topical was applied to her toes.



Similarly, this patient had no conventional dermatologic intervention. Together, she and I orchestrated her DNA to perform better.