

Aloe Vera (Continued from p. 17)

results in partially digested food remnants which can be involved in several pathological reactions. First, these remnants become irritants and cause inflammation of the mucosal wall of the intestines. Many powerful enzymes and damaging chemicals are released, injuring the intestinal wall causing increased intestinal mucosal permeability. The foreign proteins of the digested food can then leak across the mucosa into the lymphatic channels of the intestinal wall and from there gain access to the circulation. Here, these absorbed proteins are recognized as foreign and attacked by cells of the immune system. Antibodies bind to the protein, then call in macrophages and monocytes. T-cells arrive later, releasing enzymes and using oxygen to drive the metabolic breakdown of the foreign protein.

The total result is that the immune system is constantly turned off and draining down like a battery. As these allergic reactions to food breakdown products continue, the cells of the immune system wear out faster, run out of fuel and aren't reproduced in sufficient numbers.

Maldigestion and Candida

In addition to this chronic hyperimmune state, undigested food remnants provide fuel for the overgrowth of fermentative fungal organisms such as *Candida albicans* as well as several types of parasites. Overgrowth of *Candida* in the intestine has significant effects throughout the body due to the absorption of toxic by-products of its metabolism. This can result in worsening of food allergies, hypoglycemia, digestive disturbances, excessive mucus, bloating, flatulence, skin rashes, and extreme fatigue. This chronic infection further drains the immune system and complicates the picture.

Maldigestion and free radicals

Further damage is inflicted on all cell membranes from the effects of the generalized inflammation occurring as a result of maldigestion. These metabolic reactions utilize large amounts of oxygen and produce oxidative free radicals as waste by-products. These negatively charged oxygen molecules are desperately trying to balance their electrical charge and immediately begin to chop holes in cell membranes as they grab positive charges. The result here is further damage to the intestinal mucosa and ever worsening of the increased permeability.

All these processes work together in a vicious sequence of events leading to progressive weakening of the immune system. Without definitive therapy directed at each component of immune system pathology, this is a downward spiral to death. Fortunately, a thorough multidimensional treatment protocol addressing each component has been shown to reverse these processes. Also, Aloe Vera appears to play a key role on many different levels in boosting immune function.

Aloe Vera and anti-inflammatory action

As the biologic activities of Aloe Vera derived acemannan have been elucidated, it has been shown to have a remarkable ability to normalize all of these damaging processes and therefore contribute significantly to the enhancement of immune system function. At the intestinal level, acemannan acts as a potent anti-inflammatory agent, neutralizing many of the enzymes responsible for damaging the mucosal wall; in effect, quenching the fire. This results in decreased leakiness of the intestinal wall and less absorption of allergic stimulating foreign protein. Acemannan has direct virucidal, bactericidal, and fungicidal properties which can help control *Candida* overgrowth so that normal gastrointestinal bacterial flora can be restored. Acemannan also stimulates intestinal motility, helping to move allergenic proteins into the colon. All these processes help to normalize gastrointestinal wall structure and function and therefore stop the vicious macrophages, killer T-cells, and monocytes, as well as increasing the number of antibody forming B-cells in the spleen. Acemannan also protects the bone marrow from damage by toxic chemicals and drugs such as AZT.

Aloe Vera and cellular health

Acemannan interjects itself into all cell membranes, allowing toxins to flow out of the cell more easily and nutrients to enter the cell. This results in improved cellular metabolism throughout the body and an overall boost in energy production. Acemannan has been shown to possess a unique combination of immunomodulatory and antiviral properties. The vicious cycle of maldigestion and cellular starvation is finally broken as the acemannan normalizes absorption of nutrients and increases tolerance for allergenic foods. The immune system is now stronger, under control, and better prepared for any new threat.