

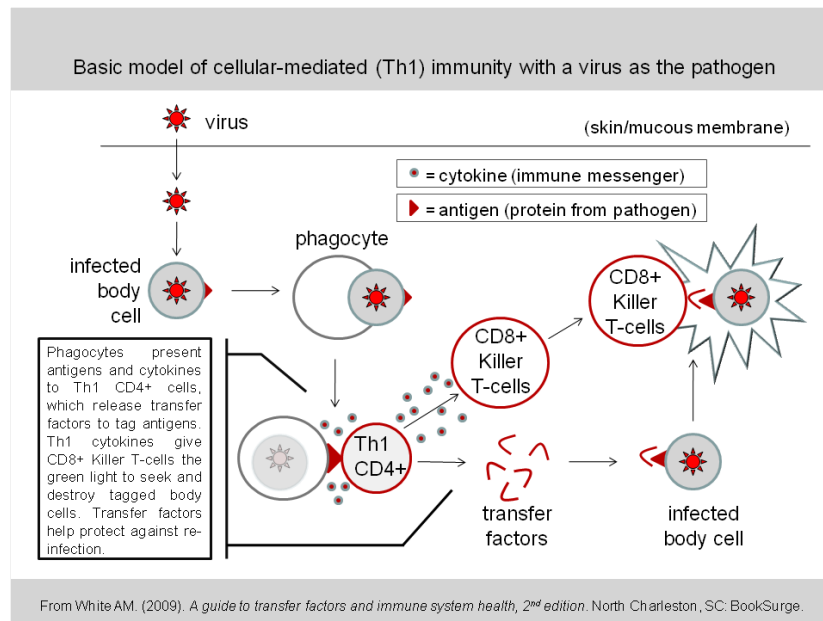
TRANSFER FACTOR REFRESHER

WHAT ARE TRANSFER FACTORS & HOW DO THEY WORK?

Transfer factors appear to be short strands of amino acids and perhaps small bits of ribonucleic acid (RNA). It is thought that transfer factors are manufactured within Helper T-cells; cells that coordinate attacks launched by the immune system. Once released by Helper T-cells, transfer factors influence immune system activity in several ways. Their presence is read by other immune cells as an indication that a Th1-mediated immune battle is under way. This results in the birth of new Helper T-cells, Natural Killer cells and macrophages, the conversion of young lymphocytes into Th1-related immune cells, decreased levels of Th2-related cytokines, increased levels of Th1-related cytokines and a general strengthening of the Th1 response.

In addition, like antibodies, transfer factors bind to specific antigens. In the case of transfer factors, the antigens are located on the surface of infected body cells. New Helper T-cells use the presence of antigen-specific transfer factors to focus the immune response against particular threats. By sticking to antigens on infected cells, transfer factors presumably flag the infected cells for destruction by Cytotoxic T-cells.

In essence, transfer factors are the smaller siblings of antibodies, but operate to facilitate the destruction of infected body cells via cell-mediated immunity rather than the labeling of free-floating antigens via antibody-mediated immunity.



HOW DOES TRANSFER FACTOR SUPPORT MY PATIENTS' IMMUNE HEALTH?

According to Aaron White, Ph.D. and author of *Transfer Factors & Immune System Health*, "Research strongly suggests that transfer factors are effective for helping the body beat an array of disease states that involve faulty or overloaded immune function and can prevent infections before they occur. Transfer factors seem to prime the body for battle against intracellular pathogens, like viruses, mycobacteria and cell wall deficient bacteria, and help quash infections before they can take root. Transfer factors turn non-immune-related white blood cells into immune-related white blood cells and stimulate the birth of new Helper and Cytotoxic T-cells, Natural Killer cells and macrophages. After stimulating an increase in T-cell counts, transfer factors orient these new T-cells toward a target, presumably by influencing the nature of the antigen receptors expressed by the cells. Further, by binding to antigens on infected body cells, transfer factors paint infected cells for destruction by Cytotoxic T-cells."

Natural Killer activity is often suppressed in people with chronic immune-related conditions and research indicates it is effective at promoting healthy NK cell function.



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