

The Basics of Transfer Factor

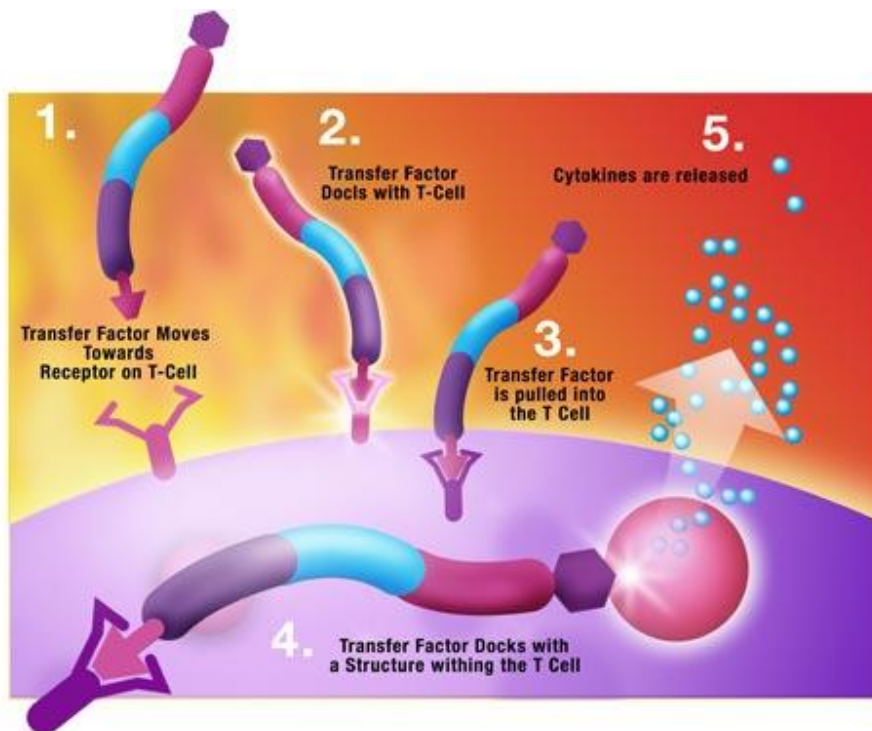
Transfer factors are natural, microscopic molecules that reside in the bodies of all animals. They are messengers, passing immunity information about the presence of an immune threat—whether external or internal—and how to properly respond, from immune cell to immune cell.

Transfer factors are produced by lymphocytes with cell-mediated immunity function. They carry the parent lymphocyte's antigen-specific cell-mediated immunity (delayed-type hypersensitivity) to unsensitized, or naive, lymphocytes. They can also increase the nonantigen-specific immunostimulatory activity of the recipient lymphocytes.

Transfer factors transfer immunity information—recognition of pathogens and appropriate immune response—with inducer, suppressor and antigen-specific factors.

- The inducer factor allows transfer factor to aid the adaptive immune response to viral infections, parasites, malignancies, bacterial and mycobacterial disease, fungal infection, autoimmune disorders and neurological disease. This factor can transfer an immune response in under 24 hours and significantly reduce or eliminate symptoms of illness.
- The suppressor factor keeps the immune system from over-responding, such as to pollens and other foreign bodies, as well as to itself as in the case of an autoimmune disorder.
- The antigen-specific factor carries critical tags that the immune system uses to identify foreign microbes and cells.

Transfer factors are found in even the most primitive immune systems. As such, transfer factors' inducer and suppressor factors are universal and can transfer immunity across species barriers. Hence, transfer factors from a cow can confer immunity in a human. The antigen-specific factor can transfer immunity between species when crossover occurs between antigen-specific pathogens, such as in smallpox and cowpox, *E. coli*, etc.



Sources:

Natural Immune Booster: Transfer Factor, William J. Hennen, Ph.D., Woodland Publishing, 1998

The Super Supplement Combination for Optimal Immune Function: Enhanced Transfer Factor, William J. Hennen, Ph.D., Woodland Publishing, 2000

"A New Basis for the Immunoregulatory Activities of Transfer Factor—an Arcane Dialect in the Language of Cells," Lawrence HS, Borkowsky W. *Cell Immunol*, 1983.

"Structural Nature and Functions of Transfer-Factors," Kirkpatrick CH. *Annals of The New York Academy of Sciences*, 1993

Extracted Transfer Factors

Transfer factors are thought to contain protein and RNA, but no DNA. Their small size—a molecular weight of less than 10,000—helps render them nonallergenic and enables them to retain full potency when taken orally. The colostrum of all mammals is, in fact, rich in transfer factor, and is critical for conferring passive immunity to newborns when ingested during breastfeeding or suckling.

Needs for Transfer Factor

Anyone—healthy or diseased, with a few exceptions—benefits from regular transfer factor supplementation. The use of transfer factor has resulted in no reports of serious adverse reactions, even when clinically administered in doses in excess of normal for prolonged periods.

Those with specific ailments also benefit. Numerous studies have shown the effectiveness of transfer factor in eliminating or alleviating symptoms of herpes, chronic fatigue syndrome, Epstein Barr, hepatitis, secondary infection due to AIDS, candida, cancer and many other disorders. Studies have also shown that continual use provides the greatest benefit with maximum immune activity occurring 24 to 48 hours after initial dosing.

The need for transfer factor as an adjunct to better health stems from the growing awareness that prevention is the best source of treatment. With the increasing risks of antibiotic resistance and significant health threats, such as SARS, the medical community increasingly turns to the inherent concept of vaccines—prevention.

Transfer factors are akin to vaccines. But, rather than expose the patient's immune system to the actual disease or a deactivated version of the same, transfer factors expose the patient's immune system to the memory of a health threat—whether foreign or native—and the knowledge of how to best respond to protect itself.

Sources:

Natural Immune Booster: Transfer Factor, William J. Hennen, Ph.D., Woodland Publishing, 1998

The Super Supplement Combination for Optimal Immune Function: Enhanced Transfer Factor, William J. Hennen, Ph.D., Woodland Publishing, 2000

"Effect of Anti-Herpes Specific Transfer Factor" Byston J., Cech K, Pekarek J, Jilkova J. *Biotherapy*. 1996

"Orally Administered HSV-Specific Transfer Factor (TF) Prevents Genital or Labial Herpes Relapses." Pizza G, Viza D, De Vinci C, Palareti A, Cuzzocrea D, Fornarola V, Baricordi R. *Biotherapy*. 1996.

"Efficacy of Transfer Factor in Treating Patients with Recurrent Ocular Herpes Infections." Meduri R, Campos E, Scorolli L, De

Sources of Transfer Factor

For his pioneering work on transfer factor, Dr. H. Sherwood Lawrence used an extract of human blood cells. For many years, human blood or blood harvested from farm animals and slaughterhouses remained the sole sources and were typically injected.

Today, cow or goat colostrum (the milk a mother produces right after birth) or chicken eggs are recognized as the most common polyvalent sources due to their efficacy, abundance and economics. These sources are usually dried and capsulized or powdered. Transfer factors or extractions of transfer factors are still extracted from blood as well as grown in vitro. However, these sources are typically antigen-specific and reserved for research purposes due to their relative lack of economics and availability.

Transfer factor preparations can include whole products or concentrated transfer factors harvested from whole products using specialized and sometimes patented microfiltration technologies.

Whole Colostrum

Colostrum can be dried in its original whole form and encapsulated.

Sources:

Natural Immune Booster: Transfer Factor, William J. Hennen, Ph.D., Woodland Publishing, 1998

The Super Supplement Combination for Optimal Immune Function: Enhanced Transfer Factor, William J. Hennen, Ph.D., Woodland Publishing, 2000

"A New Basis for the Immunoregulatory Activities of Transfer Factor—an Arcane Dialect in the Language of Cells," Lawrence HS, Borkowsky W. *Cell Immunol*, 1983.

Dorland's Illustrated Medical Dictionary. www.mercksource.com

Who Can Use Transfer Factor?

People of all ages can use transfer factor. Transfer factor was, in fact, designed by nature for newborns. People wishing to give transfer factor to infants and children under age 12 should work closely with a medical professional on deciding what dose to take. Typically, children do well with doses half that of the adult/label dose. Infants would require somewhat less. While there is no known toxicity to transfer factor, picking doses for younger children and infants should be done with prudence.

Frequently Asked Questions

What Is Transfer Factor?

Transfer factor molecules function as a highly effective immune messaging system made up of small protein chains and other related compounds. Transfer factors occur in white blood cells of humans and animals. When foreign organisms are encountered by select immune cells they produce transfer factors specific to the invading organism. These transfer factors are then passed along to other immune cells "passing the message" of a foreign organism and the characteristics of the organism. Current research indicates that these immune compounds are identical from one species to another. Thus making it possible for transfer factors from cows and chickens to be beneficial in human health.

Transfer factors are designed by nature to transfer critical immune information. These compounds are most prevalent in colostrum and egg yolks. Through these two sources, all animals are given temporary immunity to all of the organisms to which their mothers have been exposed. This allows the young animal some protection until its immune system is more fully developed. Likewise, this temporary protection can

be utilized by humans of any age.

How Does Transfer Factor Work?

Transfer factor is made up of three separate fractions that balance the immune system for a more effective immune response. The three fractions are the INDUCER, ANTIGEN SPECIFIC and SUPPRESSOR fractions. The inducer and antigen-specific fractions educate your naïve immune system about a present or potential danger and equip it with a plan of action. These fractions speed up the recognition of a threat, making the duration of an illness shorter, allowing your body to more quickly respond to similar health threats. Finally, the suppressor fraction is able to recognize the enemy's defeat and then calm the immune system back to a normal level. Such effects may have particular importance in autoimmune disorders.

Unlike most immune supplements that only provide building blocks for proper immune function, transfer factor also provides immune intelligence. It is the immune information and education that helps to focus the immune system, keeping it on task and effective.

When Was Transfer Factor Discovered?

Dr. H. Sherwood Lawrence discovered transfer factor in 1949. During the process of studying tuberculosis, he discovered an immune response could be transferred from a donor to a recipient through an injection of an extract of leukocytes. Further investigation led him to conclude that this immune extract must contain "factors" that made it possible to transfer the donor's immunity to the recipient. He called these molecules "transfer factors."

What Is The Most Commonly Used Form of Transfer Factor?

Transfer factor can be sourced from white blood cells isolated from a suitable donor, cloned lymphocytes grown in vitro, colostrum and egg yolks. Of these, the most promising commercial sources are colostrum of milk cows and eggs laid by hens.

What Is The Difference Between Polyvalent and "Specific/Targeted" Transfer Factor?

Standard transfer factor preparations are polyvalent, or balanced preparations with no one transfer factor predominating. Polyvalent transfer factor supplements provide a broad spectrum of immune support.

While a "specific" transfer factor preparation continues to offer polyvalent benefits, it also provides one set of transfer factors that are targeted against a specific condition. Specific or targeted transfer factors are obtained by exposing a non-mammalian source animal to at least one antigenic agent that will cause said source to elicit a T-cell mediated immune response.

Is Transfer Factor Safe?

Transfer factors are natural molecules and have been safely used in supplement form for many years. Throughout the history of transfer factors use, there have been no reports of serious adverse reactions, even when clinically administered in excess or with normal doses given over many years.

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