

### **The Immune System: A Closer Look**

The immune system is a complex and vitally important arrangement of cells and cell products such as anti-bodies, which recognize and neutralize foreign substances and potentially pathogenic organisms. It is the body's defense. There are two types of cells in the immune system, both of which are derived from stem cells in the bone marrow. Red blood cells, or *erythrocytes*, transport oxygen throughout the body, while white blood cells, or *leucocytes*, defend the body against foreign agents.

Leucocytes must recognize and destroy hostile agents. There are several different types of leucocytes. Here we'll examine two distinct varieties known as *lymphocytes*. Lymphocytes, like all cells in the immune system, have an intricate system of labor distribution. Each type of lymphocyte has a distinct function, which is its sole responsibility. It does nothing else. Two groups of lymphocytes are of particular importance to overall health, and have been studied extensively in pursuit of treatments and cures for immuno-deficiency diseases such as AIDS and Multiple Sclerosis. These are B-cells and T-cells.

B-cells work primarily to produce antibodies, which are y-shaped proteins that are secreted in response to an antigen such as a foreign bacteria, virus, or parasite. The antibody will bind with the foreign substance, thereby neutralizing it. T-cells are more aggressive and will directly attack and destroy foreign material. These are sometimes referred to as "defensive cells".

It is a delicate balance and one that, if disturbed, will create and encourage a barrage of ailments in the body. The immune system grows dysfunctional in one of two ways. It may have a weakened state, where too few anti-bodies are produced and defensive cells are outnumbered by the attacking organisms. A weakened state leads to a heightened vulnerability to infection, non-healing or chronic disorders, an eruption of viral infections and skin problems, frequent disorders of the respiratory system, and physical exhaustion and general malaise. To exacerbate matters, a system thus overworked will spur an overabundance of suppressor cells that inhibit immune functioning and, in excessive numbers, leave the body virtually defenseless.

Conversely, the immune system may become overactive. If defense cells come to outnumber suppressor cells, the immune system will overreact and experience a state of hyperactivity where T-cells no longer make the distinction between destructive and benign elements. In this case, the defense cells may actually turn against the body and attack healthy tissue. A hyperactive immune response can be seen in allergy sufferers whose histamine production is elevated and the symptoms of fighting the allergen are more destructive than the allergen itself. It is also the cause of various forms of rheumatoid arthritis, and fibrosis of the lungs, kidney and liver disorders, multiple sclerosis, epilepsy, diabetes, and leukemia.

As you can see, a well-balanced immune system is vital to proper health and functioning. And the immune system faces myriad of stressors every day, including bacteria, viruses, fungi, environmental pollutants, chemical food additives, emotional stress, and sleep disturbances. The immune system must recognize and combat an unending stream of potentially harmful substances to the body. Black Seed, when taken

over time, is a proven immunomodulator – meaning it helps sustain the immune system's strength and proper balance of functioning.

### **Black Seed And A Balanced Immune System**

As discussed, environmental factors, improper diet, nicotine, alcohol, and stress all take a toll upon the body and disruptions of the immune system are quite common. In fact, studies have reported 30-50% of all Americans suffer from allergies – a clear sign of an overactive immune system.

More severe ailments include unexplained rashes and inflammations of the skin, chronic exhaustion, recurring infections, cancer, and AIDS.

Black Seed remedies the imbalance of an impaired immune system in several unique ways.

Both nigellone and thymoquinone, the active ingredients in the essential oil of Black Seed, act as powerful bronchodilators, which counter excessive immune reactions and restore proper function to the respiratory system. Respiratory symptoms are often caused by hyperactivity of the immune system, as clearly seen in common seasonal allergies. Both substances also offer anti-oxidant qualities that disrupt the free-radical activity that attacks the body in times of weakness and stress.

Perhaps most importantly, nigellone and thymoquinone work in the conversion of linolenic acid, which is a necessary function to the production of prostaglandin E1. Prostaglandin E1 generates critical regulatory actions in the body. It also works as a

potent anti-inflammatory agent, and strengthens the resistance of cell membranes to foreign material.

When imbalanced, the immune system shows a lowered amount of linolenic acid, and therefore a deficiency of Prostaglandin E1. Black Seed is one of the very few substances that can adequately fill this need.

These actions make Black Seed a valuable addition to the treatment of a long list of ailments. Here, we'll deal with a few of the most common and discuss recent evidence of Black Seed's efficacy as a remedy for each.

## **Research**

Research from around the globe is producing increasing support for Black Seed's widespread healing powers. Since 1959, over 200 studies have been conducted on the medical applications of the herb, and the findings have surpassed the expectations of even Black Seed's most ardent supporters. Due to its profound effect on the immune system, Black Seed supplements and strengthens the body's own ability to heal. Especially when combined with complimenting treatments, Black Seed has proved beneficial against even the deadliest of diseases.