As a traditional therapy applied for thousands of years, acupuncture has recently been attracting more and more investigators throughout the world. In the theory of acupuncture, it is proposed that it can strengthen the human body to resist diseases by puncturing needles at certain points. The characteristic that acupuncture enhances resistance is closely related to the immune system, which functions in defence, homeostasis and surveillance. For instance, research has revealed that acupuncture can regulate immunity to enhance anti-cancer and anti-stressor immune functions and exert anti-inflammation effects. This may be the basis of acupuncture in preventing and treating diseases later. Acupuncture has been proven scientifically by many studies to improve immunity against all types of viral and bacterial infections.

Let’s first focus on immunity.

**How does the mechanism of acupuncture work in modulating immunity?**

Immunity is of two types — **born or innate immunity**, and **acquired immunity**. Acupuncture works on improving our acquired immunity. This is done by three methods:

1. Reinforcement of natural killers (NK) cells: The NK cells play a vital role in killing the virus-infected cells by increasing levels of interferon and β-endorphins in the body.

2. Modulation of TH1/TH2 cell responses is an important cause of immune diseases and infections. Acupuncture rebalances these cell responses by activating certain cytokines, which help to fight the disease. For example, in chronic asthma and allergic bronchitis, the TH2 cell response is overactive, leading to high levels of IgE in the body. Acupuncture helps restore the TH1 and TH2 balance to normalcy.
3. Neural-Immune communication: Acupuncture activates the hypothalamus which causes the release of β-endorphins, which further act on opioid receptors present in the body. Activation of the hypothalamus also regulates the activity of the autonomic nervous system.

Anxiety and depression are high in prevalence, especially in women, where the incidence is approximately twice as compared to men. In addition, these conditions are difficult to treat and have high relapse rates and side-effects due to medication. There is evidence to suggest that acupuncture may be an effective treatment.

Studies show that acupuncture has proven to be effective in treating insomnia.

Insomnia is one of the most common diseases in modern society. The patients face difficulty in falling asleep at night and/or inability to maintain effective sleep. They have difficulty falling asleep, maintaining sleep and waking up early. This in turn causes a series of complications, such as fatigue, inefficiency, cognitive decline, poor quality of social interactions, tension and anxiety, which affect social harmony and stability. With Covid infection and the associated stress being paramount on everybody’s mind, insomnia has been gaining more and more attention lately. Studies show that acupuncture has proven to be effective in treating insomnia.

So, how does acupuncture help in treating sleep disorders or stress?

1. Insertion of acupuncture needles activates peripheral nerves and muscles through sensory stimulation. This further modulates the parasympathetic nervous system — a sleep regulator.

2. Acupuncture regulates various neurotransmitters and hormonal factors like endorphins, serotonin, norepinephrine, ACTH and melatonin — all of which play a major role in sleep regulation.

Most common scientific studies have been conducted using specific acupoints. Acupuncture treatment to promote immunity is generally given thrice a week for about four weeks, and a maintenance follow-up treatment of once a week is sufficient. Other adjuvant modalities are:

a. Moxibustion, in which a herb (Artemesia Vulgaris) is made into a roll and burnt over an acupuncture point ST. 36 (10 minutes each side). It can also be used as a self-help device to improve immunity. This point is also known in acupuncture as a ‘point for treating 400 diseases’.

b. Ear-press needles at specific points in the ear can also be used to promote immunity and restore normal sleep patterns.

c. Catgut embedding therapy at a specific point on the anterior chest wall is used to improve respiratory capacity in patients with chronic asthma and COPD.

d. Electro-Acupuncture (EA) involves electrodes being applied to certain acupuncture points to stimulate the body’s central nervous system (especially the hypothalamus) to produce specific neurotransmitters and opioids. These chemicals enhance the patient’s immunity.
e. Cupping therapy involves the application of special cups made of bamboo, plastic or glass at certain target points that helps relax the tense muscles and induce a sense of calmness in the body. This helps induce sleep.