

# Emotions Impact Immunity

## Overview

### **Cancer patients can get a jump-start in the race against cancer by learning to use the mind-body connection.**

The doctors treat the body, but only patients can control what they think, and how they feel about what they think. Controlling thoughts and feelings is no easy task. And do we want to control everything we think and feel? If not, how do we know what thoughts and feelings to control? What steps can we take to control them? How can controlling such thoughts and feelings help us defeat cancer? The answers to these and other questions come in understanding why awareness of our thoughts and feelings is important. Learning some simple concepts about Psycho-Neuro-Immunology (PNI) will lead us to this understanding.

PNI studies the mind-body connection and focuses on how the mind's activity transmits hormones that affect all the body's cells. Some hormones determine whether the immune system is weakened or boosted, switched on or off. Our emotions, beliefs and general outlook on life drive the brain's use of hormones, thus have a very real affect on immune function. One of the foremost authorities in healing with mind-body medicine, Dr. Deepak Chopra, offers this explanation:

*"The revolution we call mind-body medicine was based on this simple discovery: Wherever thought goes, a chemical goes with it. This insight has turned into a powerful tool that allows us to understand, for example, why recent widows are twice as likely to develop breast cancer, and why the chronically depressed are four times more likely to get sick. In both cases, distressed mental states get converted into the bio-chemicals that create disease."<sup>[1]</sup>*

PNI is not a substitute for physical cancer therapies such as surgery, radiation or chemotherapy. Rather, it's a powerful tool for improving the psychological environment where the body fell prey to cancer. First, let's establish a clear understanding of the crucial role the immune system plays in defeating cancer. Then we'll look at PNI research that demonstrates mind/body skills can strengthen immune function. Finally, we'll identify resources for learning the skills that give us a winning advantage in pursuit of conquering cancer.

## Strong Immunity Can Conquer Cancer

All modes of cancer treatment rely on healthy immune function. After a surgeon removes cancerous tissue, he or she relies on the patient's immune resistance to keep the wound free from bacterial invasion. Oncologists monitor the white blood cell count during chemotherapy. When the immune cell numbers fall below a threshold, the oncologist orders a break in the chemotherapy treatment. Radiation oncologists rely on white blood cells to clear radiated tumor tissue from the treatment site. In holistic medicine, the physician seeks to restore immunity, thus empowering it to dominate cancer. Psychologists seek to restore immunity using the mind-body relationship. Considering how all doctors rely on strong immune response for treatment success, doesn't it follow that it might be possible to build enough immune strength to drive cancer into remission?

What exactly does the immune system do? Author Daniel Goleman offers this description in his book 'Emotional Intelligence':

*"Immune cells travel in the bloodstream throughout the entire body, contacting virtually every other cell. Those cells they recognize, they leave alone; those they fail to recognize, they attack. The attack either defends us against viruses, bacteria, and cancer or, if the immune cells misidentify some of the body's own cells, creates an autoimmune disease such as allergy or lupus."<sup>[2]</sup>*



Current cancer research investigates new methods of invoking a strong immune response. The Dana-Farber Cancer Institute just finished work with Harvard Medical School and others to stimulate immune response in cancer patients using dendritic cells.<sup>iii[3]</sup> Unither Pharmaceuticals of Wellesley, Massachusetts, sponsored a study this year (2004) of the antibodies' role in manipulating immune mechanisms.<sup>iv[4]</sup> The University of Tubingen, Germany, recently completed a study that found irreversible damage to immune cells (heavy chemotherapy) impairs the benefits of cancer treatment.<sup>v[5]</sup> Clearly, strong immune response is key to surviving cancer.

## Emotions Can Sabotage Immune Response

PNI provides solid scientific evidence that our emotions have a direct and measurable impact on our immune system. Unfortunately, medical doctors rarely suggest steps to counteract the negative effect of emotions on immunity. Let's first identify those emotions that hinder immune function. Then we'll clearly understand the steps suggested for intercepting those emotions.

A cancer diagnosis brings on major emotional trauma for most patients. The emotions experienced that first week after the diagnosis includes panic, fear, despair and denial. As treatment progresses, patients experience isolation, the feeling of being cast out of normal life and deprived of a future. Therapist Beata Bishop describes the experience like this:

*"Fear springs from two sources. One is rational, based on the very real threat of suffering, disfigurement, drastic treatments with vile side effects and probably no cure in the end. But there is a non-rational fear, too, which sees cancer as an intruder, an evil alien that has breached our defenses and may kill us. In their panic-stricken state very few patients realize that tumors don't come from outer space, but from the faulty functioning of their own bodies. All these emotions are negative and distressing. They are made worse by the average physician's response which is normally defensive and reserved, if not downright cold."<sup>vi[6]</sup>*

These strong emotions significantly weaken the immune system. Depending on the degree to which the patient experiences these emotions, the diagnosis itself could send a patient with relatively few symptoms into a downward spiral toward quick death. The patient needs reassurance from people who have survived cancer. A treatment plan can help to counteract the negative effect of the diagnosis. But cancer treatment rarely stimulates positive emotions. The medical community leaves the burden of lifting emotions to the patient's family or religious community.

Tumors represent a sign of weak immunity that developed long before the doctor's diagnosis. Our immune system fights against cancer throughout our entire lives. A strong immune system disposes of cancer cells long before tumors develop.<sup>vii[7]</sup> Tumors require a prolonged period of weak immunity that allows cancer to develop. The treatment prescribed by the doctor typically does nothing to address the environment that weakened our immune response long ago. What could weaken immunity slowly over a long period of time?

Pioneer researcher Lawrence LeShan proposes a cause for chronic weak immunity in his concept called "the cancer-prone personality". This unfortunate personality seems to predispose some people to cancer. Expressing traits such as low self-esteem and anger suppression creates an undercurrent of immune-suppressing hormones. This personality affects the body's ability to resist disease. Over several years, this chronic weak immunity could allow cancer to develop.<sup>viii[8]</sup>

Another theory that addresses long-term immune weakness postulates that cancer often appears 18 months to two years after an unfortunate life event.<sup>ix[9]</sup> Reflecting on the patient's life two years prior to the diagnosis can yield valuable clues. Did a major event such as divorce, the death of a loved one, a career crisis, or financial failure, cause



emotional trauma? Did the patient fall into a drinking spell, drugs or other destructive habits, which damaged the liver significantly? How did the patient's lifestyle and eating habits change? Simply identifying such an event can inspire the patient to take control of recovery and make the effort to learn skills that revive immunity.

## Guilt, Stress and Immune Function

Some psychologists have criticized the personality approach as blaming the patient for the illness. They argue: isn't learning that one has cancer a strong enough emotional blow, without guilty feelings of responsibility for the affliction? Others counter that taking responsibility can empower the patient to overcome their potentially fatal disease. Indeed, stories of spontaneous remission after patients participate in faith healing, nutrition and other self-help treatments can be found in abundance in bookshops around the world. The benefits of learning to use the mind-body connection may be worth the risk that the patient will not respond to the opportunity to heal. As difficult as accepting responsibility may seem, patients with untreatable disease might consider this high-risk approach a Godsend.

Stress can exert either a positive or negative influence on immune resistance, depending on the person's emotional perspective. This difference of reaction to stress can be observed in many stressful events common to daily life. People react differently to stressors such as freeway traffic, written examinations, emotionally abusive coworkers, and standing on the highest balcony of a twenty-story building. Every individual should identify for themselves the events that cause anxious feelings.

Long-term negative stress, like that experienced in college or at work, can take a serious toll on health. High levels of negative stress, experienced over extended time, cause fight-or-flight hormones such as adrenaline and cortisol to circulate constantly. These hormones suppress vital systems such as digestion and immunity to prepare the body for short, high-energy events.<sup>x[10]</sup> Unending high cortisol levels elevate blood sugar and increase blood pressure, possibly leading to diabetes or heart disease. Ongoing exposure to fight-or-flight hormones interferes with the body's ability to maintain health.

We can counteract the effects of negative stress by purposefully taking time each day for relaxation exercises. A 30-minute session doing one of the skills discussed at the end of this essay relieves the body of harmful hormones. Early studies in shock treatment of mice (1930's) revealed that the animals were not harmed when they were given enough time between shock treatment to recover. If we can learn to reset our body chemistry to allow for renewal, we can restore resilient health.

## Emotions Can Strengthen Immunity

Just as a cancer-prone personality or traumatic life event can hinder the immune system, positive emotions fortify immunity. Hope, confidence, trust, joy, love and laughter all reward the body with hormones that boost immunity. When the mind is at peace, the brain releases dopamine and nor-epinephrine along with endorphins to enhance a person's sense of security and comfort.<sup>xii[11]</sup> When we relax, the body feels free to spend energy cleaning up free radicals created during metabolism. The white blood cells have unlimited access to energy for disposing bacteria and waste. Considering these immune functions, it becomes clear how the daily practice of relaxation exercises can restore immune resilience.

Another activity not often associated with enhancing health is the practice of journaling. Psychologist James Pennebaker conducted a study to discover the effect of thought suppression on immunity. Participants wrote about either emotional or non-emotional topics, with or without thought suppression. Blood was drawn before and after each experimental session on three consecutive days. Results showed a significant increase in immune cells for those writing about emotional topics without thought suppression. Thought suppression resulted in a significant decrease in immune cells.<sup>xii[12]</sup> The simple act of writing about the day's concerns can switch immune cells into action.



Can we create a body chemistry of immune-strengthening hormones that circulate all day long? Certainly we would still be buffeted by life's daily trials. PNI research suggests we can recover from bad experiences faster and more completely than we have in the past. Margaret Hilderley, Nurse Specialist in England, conducted a study to test immune response in cancer patients taught to meditate at least once each week. Blood was drawn at the beginning and end of a two-month training period to measure immune cell counts. The patients observed to achieve a meditative state, as opposed to a relaxed state, showed a strong improvement in their immune response.<sup>xiii[13]</sup> We can purposefully dose ourselves with positive hormones by practicing one or two immune-boosting activities from those suggested in the next section.

## Skills for Strengthening Immune Function

Research has shown that embracing the role of problem solver, rather than passive victim, strengthens immune function.<sup>xiv[14]</sup> As patients, we can become our doctor's partner by reducing our encounters with stress, and learning skills that strengthen immunity. We can choose one or two of several options to supplement clinical treatment:

- Counseling
- Support Groups
- Self-Help (self-hypnosis, affirmations, visualization, journaling)
- Relaxation Exercises (meditation, yoga, deep breathing)

Counseling provides an objective viewpoint that can help the patient to defuse the emotional overload. Through counseling, the patient recognizes and learns to counteract self-defeating patterns that, when triggered, unleash a barrage of negative hormones. Perhaps the patient will recognize and learn to neutralize a toxic relationship with a coworker, spouse, or antagonistic child. Counseling may help the patient work out a rational plan for incorporating cancer treatment into the life that existed before the diagnosis. The counselor offers a calm, reliable presence that may be the only refuge in the patient's anxious new circumstances.

Many employers offer counseling under the label 'mental health services'. The program can refer the employee and spouse for counseling to deal with the stress associated with the cancer diagnosis. Such a program may have a vague, catch-all title such as 'Employee Assistance Program'. These programs help employees cope with many upsetting life events such as domestic violence, substance abuse and life-threatening illness. Often the counselor's fees are covered entirely, or a minimal co-payment is collected.

Support groups can significantly improve survival rates of cancer patients. David Spiegel, M.D., demonstrated the positive impact of group meetings in his classic study back in 1989. Spiegel invited 50 women with metastasized breast cancer to attend weekly meetings for a year. A control group of 36 women did not attend meetings. The support group provided a safe environment where the patients could express fear and anger to others who understood the unfair death sentence they faced. Ten years later, Spiegel found that the women who attended the meetings lived twice as long as those in the control group.<sup>xv[15]</sup> If patients can lengthen their survival time, doesn't it follow that cancer treatment would have more time to work?

Two excellent resources for finding a cancer support group are provided by Gilda's Club ([www.gildasclub.org](http://www.gildasclub.org)) and The Wellness Community ([www.wellness-community.org](http://www.wellness-community.org)). These organizations provide more than 20 facilities each across the nation. Both provide support groups, classes and workshops free of charge. The Wellness Community offers online support groups as well.

Patients can learn self-help skills in the privacy of their own homes. Libraries allow self-help seekers to test-drive several authors to find the approach that best fits their learning style. Also helpful are books-on-tape that verbally coach skills like self-hypnosis, visualization and meditation. Start a journal to write about harsh feelings of injustice



regarding your cancer diagnosis. Dispatch sad feelings onto those pages and then burn them. The emotional load of living with cancer will fly away like ashes blown by a gust of wind. Check local community college for classes in meditation or self-hypnosis. Cancer patients can develop these skills at little or no expense.

## Conclusion

We've seen how important immune function is to the success of any cancer treatment. We've looked at evidence that shows immune response can falter or improve according to how we feel. We alone control our thoughts and feelings, so we play a significant role in the success of our fight against cancer. We can identify for ourselves those aspects of our lives that make us feel anxious, fearful or just plain blue. Regular practice of one or two immune-boosting skills discussed in this essay can significantly improve our immune response. That will lengthen our survival time, giving cancer therapy more time to work, perhaps sending cancer into remission. When we refuse to accept the role of cancer victim and become a problem solver, we give ourselves a huge advantage toward winning the race against cancer.

## References

- i[1] Deepak Chopra M.D., *Ageless Body, Timeless Mind* (Harmony Books, 1993)
- ii[2] Daniel Goleman, *Emotional Intelligence* (Bantam Books, 1995)
- iii[3] Avigan D, et al., *Clinical Cancer Research*, July 15, 2004; 4699-4708.
- iv[4] Schultes BC, Nicodemus CF, *Expert Opinions in Biological Therapy*, Aug, 2004; 1265-84.
- v[5] Nencioni, A, Brossart, P, *Stem Cells*, 2004, 22(4):501-13.
- vi[6] Bishop B, *The Gerson Therapy Workbook*, (The Gerson Institute, 1999; Chapter 4)
- vii[7] Andrew Weil, M.D., *Spontaneous Healing*, (Ballantine Publishing, 1995)
- viii[8] Lawrence LeShan, PhD., *Cancer As A Turning Point*, (Plume Books, 1994; page 267)
- ix[9] Butler L, et al., *Health Psychology*, 1999 Nov; 18(6): 555-60.
- x[10] Rabin BS, et al., *Critical Reviews in Immunology*, 9(4), 1989; 279-312.
- xi[11] Michael Liebowitz, M.D., *The Chemistry of Love* (Little, Brown and Company, Boston, 1983)
- xii[12] Pennebaker JW, et al., *Journal of Pers. Social Psychology*, Nov 1998; 75(5): 1264-72.
- xiii[13] Hilderley M, Holt M, *European Journal of Oncology Nursing*, 2004 Mar; 8(1): 61-5.
- xiv[14] Norman E. Rosenthal, *Emotional Revolution*, Citadel Press; (March 1, 2002)
- xv[15] David Spiegel et al., *Lancet* No. 8668, 1989.

\*The statements contained in this article have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

