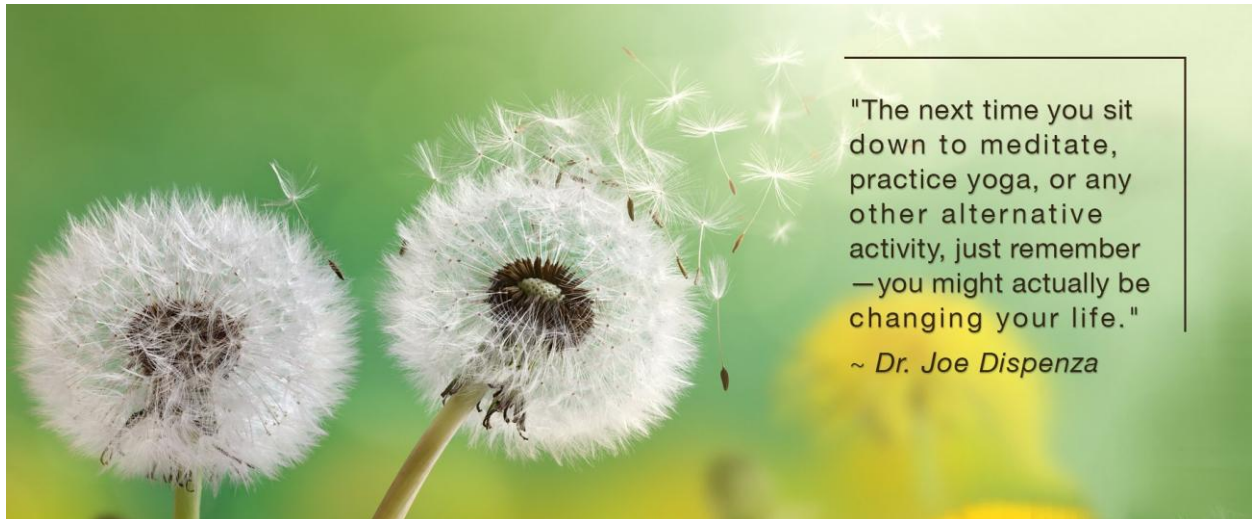


# The Positive Effects of Yoga and Meditation at the Molecular Level

Posted by **Dr. Joe Dispenza** on Jun 24, 2017 7:37:06 AM



For the past several decades, the world has seen an exponential growth, interest, and curiosity in mind-body interventions such as yoga, meditation, and Tai Chi. After practicing such disciplines, it doesn't take long for us to feel physically stronger and experience increased mental clarity. As the saying goes, it does the mind and body good.

But new research by the universities of Coventry and Radboud, published in the journal *Frontiers in Immunology*, suggest that the benefits of these practices are far greater than simply calming the mind and strengthening the body. The benefits actually begin at the molecular level and can change our genetic destiny. In other words, they can 'reverse' the molecular reactions in our DNA which cause ill-health and depression. How?

As we all know by now, stress is a silent killer, and when we are under stress, our fight-or-flight response is activated. Stress produces an inflammatory effect that temporarily bolsters the immune system. In mankind's hunter-gatherer prehistory, this played an important role when there was a higher risk of infection from wounds. In modern society, however, where stress has increasingly become psychological and long-term, persistent pro-inflammatory gene expression is more likely to cause psychiatric and medical problems.

In their research, over the course of 11 years, experts drew from 18 studies featuring 846 participants to analyze how different mind-body interventions affected the behavior and expression of our genes, meaning they focused on the way genes activate to produce proteins. Proteins are the building blocks of the body, which influence our biological make-up, brain

functioning, and immune system. They are responsible for the structure and function of the body. The results of this study point to a pattern of molecular changes that happen to the body when practicing mind-body interventions, which result in beneficial changes to our mental and physical health. So how does it work?

Our sympathetic nervous system (SNS) is responsible for the 'fight-or-flight' response, and when a person experiences a stressful event, the SNS is triggered. The result is that the body begins to increase production of a molecule called nuclear factor kappa B (NF-kB). NF-kB is responsible for regulating how our genes are expressed. It translates stress by activating genes, which in turn produce proteins called cytokines. Cytokines cause inflammation at the cellular level. Again, this inflammation is beneficial as a short-lived fight-or-flight reaction, but the long-term effect leads to a higher risk of cancer, accelerated aging, and psychiatric disorders like depression.

What researchers in this study suggest, however, is that people who practice mind-body activities such as meditation and yoga, produce the opposite effect—that is, their bodies experience a decrease in the production of NF-kB and cytokines. This reverses the pro-inflammatory gene-expression pattern and results in a reduction of the risk of inflammation-related diseases and conditions.

"These activities are leaving what we call a molecular signature in our cells, which reverses the effect that stress or anxiety would have on the body by changing how our genes are expressed," said Coventry University's lead investigator, Ivana Buric. "Put simply, MBIs cause the brain to steer our DNA processes along a path which improves our wellbeing."

Is it possible then that the more we engage in meditation, yoga, and mind-body interventions, the less we will rely on doctors, drugs, and surgeries—and perhaps even prolong our lives and improve our quality of life?

The next time you sit down to meditate, practice yoga, or any other alternative activity, just remember—you might actually be changing your life.

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