

Pranayama

Path to Self Discovery – One Breath at a Time

An Illustrated Guide to the Mind-Body Response

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DEDICATION

This book would not have been possible without the inspiration of my father. He was a questioner, thinker, and motivator . His favorite quote was “There is nothing known as a dumb question “ I am dedicating this book in his loving memory – as my father, he shook the walls of life with his deep dedication to science, philosophy and art. As an author himself, wrote text book for medical school on “Social and preventive Medicine “ He chronicled the criminal actions within the United States Justice system – hoping to set the record, literally . He inspired me to learn the art of observation that has allowed me to draw , paint , sculpt and most of all find truth within by applying the art of deep breathing and scientific inner workings of the brain and body. The proceeds from this book in part will be donated to Bal K Jerath Health care foundation.

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My friend Dan Leonard and Mr Ranbir Sethi who read and reflected on the book that allowed me to explain the concepts in depth.

Most of all I am thankful to Higher Power for providing me with the most amazing live laboratory on earth, a human body with dynamic mind body connection open for observation day and night! This lab has taken me on a path where my journey is going to allow more sights that I am looking forward to witness.

INTRODUCTION

As a practicing gynecologist I have noticed that patients seek help for stress, insomnia, anxiety , depression and lack of concentration. They try exercise, relaxation techniques and medications . Often these techniques do not work. They tend to try these without knowing the basis of their origin of stress or mechanism of action of relaxation or medication.

The mechanism of how we get into stress , insomnia or anxiety is complex. How treatment works is even more complex. Actually the state of mind- body response in disease or health involves same parts of our brain and body. In fact with every emotion the changes are noticed in the brain and body ! The nuts and bolts of such relationship needs to be illustrated so that even a layman should be able to understand.

For this I read both western science and eastern practices of relaxation. Brain and nervous system appeared to be the key in modern medicine however it had little information to explain the relaxation ,activation of various Chakras as claimed in eastern practices. So my attention ,reading and research centered on finding the center that is at the heart of a relaxed ,calm , focused mind. The years of practice of breath induced relaxation helped me to observe internal currents within our bodies .I discovered that deep breathing first induced a pleasant feeling of relaxation that after several breaths started to relax my mind. Such observations continued and I increasingly visualized that deep breathing unleashed strong relaxing currents that followed the path of heart, forehead and spine that corresponded to what is explained in the practice of Pranayama .I could send controlled chills down my spine with breathing. This practice of advanced pranayama allowed me to observe the abnormal mind body response during stress.

As a physician I explored the abnormal mind body response during sleeplessness, anxiety , feeling of sadness and other emotions. Soon my thoughts gave me the clues that mind was headed in the wrong direction. I needed a mechanism that would allow me to apply brakes that were strong enough to counter the formidable normally unstoppable stress related state of mind.

Soon I discovered that methodical slow deep breathing when done with pray full thoughts (Pranayama) worked invariably to counter the stress . Time and again I found that this practice could not only relax me but invigorate me and make me feel joyful whenever I aspired to be so. All the claims by gurus of Pranayama from past and present now seemed to be coming true. My pursuit of medical science to substantiate my observations was adding science

to the practice. It was clear to me that brain needed lungs to correct our abnormal state of mind when needed in a short order . Why is it so?

These questions needed to be answered and study of current literature in medicine especially Pubmed website helped me to publish my hypothesis on Pranayama mechanism in medical journal of Hypothesis in 06. Now I felt I need to visualize the unexplainable mechanism in real time. Assistance from medical illustrators allowed me to create the human being 2 D animated videos. These videos showed current flows as I imagined within a transparent human being with heart as it is beating, lungs inflating and brain areas that are lighted up when the current flows.

2 D videos allowed an insight into creating a 3 D animation that revealed an experience of Pranayama with some of its important affects on mind and body. Several of my colleagues and physician friends gave me their valuable feedback on these dynamic models. My patients found these models helpful in learning the practice. Time had come to organize my thoughts for a wider audience to experience this technique . These videos are available to view at author's website www.myheartmymind.com

It is well known that picture is worth a thousand words. This book is designed to present complex information in an easy to understand illustrations. Such information should allow a reader to understand more about themselves. In the world today science is the key to advancement in every field. In the past words from wise men were blindly followed. Even though it happens today but the truth from scientific explorations is changing that. There is increasing amount of research in meditation, relaxation practices and its application in disease that it should be available in practical form to understand and apply the powerful mind- body response. The illustrations in each chapter follow similar pattern of visible color spectrum so the reader can associate facial expressions with heart and lung physiology. The same spectrum is designed to allow readers to understand what happens in our nervous system of the body also mirrors simultaneous changes in various regions of the brain. This theme is extended into a color spectrum representing our emotions from fear to joy within our beings. Understanding the color spectrum allows the reader to grasp the variable changes at defined locations in our body revealing the amazing dynamic relaxation effects of deep breathing.

Research has shown that every emotion is accompanied by its own signature of breathing pattern. When breathing is slow and deep the heart rate also slows down. In fact the sympathovagal balance a scientific term that describes mind-body response shifts towards vagal or relaxation . During stress and anxiety it shifts towards sympathetic response and is always accompanied by irregular , shallow breathing.

Relaxation techniques such as meditation, pranayama, tai chi have been investigated and found to be very effective based on studies from various investigators. Preliminary studies have shown that Pranayama a deep breathing form of meditation practice leads to higher relaxation response than prayer or meditation alone , More studies are needed to substantiate that it is more potent than TM or tai chi alone.

The book is divided into 7 chapters. The first chapter illustrates the prevailing view of Mind body response being akin to 5 blind men and the elephant. It has not been well defined in terms that are common to east and west, doctors and actors, gurus and neuroscientists and others . Mind and body dynamic state is akin in fundamental respects in every human being . Why cannot it be understood in the same language?

Mind body response when viewed in pictures should allow one to match facial expressions, feelings of heart, thought process (psychology), brain waves and scans to physiological observations. This book is designed to satisfy the curiosity of readers who not only want to learn more about mind body response but to experience in visually and learn how to use deep breathing to realize their inner powers. Although current depth of knowledge forms the basis of new discoveries tomorrow , this book is the initial attempt that compiles several schools of thoughts into a common language of color and illustrations .