

# Light Therapy Research Studies

(excerpt from Dr. Starwynn's new book, to be released late 2009)

There has been a huge amount of recent research into the healing effects of light on our bodies. What once seemed like the practice of tripped-out fringe healers is now firmly moving into mainstream medicine. Advocates for light therapy and use of full-spectrum lighting claim that therapeutic light has the following beneficial effects:

- Promotes better mental clarity
- Anti-aging and facial lifting effects (the focus of this book)
- Improves mood and reduces depression
- Improves learning in children and reduces attention-deficit and hyperactivity disorders
- Improves energy levels
- Lowers blood pressure
- Strengthens the immune system
- Improves and protects vision
- Prevents and cures a host of diseases

Various forms of light therapies have been around since ancient times. There are accounts of healing temples from ancient Egypt and Greece. According to a recent article by Tama Day:

The Ancient Greeks were the first to document both the theory and practice of solar therapy. Heliopolis, the Greek city of the sun, was famous for its healing temples, in which sunlight was broken up into its spectral components (colors), and each component was used for a specific medical problem. Color, being a manifestation of light, held a therapeutic, as well as divine meaning for these historical cultures.<sup>1</sup>

Modern light medicine got its biggest boost in the USA from the pioneering work of an Indian physician named Dinshah Ghadiali. He got his start in light medicine in India after a young woman with severe diarrhea caused by colitis was rapidly cured after light from a kerosene lantern, passed through an indigo-colored glass bottle, was shone onto her. The woman was also helped by drinking milk that had been in an indigo bottle left out in the sun, with the milk apparently taking on the healing vibrations of that color of light.

Dinshah did a great deal of research and clinical trials into the use of color light for healing after moving to New York in 1911. He trained over 800 professionals between 1920 and 1924. Over the next 20 years his group amassed many thousands of successful case studies showing the remarkable power of light healing for a very wide range of human diseases.

Now light therapy has come of age and is coming into the mainstream, redeeming Dinshah's vision. Here are a few examples of recent research findings:

**Light therapy for treating cancer:** Small tumors in the lungs, esophagus and some body cavities can be destroyed without the negative effects of chemotherapy by using FDA-approved light therapy. Here's how it works - First a chemical that sensitizes cancer cells to light is injected into the body. After waiting at least a day a selected wavelength of light is applied to

the tumor, which then dies leaving healthy surrounding cells unharmed. There is also some evidence that this treatment stimulates the immune system to kill other cancer cells.<sup>2</sup>

**NASA uses light therapy for helping bone marrow transplants:** “A device using specialized light emitting diodes (LEDs), based on NASA technology for plant growth in space, is continuing to show promise as a treatment to aid healing of bone marrow transplant patients ... Biologists have found that cells exposed to near-infrared light – that is, energy just outside the visible range – from LEDs grow 150 to 200 % faster than those cells not stimulated by such light. The light arrays increase energy inside cells that speed up the healing process.”<sup>3</sup>

**Light used for treating depression:** “A study commissioned by the American Psychiatric Association and led by a psychiatrist at the University of North Carolina at Chapel Hill School of Medicine has found that light therapy effectively treats mood disorders, including seasonal affective disorder (SAD) and other depressive disorders. A report of the study, which appeared April 1 in the American Journal of Psychiatry, also finds that the effects of light therapy, also known as phototherapy, are comparable to those found in many clinical studies of antidepressant drug therapy for these disorders.”<sup>4</sup>

**Light may influence fungal infections in the body:** “A newly discovered mechanism by which an infectious fungus perceives light also plays an important role in its virulence, according to Howard Hughes Medical Institute investigators at Duke University Medical Center. The findings suggest that changes in light following fungal invasion of the human body may be an important and previously overlooked cue that sparks infection, the researchers said.”<sup>5</sup>

**DNA is highly light sensitive:** Many studies have documented that DNA, the double-helix molecule that holds all our genetic information and guides all growth and healing in the body, is highly responsive to light. In a paper from Kiel University in Germany, N. Schwalb described how light applied to DNA molecules makes them light up, or fluoresce, in distinctive ways. She concludes that laser light could be used to directly recognize and possibly repair many genetic diseases.

**The body conducts light just like telephone lines:** Some Russian researchers have proposed that the protein fabric of the body acts as a fiber-optic system, as is used for telephone transmissions. S. Pankratov projected light on acupuncture points and was able to measure light streaming out of other points on the body. These points were along the same meridians as where the light was introduced<sup>6</sup>. He concluded that the meridians are preferential pathways for the transmission of light in the body<sup>7</sup>

**Our whole bodies perceive light, not just our eyes!:** Most of us understand that we are able to see because our eyes receive light patterns that our brains interpret as images. The retina is the tissue in the back of our eyes that consists of light-sensitive rods and cones that absorb various colors of light. It is less understood, but also true that we “see” light throughout our whole bodies! While this idea has been accepted by some martial artists and metaphysical types for a long time, modern research is now confirming how this works. According to an article in the German medical journal Raum & Zeit, our bodies are loaded with light-sensitive molecules called “cryptochromes” similar to those in plants. These are in our skin, the blood, internal organs and elsewhere. The fact that these substance are all through the inside of our bodies confirm that our bodies are full of light.

This helps explain why light therapies that involve shining certain colors of light on the body, as Dinshah and his colleagues demonstrated in the last century, have produced such positive results for a wide range of physical, emotional and mental diseases and disturbances.

**Wounds heal faster with light:** Infra-red light is most of what comes to us from the sun. It is deeply heating and is what is used to keep the French fries hot at McDonalds. In a recent 2008 study, wounded rats healed significantly faster than controls without light therapy, when polarized (uni-directional) infra-red light was applied to their wounds<sup>8</sup>. Other studies show just what kinds of light speed healing. It seems that red-orange visible light and invisible infra-red light at 820 nm work the best.<sup>9</sup>

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<sup>1</sup> T Day, in Healthcare Design, February 2008

<sup>2</sup> Fact sheet from National Cancer Institute: Photodynamic Therapy For Cancer: Questions and Answers, May 2004

<sup>3</sup> From bulletin of Marshall Space Flight Center, NASA

<sup>4</sup> From Medical News Today 10 April 2005

<sup>5</sup> Duke University Medical News, 3/14/2005

<sup>6</sup> Meridians are pathways of vital energy that interconnect all parts of the body. The meridian pathways between the face and body are of greatest interest in facial rejuvenation, as they probably account for the remarkable whole-body healing effects reported with facial rejuvenation. See Chapter XXX.

<sup>7</sup> Acupuncture Applications: Meridians Conduct Light *Raum & Zeit*, undated

<sup>8</sup> From journal Photomedicine and Laser Surgery, Volume 25, 2008

<sup>9</sup> Progress in Biomedical Optics and Imaging, Vol 7 2006