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### An approach to diagnosis and treatment of mild traumatic brain injury

Our understanding of MTBI has evolved to more appreciate the centrifugal force, or rotational acceleration as a key damaging force. We are also coming to understand that the physiological damage is perhaps the most important aspect. This is not to diminish the importance of looking at the physical insult, and anatomical changes, but rather to appreciate that the physiological function is of course of paramount importance. Advances in imaging, especially in Diffusion Tensor Imaging helped to visualize anatomical damage in the brain. Now we have developed a novel EEG method that is proving to be accurate and reliable. But more importantly, we now have a treatment that is demonstrably effective. Patients with recent history of MTBI, and also patients with very history of multiple MTBI's were seen. Symptoms ranged the full gamut, including inability to concentrate without pain, memory problems, headaches, fatigue and pain upon exertion, emotional disturbances, etc. A single point EEG was done with each patient for 20 minutes; the data was analyzed using a unique combination of nonlinear equations producing and LCI (concussive index). Treatment was provided with Light MD's LED light therapy unit for 20 or 40 minute sessions. Several different protocols were needed depending on the severity and how recent the MTBI was. Most patients felt noticeably better after the first treatment, and all patients were significantly improved, if not symptom free after 10 or fewer sessions.

**Conclusion:** The consistent results of the EEG test demonstrate the need for further, larger scale study. The treatment results are the most encouraging, with most patients recovering, demonstrating the need for a larger scale study with more diverse testing included.

### Biography

Joseph P Leahy Graduated with honors in 1982 from Los Angeles College of Chiropractic. He serves as Lead Instructor for Active Release Techniques courses and is Medical Director for Light MD, LED light therapy device design and manufacture, principal researcher with focus on MTBI as well as the he is the inventor of a portable micro current unit. Presently he is the owner of C.H.A.S.E. clinic in Los Gatos, CA specializing in sports chiropractic and spine testing, diagnosis and rehabilitation, MTBI.

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