

Spring 4-18-2016

## **1st Place Contest Entry: The Effectiveness of Yoga Therapy on an Adult, Post-Stroke Population: A Systematic Review**

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### **Recommended Citation**

Hogan, B.E. (2016). The effectiveness of yoga therapy on an adult, post-stroke population: A systematic review (contest entry). *Kevin and Tam Ross Undergraduate Research Prize*. Retrieved from <http://digitalcommons.chapman.edu/undergraduateresearchprize/11>

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## Essay:

Stroke is a leading cause of death in the United States and throughout the world. The mechanisms behind a stroke are well understood, however, there is no current standardized protocol for stroke rehabilitation. Recent evidence suggests that a yoga therapy program may offer a biopsychosocial solution to complications that linger after a stroke. In hopes of positively contributing to the current literature, I conducted a systematic review to evaluate the effectiveness of yoga rehabilitation in an adult, post-stroke population.

To gain a general idea of topic viability, the research process started with the Leatherby Library's Discover search engine and Google Scholar using the words "stroke" and "yoga". The results helped refine the review inclusion criteria by giving rise to a variety of key terms including: stroke, yoga, rehabilitation, disability, depression, anxiety, and Health-related quality of life (HRQL). A preliminary search was done using the library catalog to find books and media sources that would aid in background information on strokes and yoga. The health science and psychology archives were then used to access PubMed, Web of Science, Academic OneFile, and ScienceDirect. Within the database search engines, advanced search methods were used by adjusting the parameters to include peer-reviewed articles with human subjects published in the English language between 2000 and 2016. Then, various combinations of the keywords using Boolean operators were imputed to yield results. All primary studies and reviews were considered. Studies containing pediatric stroke, non-stroke neurological diseases, or subjects with comorbidities were excluded. Additional papers were identified through the references in the papers of the initial search. Due to the nature of a systematic review, primary sources were used for the research results but secondary sources were used to gain background information. These secondary sources included systematic reviews, meta-analysis, books, videos, and websites. All materials were legally obtained through book rental, a personal login on the library portal, or legitimate websites.

Relevancy of the articles was first determined based on title and then abstract. If the abstract showed promise, the full text PDF was obtained. Occasionally, Chapman University did not have access to a necessary publication, so I requested the text via interlibrary loan. The full text was then evaluated for validity and reliability based on research design, primary outcomes, and statistical significance ( $p < 0.05$ ). All needed articles were saved as PDF files in the format of "Author last name – Title of article." During the writing process, all information and ideas obtained from a source were documented in-text using the format of (Authors Last Name, Page #). This allowed me to find the specific information again quickly and ensured that all material would be correctly cited. My paper included a background of stroke physiology and the benefits of yoga, a review of published trials, and implications for future research. In regards to data collection, all research designs, methods, and statistically significant results were organized by author in an Excel spreadsheet.

Over the course of four years, I have attended many library instruction sessions. The research methods and advice I received from Douglas Dechow and Carolyn Radcliff proved to be invaluable. After multiple sessions, I felt competent enough to conduct my own research and design effective personal search strategies. During the capstone research process, I did hit a few road blocks when attempting to locate materials either online or onsite. When this occurred, I used the libchat feature on the library website for immediate assistance from a librarian.

Over the years, I have come to love the learning process involved with the investigation of a topic, especially when it involves improving the lives of future patients. This capstone project is the culmination of my undergraduate career and has been the most thought-provoking assignment thus far. Conducting research for this project has further reinforced the importance of evidence based practice in health care. As an aspiring physical therapist, it is my duty to provide the best care for my patients. Once I enter the work force, I will be solely responsible for my own learning. Therefore, it is important that I continue my education by staying up to date with the current literature, modern trends, and technological advances in health care. In the future, I hope to further the research presented in my systematic review by conducting a randomized-controlled trial using yoga therapy for stroke survivors.

### 3. Summary and Bibliography Instructions

Please provide a 250-500 word abstract of your paper/project along with a complete works cited list, reference list, or bibliography in APA, MLA, Chicago, or other recognized style. Do not submit your entire paper!

#### Summary:

Stroke is a leading cause of preventable death and adult disability throughout the world. The pathophysiology of a stroke is widely understood but no standard rehabilitation protocol has been developed. The aftermath of surviving a stroke can be devastating; often times an individual is left with a seemingly irreversible physical or mental disability. This can effect a person's capacity to be independent or socialize, resulting in depression, anxiety and a reduced health-related quality of life (HRQL). Stroke rehabilitation currently focuses on improving functional movements to promote independence. Although improvements have been seen in patients, a biopsychosocial model of therapy may be more effective in improving overall quality of life.

In western culture, yoga is becoming widely accepted as a holistic approach for physical and psychological treatments. Yoga is a social activity that pairs a somatic practice with active mindfulness to promote well-being. The most common practice used for therapy in the west is hatha yoga due to its gentle nature and emphasis on breathing. Preliminary evidence shows that yoga may have positive effects on stroke survivors on the level of the mind and the body. The mechanisms behind the benefits of yoga are not widely understood and more evidence based research is needed before rehabilitation protocols can be made. The current literature on stroke and yoga has faced limitations, particularly in sample size and participant adherence. In order to compile current data and determine recommendations for further trials, a systematic review was conducted to evaluate the effectiveness of yoga therapy on adults post-stroke.

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