Dynamic Chiropractic

NIH Sponsoring Conference on "Manual Therapies"

"MANIPULATION" PART OF NCCAM STRATEGIC PLAN

Editorial Staff

On June 9-10, 2005, the U.S. National Institutes of Health (NIH) and the Canadian Institutes of Health Research (CIHR) will sponsor a conference titled "The Biology of Manual Therapies." The conference, which will be held on the NIH campus in Bethesda, Md., will emphasize research in neuroscience, immunology, endocrinology, biomechanics, and imaging as it relates to manipulation, massage, and mobilization.

Experts from NIH and CIHR will join academic, patient advocacy, and professional organizations to assess current knowledge and identify opportunities for further research. There is increasing evidence that manual therapies may trigger a cascade of cellular, biomechanical, neural, and/or extracellular events as the body adapts to external stress.

The conference will feature three sessions, each devoted to specific topics: neuroscience, biomechanics and imaging, and immunology/endocrinology/other. Three doctors of chiropractic will be making presentations in two of the three sessions; two of the DCs are co-chairs of their particular session:

Session on Neuroscience

- Co-chair: Joel Pickar, DC, PhD; professor, Palmer Center for Chiropractic Research;
- Partap S. Khalsa, DC, PhD; assistant professor/graduate program director, biomedical engineering department, State University of New York at Stony Brook.

Session on Biomechanics and Imaging

- Co-chair: John J. Triano, DC, PhD; research professor, department of engineering at the University of Texas, Arlington; co-director for research, Texas Back Institute.

Researchers, health care practitioners, patient advocates, and the public are all invited to participate in this groundbreaking event. For more information or to register for the conference, call 202-973-8734, send an e-mail to manualtherapies@courtesyassoc.com, or visit http://nccam.nih.gov/news/upcomingmeetings/manual-conference.htm.

The NCCAM Strategic Plan

A division of the NIH, the National Center for Complementary and Alternative Medicine (NCCAM), has released *Expanding Horizons of Health Care: Strategic Plan 2005-2009* (http://nccam.nih.gov/about/plans/2005/index.htm).

The major investment of the NCCAM budget is used to support and conduct research in various areas of "alternative medicine. Since its inception, NCCAM has funded more than 1,000 research projects at over 200 institutions, with grantees publishing widely in major peer-reviewed journals.

Much of this research is clinically oriented, including studies on chiropractic, herbal/botanical products, acupuncture, Reiki, and a variety of mind-body practices.

The NCCAM *Strategic Plan 2005-2009* clearly recognizes that "the best-known manipulative therapy in the United States is provided by Doctors of Chiropractic, who apply force to the joints of the spine (and other joints and muscles) as input to the nervous system to mediate beneficial changes to the body. According to the most recent national survey, 7.5 percent of Americans had chiropractic treatment in 2002."

It also notes that:

"Reports in the literature primarily relate to chiropractic manipulation. Collectively, reports of animal studies, case studies, and numerous clinical trials of chiropractic manipulation suggest that spinal manipulation can alter the activity of nearby nerve cells that sense body position and muscle movements. In turn, these alterations may ultimately lead to observed changes in circulating levels of various neurochemicals and proteins that affect nervous system function. Whether this cascade is responsible for the reported clinical efficacy of chiropractic manipulation for back and neck pain is unknown."

The NCCAM *Strategic Plan* focuses on eight sets of research goals:

1. mind-body medicine;
2. biologically based practices;
3. manipulative and body-based practices;
4. energy medicine;
5. whole medical systems;
6. international health research;
7. health services research; and
8. ethical, legal, and social implications of CAM research and integrated medicine

The goals and objectives for research on "manipulative and body-based practices" include:

> Goal 1: Elucidate mechanisms of action operative in manipulative and body-based practices.

Objectives:

- Use the resources outlined to facilitate the design of research to determine the effects of manipulative and body-based practices. Begin with tissue studies and animal models, and proceed to clinical research, using objective outcome measures (e.g., biomarkers of pain) as well as subjective measures (patient ratings).
- Conduct comparative studies of manipulative and body-based practices to determine commonalities and differences at the molecular, biomechanical, neurological, and clinical levels.
- Characterize the biomechanics of manipulative and manual procedures.

> Goal 2: Determine the disorders and states of wellness for which selected manipulative and body-based practices may offer meaningful benefits, and specify the optimal circumstances under which the chosen manipulative and body-based practices are performed.

Objectives:

- Use the findings from studies of the biomechanical and biological features of manipulative

and body-based practices, and the existing body of clinical evidence, to formulate optimal regimens (i.e., number, intensity, duration, and frequency of treatments) for each approach found to offer therapeutic or wellness benefits.
- Use biomarkers and other tools to measure tissue strain and neurological, immunological, and endocrine responses to manipulative and body-based interventions, to identify patient populations who would be most responsive to manipulative and body-based practices, noting diagnostic and genetic variability.

> Goal 3: Study manipulative and body-based practices to determine their potential therapeutic or wellness benefits.

Objectives:

- Conduct larger phase II and phase III trials if preliminary pre-clinical and small clinical studies of selected manipulative and body-based practices indicate significant benefits.
- Incorporate into large trials measures of the costs and benefits of manipulative and body-based approaches relative to more conventional practices.

> Goal 4: Determine the extent to which patient expectations prior to treatment, and satisfaction following manipulative and body-based practices, are related to objectively measured biological endpoints.

Objective:

- Compare outcomes of treatment on subjective reports (wellness, improved function) with validated physiological and psychosocial measures.

In order to reach these goals and objectives, the following resources will be needed:

- application of advanced imaging techniques, such as positron emission tomography (PET) and functional magnetic resonance imaging (fMRI);
- development and exploitation of better biomarkers and instruments to quantify disease symptoms and disability;
- development of *in vitro* and animal models to study manipulative techniques;
- use of biomechanical principles, tools, and techniques to better measure forces on the body's soft and hard tissues; and
- expertise from other fields to work in interdisciplinary teams, including biomechanical and tissue engineers, computer scientists, pain neuroscientists, imaging experts, geneticists, neuroendocrinologists, neurophysiologists, immunologists, manipulative and body-based practitioners, physical therapists, muscle physiologists, rheumatologists, and orthopedists.

As part of the NCCAM's *Strategic Plan 2005-2009*, the study of the potential benefits of "manipulation" is set to receive a significant amount of focus. While the entire scope of "manipulation" will be studied, chiropractic is in the best position to benefit from the resources and attention the NCCAM will be providing.

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