KINESIOLOGY

A MEDICAL DICTIONARY, BIBLIOGRAPHY,
AND ANNOTATED RESEARCH GUIDE TO
INTERNET REFERENCES

JAMES N. PARKER, M.D.
AND PHILIP M. PARKER, PH.D., EDITORS

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Table of Contents

FORWARD

In March 2001, the National Institutes of Health issued the following warning: "The number of Web sites offering health-related resources grows every day. Many sites provide valuable information, while others may have information that is unreliable or misleading."[1] Furthermore, because of the rapid increase in Internet-based information, many hours can be wasted searching, selecting, and printing. Since only the smallest fraction of information dealing with kinesiology is indexed in search engines, such as **www.google.com** or others, a non-systematic approach to Internet research can be not only time consuming, but also incomplete. This book was created for medical professionals, students, and members of the general public who want to know as much as possible about kinesiology, using the most advanced research tools available and spending the least amount of time doing so.

In addition to offering a structured and comprehensive bibliography, the pages that follow will tell you where and how to find reliable information covering virtually all topics related to kinesiology, from the essentials to the most advanced areas of research. Public, academic, government, and peer-reviewed research studies are emphasized. Various abstracts are reproduced to give you some of the latest official information available to date on kinesiology. Abundant guidance is given on how to obtain free-of-charge primary research results via the Internet. **While this book focuses on the field of medicine, when some sources provide access to non-medical information relating to kinesiology, these are noted in the text.**

E-book and electronic versions of this book are fully interactive with each of the Internet sites mentioned (clicking on a hyperlink automatically opens your browser to the site indicated). If you are using the hard copy version of this book, you can access a cited Web site by typing the provided Web address directly into your Internet browser. You may find it useful to refer to synonyms or related terms when accessing these Internet databases. **NOTE:** At the time of publication, the Web addresses were functional. However, some links may fail due to URL address changes, which is a common occurrence on the Internet.

For readers unfamiliar with the Internet, detailed instructions are offered on how to access electronic resources. For readers unfamiliar with medical terminology, a comprehensive glossary is provided. For readers without access to Internet resources, a directory of medical libraries, that have or can locate references cited here, is given. We hope these resources will prove useful to the widest possible audience seeking information on kinesiology.

The Editors

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[1] From the NIH, National Cancer Institute (NCI): **http://www.cancer.gov/cancerinfo/ten-things-to-know**.

CHAPTER 1. STUDIES ON KINESIOLOGY

Overview

In this chapter, we will show you how to locate peer-reviewed references and studies on kinesiology.

The Combined Health Information Database

The Combined Health Information Database summarizes studies across numerous federal agencies. To limit your investigation to research studies and kinesiology, you will need to use the advanced search options. First, go to **http://chid.nih.gov/index.html**. From there, select the "Detailed Search" option (or go directly to that page with the following hyperlink: **http://chid.nih.gov/detail/detail.html**). The trick in extracting studies is found in the drop boxes at the bottom of the search page where "You may refine your search by." Select the dates and language you prefer, and the format option "Journal Article." At the top of the search form, select the number of records you would like to see (we recommend 100) and check the box to display "whole records." We recommend that you type "kinesiology" (or synonyms) into the "For these words:" box. Consider using the option "anywhere in record" to make your search as broad as possible. If you want to limit the search to only a particular field, such as the title of the journal, then select this option in the "Search in these fields" drop box. The following is what you can expect from this type of search:

- **The Center of Attention**

  Source: Health. p. 98-102. January/February 2001.

  Summary: Core exercises focus on 'core' muscles of the abdominals, back, hip, and pelvis. According to Joel Press, assistant professor of physical medicine and rehabilitation at Northwestern University Medical School in Chicago, 'the center of the body is where your strength and ability to move comes from.' The body's core is the anchor for all movements, whether it is walking, running, golfing, or playing tennis. Press maintains that 'without a strong anchor to support the effort of rotation, the strain on your limbs is greatly increased.' Other experts, such as Walter Thompson, professor of **kinesiology** and health at Georgia Sate University, agree. He notes that these often-neglected muscles stabilize movements and keep everything, especially hips and pelvis, in their proper place and in balance. Instructions with photographs demonstrate six

steps to develop core strength. These moves will help strengthen and tone the body's center. They take 5 to 7 minutes to complete, and he recommends they be done two to three times a week for maximum results.

- **Take Back Your Body**

  Source: Heart and Soul. p. 76-78, 80. September 2002.

  Summary: This article shows exercises for women in their 20s, 30s, and 40s. The exercises may be added to one's regular cardiovascular, strength-training, and stretching programs to help 'tackle those potential trouble spots' and keep one moving smoothly through the years. Catherine Jackson, Ph.D., chair of the department of **kinesiology** at California State University, Fresno, encourages women in their 20s to find lifelong fitness activites and engage in resistance training twice a week to help build bone density. For women in their 30s, upper body and abdominal strength are emphasized due to their importance in pregnancy and carrying out life's daily activities. For women in their 40s, staying strong helps ward off degenerative conditions such as osteoporosis and arthritis. Two exercises are demonstrated for each decade.

- **New Low Back Pain Guidelines: Should You Refer to a Chiropractor?**

  Source: Emergency Medicine. 86,90,98,101,105; October 1996.

  Summary: This journal article for health professionals addresses the issue of whether physicians should refer patients with low back pain to a chiropractor. The history of chiropractic is briefly reviewed, and its philosophy and practice are discussed. A RAND study that is often cited as a validation of chiropractic is highlighted. The study actually offered a limited endorsement of spinal manipulation, finding that spinal manipulative therapy (SMT) was appropriate for acute, uncomplicated low back pain but not for several other spinal conditions. Agency for Health Care Policy and Research guidelines do not recommend the methods commonly used by chiropractors to diagnose subluxations, nor do they advocate manipulation for more than 4 weeks. They also do not mention the words "chiropractic" and "subluxation." Studies investigating the medical and cost effectiveness of SMT are highlighted. Other chiropractic practices are discussed, including alternative therapies and applied **kinesiology.** In addition, the article examines the marketing practices used by chiropractors and the relationship between physicians and chiropractors.

Federally Funded Research on Kinesiology

The U.S. Government supports a variety of research studies relating to kinesiology. These studies are tracked by the Office of Extramural Research at the National Institutes of Health.[2] CRISP (Computerized Retrieval of Information on Scientific Projects) is a searchable database of federally funded biomedical research projects conducted at universities, hospitals, and other institutions.

[2] Healthcare projects are funded by the National Institutes of Health (NIH), Substance Abuse and Mental Health Services (SAMHSA), Health Resources and Services Administration (HRSA), Food and Drug Administration (FDA), Centers for Disease Control and Prevention (CDCP), Agency for Healthcare Research and Quality (AHRQ), and Office of Assistant Secretary of Health (OASH).

Search the CRISP Web site at **http://crisp.cit.nih.gov/crisp/crisp_query.generate_screen**. You will have the option to perform targeted searches by various criteria, including geography, date, and topics related to kinesiology.

For most of the studies, the agencies reporting into CRISP provide summaries or abstracts. As opposed to clinical trial research using patients, many federally funded studies use animals or simulated models to explore kinesiology. The following is typical of the type of information found when searching the CRISP database for kinesiology:

- **Project Title: AGING, EXERCISE AND ENDOTHELIAL FUNCTION**

  Principal Investigator & Institution: Desouza, Christopher A.; Assistant Professor; Integrative Physiology; University of Colorado at Boulder Boulder, Co 80309

  Timing: Fiscal Year 2002; Project Start 01-AUG-1998; Project End 31-JUL-2003

  Summary: (Adapted from applicant's abstract) The applicant, Christopher A. DeSouza, Ph.D., is a physiologist currently holding a non-tenure track faculty appointment in the Department of **Kinesiology** at the University of Colorado. Dr. DeSouza has demonstrated a consistent focus and record of scholarly work in the area of physical activity, aging, and cardiovascular disease risk factors. His career goal is to develop an independent extramurally-funded research laboratory which has as its mission: 1) the study of physical activity as it pertains to human health, disease, and aging; and, 2) the scientific training of undergraduate and graduate students, and postdoctoral fellows. The Mentored Research Scientist Development Award for Minority Faculty would provide the Research and Career Development Plan. The research and career development plan consists of 2 primary elements: 1) the acquisition of an impressive number of new research skills; and 2) structured activities including formal course-work in research ethics and biostatistics; participation in journal clubs and seminar series; regular mentoring interactions; and attendance at scientific meetings. In addition to the sponsor, and advisory committee of established senior investigators and faculty members with expertise in all aspects of the proposed research and career development plan has been formed to mentor Dr. DeSouza. Research Plan. The general aim of the research project is to determine whether endothelial function declines with age in physically active populations and whether a program of regular aerobic exercise can restore some, if not all, of the loss in endothelial function in middle-aged and older sedentary adults. The general hypothesis is that endothelial function does not decline with age in physically active populations and that regular aerobic exercise can enhance endothelial function in middle-aged and older sedentary adults. Results supporting this hypothesis would provide new and useful physiological and clinical insight into the advocacy of regular aerobic exercise as a therapeutic strategy for both primary and secondary prevention of age-related endothelial dysfunction. Environment. The environment for Dr. DeSouza's training is outstanding. The sponsor, Douglas R. Seals, Ph.D., is an established investigator and mentor in integrative cardiovascular research, and has a well-funded laboratory. He and the host department will provide Dr. DeSouza all of the necessary resources to successfully complete his training. (End of Abstract)

  Website: http://crisp.cit.nih.gov/crisp/Crisp_Query.Generate_Screen

- **Project Title: BOTULINUM TOXIN FOR SPASTICITY IN CEREBRAL PALSY**

  Principal Investigator & Institution: Hays, Ross M.; Associate Professor; Children's Hospital and Reg Medical Ctr Box 5371, 4800 Sand Point Way Ne, Ms 6D-1 Seattle, Wa 98105

Timing: Fiscal Year 2001; Project Start 15-AUG-1997; Project End 31-JUL-2004

Summary: (Adapted from the applicant's description): The purpose of this study is to evaluate the effectiveness of botulinum toxin injection (BTX) in reducing spasticity and improving function and mobility in children with spastic diplegia, a common form of cerebral palsy (CP). This study proposes to evaluate the effects of the treatment across the five domains of science relative to disability: pathophysiology, impairment, functional limitation, disability, and societal limitation. The study design is a prospective, randomized, double-masked clinical trial with a 6 month evaluation period. Forty children, ages 4-12 years, will be recruited and randomized into two groups. Group A will receive BTX. Group B will receive a placebo injection. Outcomes will be assessed in a masked evaluation at baseline, 3 weeks, 8 weeks, 12 weeks, and 24 weeks. Group B subjects will have the opportunity for BTX treatment after 24 weeks. Outcome variables are proposed to provide information in the five different domains. Change in pathophysiology will be represented by quantitative electromyographic **kinesiology** measurements. Change in impairment will be represented by electromechanical measurement of joint torque across the ankle joint using the Spasticity Measurement System. Change in functional limitation will be represented by changes in gross motor function as measured by the Gross Motor Function Measure, physical exam parameters, energy expenditure using the Energy Cost Index, and kinematic gait analysis. Changes in disability will be represented by serial assessments of age appropriate task performance using the Canadian Occupational Performance Measure. Any change in societal limitation will be measured by the use of Goal Attainment Scaling in the areas of community and school activities. Sample size has been based on the power calculation necessary to demonstrate a change in the Gross Motor Function Measure and the Spasticity Measurement System. The large number of assessments required for each patient necessitate that subject enrollment be distributed over the first four and one half years of the study.

Website: http://crisp.cit.nih.gov/crisp/Crisp_Query.Generate_Screen

- **Project Title: CARDIOVASCULAR BIOMECHANICS AND IMAGING**

  Principal Investigator & Institution: Shandas, Robin; Professor; Mechanical Engineering; University of Colorado at Boulder Boulder, Co 80309

  Timing: Fiscal Year 2003; Project Start 01-APR-2003; Project End 31-MAR-2008

  Summary: (provided by applicant): The purpose of this application is to establish a new training program focused on cardiovascular bioengineering, specifically bio/fluid mechanics, instrumentation, devices, and imaging, on the campus of the University of Colorado Boulder (UCB), with participation from the University of Colorado Health Sciences Center (UCHSC), and The Children's Hospital (TCH). The objectives of this training grant are: 1) support pre-doctoral research on cardiovascular bioengineering at UCB; 2) support such research at the post-doctoral level at UCB; 3) further integrate existing research and educational efforts in modeling, cardiovascular hemodynamics, molecular and cellular biology, imaging, and device and instrumentation design. The program will be housed within the bioengineering program at the Mechanical Engineering Department, UCB, with participation from: 1) the Department of Pediatrics, TCH/UCHSC; 3) the Division of Cardiology, UCHSC; 4) the Department of **Kinesiology** and Applied Physiology (KAPH). Each of these program units has been successful in producing research relevant to cardiovascular bioengineering, and in training graduate students and post-doctoral fellows. This training grant will take advantage of recent expansions of existing individual research programs with the resultant goal of increasing the number of research opportunities for students and

fellows. Until recently, research efforts in the area of cardiovascular bioengineering have been limited on the Boulder campus. However, recent faculty recruitments and a significant thrust in bioengineering from the Dean at the College of Engineering, including the creation of an inter-campus research center (MicroElectromechanical Devices in Cardiovascular Applications - MEDICA) and the beginning of the Institute for Micro and Nano Systems, have created strong core research interests in the relevant areas of this proposal. The timing is now right to leverage these existing research successes into an established program for training future scientists in cardiovascular bioengineering. The inter-disciplinary nature of the research and the personnel involved lend itself very well to the training of bioengineers with breadth of experience and depth of training.

Website: http://crisp.cit.nih.gov/crisp/Crisp_Query.Generate_Screen

- **Project Title: CSUN BRIDGES TO THE DOCTORATE**

  Principal Investigator & Institution: Summers, Michael; Associate Professor; Biology; California State University Northridge 18111 Nordhoff St Northridge, Ca 91330

  Timing: Fiscal Year 2003; Project Start 01-SEP-2000; Project End 31-AUG-2006

  Summary: (provided by the applicant): We propose cooperative partnerships between California State University, Northridge (CSUN) and several outstanding Ph.D.-granting institutions in California. The partnerships described in this proposal are models for establishing a program between a comprehensive Hispanic Serving Institution (HSI), CSUN, and several preeminent Carnegie Foundation designated Research I and II institutions. Students participating in this Bridges cooperative program will have the opportunity to choose MA/MS concentration at CSUN in biology, psychology, mathematics, chemistry, environmental chemistry, physics, **kinesiology,** health science and family environmental sciences. Linkages between the Ph.D.-granting institutions and CSUN will be enhanced or established. Activities and interactions that will foster and strengthen these ties include seminars to be presented at CSUN by faculty from the Ph.D.-granting institutions, visits of CSUN students to the Ph.D.-granting institutions, and the opportunity for CSUN students to collaborate on research projects at the partnership schools. These activities will prepare students for entry into Ph.D. programs and ultimately to their earning a Ph.D. in a biomedically relevant program in biology, chemistry and biochemistry, psychology, mathematics, health science or nutrition at a partner institution. We anticipate that over the three-year time period 12 students will complete the program, and four will be in first year of the program. Of the students who complete the program, we expect 100% to apply to Ph.D. programs in a biomedically relevant field. We expect for 90% to enter a Ph.D. program in a biomedically relevant field.

  Website: http://crisp.cit.nih.gov/crisp/Crisp_Query.Generate_Screen

- **Project Title: GENETIC EPIDEMIOLOGY OF AGING SKELETAL MUSCLE**

  Principal Investigator & Institution: Roth, Stephen M.; Kinesiology; University of Maryland College Pk Campus College Park, Md 20742

  Timing: Fiscal Year 2003; Project Start 15-SEP-2003; Project End 31-AUG-2008

  Summary: (provided by applicant): CANDIDATE: The candidate is an Assistant Professor in the Department of **Kinesiology** at the University of Maryland, with strong background in aging skeletal muscle and human genetics. The candidate's research is focused on the identification of genetic factors that influence muscle mass and strength within the context of aging, but limitations in the candidate's training will hinder

progress in the long term goal of identifying the interactions among genetic and environmental factors in specific subpopulations that influence the risk for developing sarcopenia. As such, the candidate is proposing to dedicate 85% of his time to a well-integrated career development plan in the areas of genetic epidemiology and statistical genetics that will place him in a unique and strong position to pursue his long term research goals. ENVIRONMENT: The candidate will pursue didactic instruction and research at the University of Maryland, which has strong research activities in genetic epidemiology and biostatistics. Research activities will be performed in the Functional Genomics Laboratory. Regular interactions with scientists and statisticians from the University of Pittsburgh will provide additional strong training in the use of advanced statistical tools in epidemiologic research. The mentorship of Drs. Ferrell, Hagberg and Hurley, in addition to regular interaction with the strong collaborators of the proposed program, will provide Dr. Roth with the training required to succeed as an independent investigator in the area of genetic epidemiology of sarcopenia. RESEARCH: In addition to the didactic instruction proposed as part of the training program, Dr. Roth has proposed a unique series of research activities stemming from current research projects within the mentors' laboratories. The research activities will involve research design, data collection, and advanced statistical analysis for three cohorts with strong measures of muscle mass and strength within which genetic and epidemiologic data will be collected during the proposed program period. With receipt of this K01 award, the proposed complement of instructional and research activities will provide the candidate with an excellent background in the use of genetic epidemiologic and statistical tools that will place him in a unique position to address the underlying mechanisms of sarcopenia as an independent investigator.

Website: http://crisp.cit.nih.gov/crisp/Crisp_Query.Generate_Screen

- **Project Title: HEALTH-PROMOTING NURSING INTERVENTION: UNDERSERVED WOMEN**

  Principal Investigator & Institution: Walker, Lorraine O.; Luci B. Johnson Centennial Professor; None; University of Texas Austin 101 E. 27Th/Po Box 7726 Austin, Tx 78712

  Timing: Fiscal Year 2002; Project Start 01-MAY-2000; Project End 28-FEB-2005

  Summary: The applicant proposes to educate predoctoral and postdoctoral trainees in health-promoting nursing interventions for underserved women. A conceptual definition of "health-promoting nursing intervention for women" and the Model of Health Promoting Nursing Intervention for Women, developed by the core faculty for this proposal, guide the pre- and postdoctoral programs. The objectives of the proposed training program is fourfold: 1) to enhance trainees' capabilities to design and conduct intervention research that integrates biological, sociocultural, and psychosocial dimensions of women's health promotion across the lifespan; 2) to enhance trainees' capabilities to design, conduct, and analyze research that is sensitive to interactions among the contextual factors (e.g., gender and ethnicity) affecting the health of underserved women; 3) to promote interdisciplinary collaboration through research training experiences that "span the paradigms, languages, and methods of nursing and other disciplines" involved in the study of health-promoting interventions for women; and 4) to develop skills in grant writing and research dissemination specific to health-promoting intervention research with underserved populations. The predoctoral training program is based on the School's requirements for the PhD in Nursing and includes: 1) core study in theory development, research methods, and cross-cultural research (22 semester credits); 2) concentrated study in women's health and health promotion intervention theory and methods (12 credits); 3) coursework in experimental

design and statistics (6 semester credits minimum); 4) 12 credits of cognate study in sociology, nutrition, **kinesiology,** or women's studies; and 5) 12 dissertation credits. The "Nursing Concentration in Health Promoting Nursing Interventions: Underserved Women" (#2 above) includes three 3 credit courses (Women's Health: Adolescent and Childbearing Years; Women's Health: Mid-life and Elder Years; and either Health Promotion in Chronic Disabling Conditions, or Health Promotion in High Risk Populations, or Predictive and Interventive Research with Families; and an independent study involving pilot work for the dissertation. The core sequence involves two nursing research practica (2 credits per practicum) during which trainees will work closely with a faculty advisor/mentor on current research.

Website: http://crisp.cit.nih.gov/crisp/Crisp_Query.Generate_Screen

- **Project Title: INTERNATIONAL SYMPOSIUM ON MOTOR CONTROL USING TMS**

  Principal Investigator & Institution: Hortobagyi, Tibor; Associate Professor; Exercise and Sport Science; East Carolina University 1000 E 5Th St Greenville, Nc 27858

  Timing: Fiscal Year 2004; Project Start 01-JAN-2004; Project End 31-DEC-2004

  Summary: (provided by applicant): This application is a single-year request of support for an international symposium, "Mechanisms of Movement and Sensation Using Transcranial Magnetic Stimulation" (TMS) as part of the XVth biennial Congress of the International Society of Electrophysiology and **Kinesiology** (ISEK), Boston, June 18-21, 2004. The rationale for the symposium is that in this era of specialization, research subdisciplines on the one hand and basic researchers and therapists on the other, tend to separate. This symposium is an effort to minimize this separation. The symposium's aim is to generate a novel synthesis of basic science and clinical mechanisms of motor cortex plasticity and thus facilitate the design of rehabilitation programs. Pascual-Leone, co-chair, (US), will provide a historical perspective on TMS and rTMS. Valero Cabre (US) will discuss the effects of TMS and rTMS on the basic electrophysiological and metabolic properties of cortical neurons with reference to Parkinson's disease. Hortobagyi (US) will discuss the contralateral organization of the human nervous system. Taylor (Australia) will address the mechanisms of central fatigue in polio and chronic fatigue syndrome. Sawaki (US) will present on training dependent plasticity of the motor cortex as evidence for short-term motor memory, specifically in stroke. Rothwell (UK) will address the effect of afferent input on motor cortex organization and plasticity in healthy subjects and in patients with dystonia and hand cramps. Manto (Belgium) as co-chair will moderate the discussions. The symposium will provide maximal interaction between speakers and attendees as it will take place in a plenary session format as the only ongoing session. Through student discounts, it will provide an economical opportunity for biomedical trainees to attend. The presentations will be published in IEEE Engineering in Medicine and Biology, making a substantial impact on the field by attracting the interest of neurologists, clinical neurophysiologists, basic and clinical movement and sensation neuroscientists, physical therapists, biomechanists, biomedical engineering researchers, roboticists, educators and students from the US and abroad.

  Website: http://crisp.cit.nih.gov/crisp/Crisp_Query.Generate_Screen

- **Project Title: MECHANISMS OF CARDIOVASCULAR DISEASE AND GENE THERAPY**

  Principal Investigator & Institution: Leinwand, Leslie A.; Professor and Chair; Molecular, Cellular & Dev Biol; University of Colorado at Boulder Boulder, Co 80309

Timing: Fiscal Year 2002; Project Start 01-JUL-1996; Project End 30-JUN-2006

Summary: (Applicant's Abstract) This application for renewal of our multidisciplinary training grant provides training at the doctoral and postdoctoral levels. Since the original application, we have added new relevant faculty to the University and to the training grant. The training faculty, as a group, represents all levels of seniority and their research covers many important aspects of cardiovascular research training ranging from basic cell biology, to whole animal and human physiology to gene therapy. Our training program consists of 4 areas: 1) Gene Therapy, 2) Genetic Manipulation/Gene Mapping, 3) The Sarcomere and the Cytoskeleton, 4) Cardiovascular Development and Function. Predoctoral trainees will receive the PhD degree from one of two departments: Molecular, Cellular and Developmental Biology (MCDB), or **Kinesiology.** Formal course work and a Qualifying Exam are required. Postdoctoral trainees (either PhD), MD, or MD-PhD) will spend 2-3 years in the laboratory, and depending on their background, they may participate in a graduate course in Molecular Genetics. MD applicants who are Cardiology Fellows will obtain their clinical cardiology training either before or after their research tenure. Since the last application, a Cardiovascular Research Institute has been established as a joint venture between Boulder and Health Sciences in Denver and the trainers on this application are all members. In addition, we have established a formal link with the MD-PhD) program in Denver that allows those students to do their thesis work in Boulder. This training grant can facilitate those ventures.

Website: http://crisp.cit.nih.gov/crisp/Crisp_Query.Generate_Screen

- **Project Title: PARTICIPATION AND TRAINING IN HEALTH SCIENCE (PATHS)**

  Principal Investigator & Institution: Jackson, Allen W.; Kinesiology, Health Promotion, & Recreation and Leisure Studies; University of North Texas Denton, Tx 76203

  Timing: Fiscal Year 2003; Project Start 30-SEP-2003; Project End 31-AUG-2006

  Summary: (provided by applicant): The Hispanic population of the United States is one of the fastest growing minority groups. According to the 2000 U.S. Census, Hispanics comprised 12.5% of the U.S. population and are expected to exceed 20% of the population by 2035. Hispanics suffer disparities in morbidity and mortality due to violent crime, accidents, diabetes, and cardiovascular risk factors such as obesity and physical inactivity (USDHHS, 2000). The leading cause of death for Hispanics is cardiovascular diseases. In addition, Hispanics are vastly underrepresented in the attainment of educational degrees and represent extremely small percentages of those employed in health/science-related professions. In order to address these two issues facing the Hispanic community, the Department of **Kinesiology,** Health Promotion and Recreation at the UNT-Denton together with the School of Public Health at the UNT Health Science Center propose Participation And Training in Health Sciences (Project PATHS), a three-year health promotion initiative. Project PATHS will engage North Dallas High School students, who are predominantly Hispanic, in culturally appropriate health/science promotion activities and experiences. The two primary goals of Project PATHS are to 1) increase the representation of Hispanics in the health/science professions, and 2) promote health related life style changes. Specific objectives include: 1) increasing the number of Hispanic students taking college entrance exams by 10%, 2) increasing the number of Hispanic students who report interest in health/science professions by 10%, 3) improving participants' healthy lifestyles related to Healthy People 2010 Leading Health Indicators. The intervention is based on an ecological model that will involve students through a school-based culturally competent curriculum and

facilitate a supportive environment through the collaborative efforts of several academic institutions.

Website: http://crisp.cit.nih.gov/crisp/Crisp_Query.Generate_Screen

- **Project Title: PREDOCTORAL TRAINING IN EXERCISE PHYSIOLOGY AND AGING**

  Principal Investigator & Institution: Hagberg, James M.; Professor; Kinesiology; University of Maryland College Pk Campus College Park, Md 20742

  Timing: Fiscal Year 2002; Project Start 01-MAY-1999; Project End 30-APR-2004

  Summary: The University of Maryland College Park (UMCP) Department of **Kinesiology** predoctoral exercise physiology and aging training program has a long history of producing well-trained PhD graduates who completed postdoctoral training and become productive academic faculty members. The program provides trainees with the basic knowledge and experiences to prepare them for high quality dissertation research addressing 1) clinical and basic laboratory investigations in exercise physiology, cardiovascular, metabolism, and genetic aspects of aging research to study the pathophysiology of risk factors for cardiovascular disease in the elderly and 2) the study of the effects of exercise interventions on metabolic, cardiovascular, and musculoskeletal function in older men and women. The program consists of a didactic curriculum providing 1) basic knowledge in gerontology/geriatrics, 2) discipline-specific knowledge in exercise, cardiovascular, and metabolic physiology, 3) supporting courses in biochemistry, endocrinology, genetics, cell biology, and other biological sciences, and 4) research design, biostatistics, and computer applications. The research of the UMCP training program involves longstanding and close collaborations with the UM School of Medicine (UMSM) Division of Gerontology and the NIA-Gerontology Research Center. Trainees receive laboratory and clinical research experience under the guidance of primary UMCP mentors and secondary and associate mentors from UMSM, the NIA-Gerontology Research Center, and the University of Pittsburgh Graduate School of Public Health Department of Human Genetics. Coursework and laboratory experiences are designed to culminate in each trainee's dissertation research project. Our previous PhD trainees have published numerous manuscripts in high-level peer-reviewed clinical, gerontology, and physiology journals and have progressed on to NIH postdoctoral training and academic faculty positions. We propose to support 2-5 trainees in this training program with each funded for 4 years to provide an optimal training experience. Such training has already been shown, and will continue, to produce PhD graduates with an integrated knowledge of exercise physiology and aging applied to metabolism, musculoskeletal and cardiovascular physiology, and genetics who will complete postdoctoral fellowships and eventually become academic faculty members in universities and medical center.

  Website: http://crisp.cit.nih.gov/crisp/Crisp_Query.Generate_Screen

- **Project Title: SCORE PROGRAM AT CAL POLY POMONA**

  Principal Investigator & Institution: Hoyt, Donald F.; Biological Sciences; California State Poly U Pomona 3801 W Temple Ave Pomona, Ca 91768

  Timing: Fiscal Year 2002; Project Start 01-APR-1997; Project End 31-MAY-2004

  Summary: (provided by applicant): The SCORE Program at Cal Poly Pomona was established in June, 2000 to significantly improve the research capabilities of the University with the ultimate objective of increasing the number of underrepresented minority students who are motivated to pursue careers as biomedical scientists. To

achieve these ends the program funds high-quality research leading to peer-reviewed publications and strengthens the infrastructure for scientific research. The existing program includes twelve subprojects involving a total of thirteen faculty, all with strong, demonstrable commitments to research, and graduate and undergraduate education. The program is interdisciplinary, involving faculty from four academic departments in two different colleges. The projects are diverse as well, covering topics ranging from human nutrition and health, to organ system structure and function, immunology, cellular and molecular biology, and organic and biochemistry. The requested supplemental subproject will expand the program by adding two projects, one dealing with muscle and the other dealing with bone. The project dealing with muscle will expand the amount of research using genetically modified animals, a very important technology in the field of biology, and contribute to the career of a newly hired faculty member in Biology. The project dealing with bone is the first submission of a SCORE grant application from the Department of **Kinesiology** and Health Promotions. It deals with osteoporosis, a critical health issue, and represents an important expansion of the SCORE program into a third college (Liberal Arts and Social Sciences) and a fifth department. The four departments already participating in the SCORE proposal have been very effective at recruiting underrepresented students, with enrollments of Latino students, for example, growing twice as fast as for the University as a whole.

Website: http://crisp.cit.nih.gov/crisp/Crisp_Query.Generate_Screen

- **Project Title: SHORT TERM MINORITY UNDERGRADUATE NIMH AREAS RESEARCH**

  Principal Investigator & Institution: Gershenson, Celia W.; Psychology; University of Minnesota Twin Cities 200 Oak Street Se Minneapolis, Mn 554552070

  Timing: Fiscal Year 2002; Project Start 01-JUL-1993; Project End 30-JUN-2003

  Summary: (Applicant's abstract): The overall goal of this Educational Development Grant Application is to recruit into research careers outstanding potential scholars from underrepresented groups. This is achieved by providing a 10 week intensive research and educational experience at a major research institution to 6 undergraduates from underrepresented populations. Funding is requested for the continuation of this highly successful program supported by NIMH since 1993. The participants are those who have shown potential and have expressed an interest to go on to graduate studies, and to pursue research and academic careers. They are exposed to in depth research training, direct experiences, seminars, and other educational activities. They work under the direction of individual faculty mentors. Potential mentors are drawn from the Departments of Psychology, Child Development, Educational Psychology, Psychiatry, Pharmacology, **Kinesiology,** Computer Science, and the School of Management. The mentors are all active researchers in areas related to Mental Health and Behavioral Science. The participants are members of the mentors research team. They spend at least 40 hours per week in research and research related activities. In addition, they attend a seminar 3 times per week. These seminars include faculty presentations on research discussion of research integrity, research design, and graduate school opportunities. The participants give oral presentations and prepare written research reports. They also participate in a weekly seminar which provides practice in preparing graduate school applications and taking the GRE. They are housed in a University dormitory together with those participating in similar programs in other disciplines. Field trips to other research facilities, team building social and recreational activities are other components of the program. The participants funded by this grant do not have other federal funding. The University funds the full participation of 3 to 4 COR or MARC program trainees.

The specific goals of this Competitive Continuation are to 1) provide interested students with new research skills through intensive research experience, 2) facilitate the development of self- confidence in a facsimile of a graduate experience at a major research institution 3) encourage the selection of research and academic careers in mental health and related areas 4) increase the diversity of those choosing graduate study and research careers, and 5) In a new thrust, to involve minority institution faculty in this training opportunity.

Website: http://crisp.cit.nih.gov/crisp/Crisp_Query.Generate_Screen

- **Project Title: THE PERFECT PARTNERSHIP: SCIENCE ENRICHED PHYSICAL ED**

  Principal Investigator & Institution: Ennis, Catherine D.; Professor; Kinesiology; University of Maryland College Pk Campus College Park, Md 20742

  Timing: Fiscal Year 2003; Project Start 01-FEB-2003; Project End 31-JAN-2006

  Summary: (provided by applicant): The long term objective of this research is to design and field test a science-enriched elementary PE curriculum to increase students' knowledge and interest in health-related science. Minority students in urban public schools often do not acquire essential academic skills necessary to pursue science careers. Although interest in science may develop during adolescence, by middle or high school many students are academically so deficient they are unable to master technical knowledge essential for success. Stimulating students' interests in science, reading, and mathematics early in their schooling is critical to achievement. Many health-related scientific principles most relevant to young children involve concrete responses they can examine and understand. One salient set of principles explains the positive benefits of physical activity on health and well-being. Recent public health reports indicate that physical inactivity is a primary risk factor for coronary heart disease. PE can provide an exciting, active laboratory to examine health-related science concepts and principles. Specific project objectives are:1. To determine if a science-enriched curriculum taught in PE can increase 3rd, 4th, and 5th grade students' knowledge of health-related science. **Kinesiology** or the scientific study of human movement is the disciplinary knowledge base for PE. PE programs reflecting a kinesiological focus communicate scientific knowledge about health-related benefits of physical activity to students. We hypothesize that kinesiological or science-enriched PE curricula can create an environment that increases students' knowledge of the body systems' responses to physical activity in a stimulating, enjoyable, and academically engaging atmosphere.2. To determine if students' interactions with scientists increase their understanding of scientist's work, the scientific inquiry process, and their interest in science. While Objective #1 emphasizes the kinesiological knowledge base that will make PE an extension of the science Classroom and a viable science partner, Objective #2 examines the contributions that kinesiological scientists can make to students' understanding of the scientific process and interest in science. We hypothesize that students' interactions with distinguished NIH-funded scientists will contribute to a broader picture of the scientific enterprise and the value that students' place on scientific knowledge. Scientists will visit elementary schools and participate with students in experiments as part of the problem-solving, science-enriched PE curriculum. Students from three schools will be invited to the scientists' laboratories to participate in meaningful experiments to enhance their understanding of scientists' work, the inquiry process, and their interest in science.

  Website: http://crisp.cit.nih.gov/crisp/Crisp_Query.Generate_Screen

- **Project Title: TONGUE-JAW LINKAGES IN FEEDING**

  Principal Investigator & Institution: Palmer, Jeffrey B.; Professor; Phys Med and Rehabilitation; Johns Hopkins University 3400 N Charles St Baltimore, Md 21218

  Timing: Fiscal Year 2003; Project Start 01-MAY-1996; Project End 30-JUN-2006

  Summary: (provided by applicant): The Process Model of Feeding provides an understanding of the inter-related processes of mastication, oral food transport, and swallowing. Central to this model is the notion that foods are processed in the oral cavity but the swallow bolus formed in the pharynx. Movement of food in and through the oral cavity depends primarily on coordinated motions of the jaw, hyoid, and tongue. Although the basic motions have been described, the muscle activity patterns producing these motions have not. We propose to study of the **kinesiology** of feeding in normal adults. Motions will be recorded with videofluorography and muscle activity with electromyography. Some experiments will also include respiratory measures (expansion of the thoracoabdominal cavity and nasal air pressure). We will test the following hypotheses: 1. Cyclical movements of the hyoid bone in the sagittal plane are produced by the interaction of 3 muscle groups (jaw adductors, suprahyoid muscles, and infrahyoid muscles). 2. Although cyclical movements of the tongue surface result primarily from activity of its intrinsic muscles, they are also influenced by linkage to the jaw and hyoid bone, as well as extrinsic muscle contraction. 3. Mediolateral tongue surface motion is linked to jaw motion during food processing, and is assisted by differential activity of the jaw adductor muscles on each side. 4. The soft palate exhibits cyclical movement during eating and swallowing that is temporally linked to jaw motion. 5. Motion patterns of the jaw, hyoid, and tongue surface and the muscle activity patterns that produce them are cyclical and semi-rhythmic during eating; the sequential pattern of muscle activation is maintained across behaviors, though the duration and amplitude of contraction may vary. Data will be analyzed visually and by statistical analysis techniques including least-squares regression and time-series analysis. The results will further delineate the mechanisms of eating and swallowing, will have relevance to the evaluation and treatment of dysphagic individuals, and will enhance our knowledge of CNS control of mastication and swallowing, and their relationship to respiration.

  Website: http://crisp.cit.nih.gov/crisp/Crisp_Query.Generate_Screen

- **Project Title: UCHSC AGING TRAINING GRANT**

  Principal Investigator & Institution: Schwartz, Robert S.; Professor; Medicine; University of Colorado Hlth Sciences Ctr P.O. Box 6508, Grants and Contracts Aurora, Co 800450508

  Timing: Fiscal Year 2002; Project Start 01-MAY-2001; Project End 30-APR-2006

  Summary: The purpose of this proposal is to establish a new aging-related research-training grant on the campuses of the University of Colorado Health Sciences Center (UCHSC) and the University of Colorado-Boulder (UCB). The objectives of this training grant will be to: 1) support the aging-related research training of predoctoral students at UCB; 2) support the aging-related research training of Ph.D. fellows at UCB and UCHSC; 3) support the aging- related research training of M.D. research fellows at UCHSC and UCB; 4) further integrate and coalesce the aging-related research at UCHSC and UCB; 5) support the formal training of junior investigators as research mentors. The three program units that will make up this training experience include: 1) the Division of Geriatric Medicine at the UCHSC; 2) the Center for Human Nutrition at the UCHSC; and 3) the Department of **Kinesiology** and Applied Physiology at the UCB. Each of

these program units has individually been successful at producing research relevant to older adults and in training students and junior investigators in clinical and/or basic laboratory research. This training grant will take advantage of recent expansions in the programs and/or the resources within each of the participating units. This combined training grant will allow a greater interaction of the involved programs with a resultant improvement in the overall research environment and increase in research opportunities for students and fellows. As part of the overall training program, we intend to include a program for training junior faculty on mentoring skills. This will be accomplished through a "buddy" system of mentoring with a more senior faculty mentor and through a formal instructional program on mentoring skills being developed at UCHSC.

Website: http://crisp.cit.nih.gov/crisp/Crisp_Query.Generate_Screen

The National Library of Medicine: PubMed

One of the quickest and most comprehensive ways to find academic studies in both English and other languages is to use PubMed, maintained by the National Library of Medicine.[3] The advantage of PubMed over previously mentioned sources is that it covers a greater number of domestic and foreign references. It is also free to use. If the publisher has a Web site that offers full text of its journals, PubMed will provide links to that site, as well as to sites offering other related data. User registration, a subscription fee, or some other type of fee may be required to access the full text of articles in some journals.

To generate your own bibliography of studies dealing with kinesiology, simply go to the PubMed Web site at **http://www.ncbi.nlm.nih.gov/pubmed**. Type "kinesiology" (or synonyms) into the search box, and click "Go." The following is the type of output you can expect from PubMed for kinesiology (hyperlinks lead to article summaries):

- **1998 ISEK Congress Keynote Lecture: Motor units: how many, how large, what kind? International Society of Electrophysiology and Kinesiology.**
  Author(s): McComas AJ.
  Source: Journal of Electromyography and Kinesiology : Official Journal of the International Society of Electrophysiological Kinesiology. 1998 December; 8(6): 391-402. Review.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=9840894

- **1998 ISEK Congress Keynote Lecture: Multi-muscle control in human movements. International Society of Electrophysiology and Kinesiology.**
  Author(s): Feldman AG, Levin MF, Mitnitski AM, Archambault P.
  Source: Journal of Electromyography and Kinesiology : Official Journal of the International Society of Electrophysiological Kinesiology. 1998 December; 8(6): 383-90.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=9840893

[3] PubMed was developed by the National Center for Biotechnology Information (NCBI) at the National Library of Medicine (NLM) at the National Institutes of Health (NIH). The PubMed database was developed in conjunction with publishers of biomedical literature as a search tool for accessing literature citations and linking to full-text journal articles at Web sites of participating publishers. Publishers that participate in PubMed supply NLM with their citations electronically prior to or at the time of publication.

- **1998 ISEK Congress Keynote Lecture: The use of electromyography in applied physiology. International Society of Electrophysiology and Kinesiology.**
  Author(s): Moritani T, Yoshitake Y.
  Source: Journal of Electromyography and Kinesiology : Official Journal of the International Society of Electrophysiological Kinesiology. 1998 December; 8(6): 363-81. Review.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=9840892

- **A method of electromyographic kinesiology of the thumb.**
  Author(s): Ebskov B, Long C 2nd.
  Source: Archives of Physical Medicine and Rehabilitation. 1967 February; 48(2): 78-84.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=6018306

- **A review of the research papers published by the International College of Applied Kinesiology from 1981 to 1987.**
  Author(s): Morgan LG.
  Source: Journal of Manipulative and Physiological Therapeutics. 1990 November-December; 13(9): 553.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=2273337

- **A review of the research papers published by the international College of Applied Kinesiology from 1981 to 1987.**
  Author(s): Klinkoski B, Leboeuf C.
  Source: Journal of Manipulative and Physiological Therapeutics. 1990 May; 13(4): 190-4.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=2351880

- **A technique to investigate the three-dimensional kinesiology of the human temporomandibular joint.**
  Author(s): Siegler S, Hayes R, Nicolella D, Fielding A.
  Source: The Journal of Prosthetic Dentistry. 1991 June; 65(6): 833-9.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=2072331

- **Adams' closed-loop concept of learning and motor performance: its application in behavioural kinesiology and patients' education in rehabilitation.**
  Author(s): Olaogun MO.
  Source: International Journal of Rehabilitation Research. Internationale Zeitschrift Fur Rehabilitationsforschung. Revue Internationale De Recherches De Readaptation. 1986; 9(3): 231-8.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=3781719

- **Alphonso Borelli and Christina. The father of kinesiology and the Queen of Sweden.**
  Author(s): Breimer L, Sourander P.
  Source: Clio Medica (Amsterdam, Netherlands). 1983; 18(1-4): 155-65.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=6085963

- **An update on kinesiology. Summary.**
  Author(s): Miller WE.
  Source: The American Journal of Sports Medicine. 1982 September-October; 10(5): 300-2.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=7137451

- **Applied dental kinesiology: temporomandibular joint dysfunction.**
  Author(s): Glassley DP.
  Source: Basal Facts. 1983; 5(2): 65-6. No Abstract Available.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=6221716

- **Applied kinesiology and colon health.**
  Author(s): White PA.
  Source: Basal Facts. 1985; 7(2): 143-50. No Abstract Available.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=2994623

- **Applied kinesiology and dentistry.**
  Author(s): Goodheart GJ.
  Source: Basal Facts. 1987; 9(2): 69-73. No Abstract Available.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=2957996

- **Applied kinesiology in dysfunction of the temporomandibular joint.**
  Author(s): Goodheart G.
  Source: Dent Clin North Am. 1983 July; 27(3): 613-30. Review. No Abstract Available.
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- **Applied kinesiology unreliable for assessing nutrient status.**
  Author(s): Kenney JJ, Clemens R, Forsythe KD.
  Source: Journal of the American Dietetic Association. 1988 June; 88(6): 698-704.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=3372923

- **Applied kinesiology.**
  Author(s): Godges JJ.
  Source: Physical Therapy. 1982 March; 62(3): 350.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=7063534

- **Applied kinesiology--double-blind pilot study.**
  Author(s): Friedman MH, Weisberg J.
  Source: The Journal of Prosthetic Dentistry. 1981 March; 45(3): 321-3.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=6938675

- **Behavioral kinesiology.**
  Author(s): Diamond J.
  Source: Basal Facts. 1985; 7(1): 47-57. No Abstract Available.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=3160330

- **Biofeedback and kinesiology.**
  Author(s): Eversaul GA.
  Source: J Am Soc Prev Dent. 1976 December; 6(6): 4. No Abstract Available.
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- **Clinical kinesiology: measurement techniques for spinal disorders.**
  Author(s): Allen ME.
  Source: Orthop Rev. 1988 November; 17(11): 1097-104.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=3205587
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  Author(s): Toth-Cohen S.
  Source: Am J Occup Ther. 1995 September; 49(8): 821-7.
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  Author(s): Kasvand T, Milner M, Quanbury AO, Winter DA.
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  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=1269245

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  Author(s): Basmajian JV.
  Source: Southern Medical Journal. 1972 June; 65(6): 672-5.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=5032366

- **Dental kinesiology.**
  Author(s): Eversaul GA.
  Source: Basal Facts. 1985; 7(2): 127-31. No Abstract Available.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=2931069

- **Developmental kinesiology: maturation of basic motor patterns.**
  Author(s): Wickstrom RL.
  Source: Exercise and Sport Sciences Reviews. 1975; 3: 163-92.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=51797

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  Author(s): Jacobs GE, Franks TL, Gilman PG.
  Source: Journal of Manipulative and Physiological Therapeutics. 1984 June; 7(2): 99-104.
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  Author(s): Cammisa KM.
  Source: Percept Mot Skills. 1994 February; 78(1): 105-6.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=8177643

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  Author(s): Morris GS, Sifft JM, Khalsa GK.
  Source: Percept Mot Skills. 1988 August; 67(1): 51-4.
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  Author(s): Sifft JM, Khalsa GC.
  Source: Percept Mot Skills. 1991 December; 73(3 Pt 1): 1011-5.
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  Author(s): Grossi JA.
  Source: Physical Therapy. 1981 July; 61(7): 1011-6.
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  Author(s): Kamon E.
  Source: Archives of Physical Medicine and Rehabilitation. 1971 April; 52(4): 152-7.
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  Author(s): Tokuhiro A, Nagashima H, Takechi H.
  Source: Archives of Physical Medicine and Rehabilitation. 1985 September; 66(9): 610-3.
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  Author(s): Wozny W, Long C 2nd.
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- **Exercise and arthritis. Kinesiology and the degenerative joint.**
  Author(s): Pothier B, Allen ME.
  Source: Rheumatic Diseases Clinics of North America. 1990 November; 16(4): 989-1002. Review.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=2087588

- **From kinesiology to adaptation.**
  Author(s): Huss AJ.
  Source: Am J Occup Ther. 1981 September; 35(9): 574-80. Review. No Abstract Available.
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  Author(s): Heijnen L, De Kleijn P, Heim M.
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  Author(s): Peterson B.
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  Author(s): Lawson A, Calderon L.
  Source: Percept Mot Skills. 1997 April; 84(2): 539-46.
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  Author(s): Murray MP, Brewer BJ, Gore DR, Zuege RC.
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  Source: J Am Soc Prev Dent. 1976 December; 6(6): 16-8. No Abstract Available.
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  Source: Clinical Orthopaedics and Related Research. 1963; 30: 20-36.
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- **Kinesiology of hip extension at selected angles of pelvifemoral extension.**
  Author(s): Pohtilla JF.
  Source: Archives of Physical Medicine and Rehabilitation. 1969 May; 50(5): 241-50.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=5769844

- **Kinesiology of lower extremity bracing.**
  Author(s): Perry J.
  Source: Clinical Orthopaedics and Related Research. 1974 July-August; 0(102): 18-31.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=4424196

- **Kinesiology of the empty can test.**
  Author(s): Rowlands LK, Wertsch JJ, Primack SJ, Spreitzer AM, Roberts MM.
  Source: American Journal of Physical Medicine & Rehabilitation / Association of Academic Physiatrists. 1995 July-August; 74(4): 302-4.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=7632387

- **Kinesiology of the knee joint. An experimental investigation of the ligamentous and capsular restraints preventing knee instability.**
  Author(s): Nielsen S.
  Source: Dan Med Bull. 1987 December; 34(6): 297-309. Review.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=3325234

- **Kinesiology of the mandible. An EMG study.**
  Author(s): Ahlgren J.
  Source: Acta Odontologica Scandinavica. 1967 December; 25(6): 593-611.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=5247242

- **Kinesiology of the transplanted muscle.**
  Author(s): Mussen M.
  Source: Electromyogr Clin Neurophysiol. 1977 November-December; 17(6): 455-67. No Abstract Available.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=608449

- **Kinesiology of the transplanted muscle.**
  Author(s): Mussen M.
  Source: Electromyogr Clin Neurophysiol. 1977 April-May; 17(2): 167-76. No Abstract Available.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=880928

- **Kinesiology of the transplanted muscle. Part 3: transfers about the lower extremity.**
  Author(s): Mussen M.
  Source: Electromyogr Clin Neurophysiol. 1978 April-May; 18(2): 115-46. No Abstract Available.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=679889

- **Kinesiology of the wrist.**
  Author(s): Radonjic D, Long C 2nd.
  Source: Am J Phys Med. 1971 April; 50(2): 57-71. No Abstract Available.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=5580261

- **Kinesiology versus biomechanics. A perspective.**
  Author(s): Cerny K.
  Source: Physical Therapy. 1984 December; 64(12): 1809.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=6505023

- **Kinesiology. I. The semantics and application of forces involved in the human body in motion.**
  Author(s): Miller WE.
  Source: The American Journal of Sports Medicine. 1981 September-October; 9(5): 342-4.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=7282990

- **Kinesiology. II. A practical discussion of certain muscle actions in a few illustrative sports activities.**
  Author(s): Miller WE.
  Source: The American Journal of Sports Medicine. 1981 November-December; 9(6): 405-8.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=7316024

- **Kinesiology. III. An analysis of peak efforts in sports activities.**
  Author(s): Miller WE.
  Source: The American Journal of Sports Medicine. 1982 January-February; 10(1): 38-9.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=7053635

- **Kinesiology. Part V: physiologic and biochemical relationships.**
  Author(s): Miller WE.
  Source: The American Journal of Sports Medicine. 1982 May-June; 10(3): 188-91.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=7114356

- **Kinesiology. Part VI. Psychologic and neurologic aspects of kinesiology.**
  Author(s): Miller WE.
  Source: The American Journal of Sports Medicine. 1982 July-August; 10(4): 250-2.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=7125050

- **Kinesiology/biomechanics: perspectives and trends.**
  Author(s): Atwater AE.
  Source: Research Quarterly for Exercise and Sport. 1980 March; 51(1): 193-218.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=7394284

- **Kinesiology: Part IV: application of concepts, principles, and laws.**
  Author(s): Miller WE.
  Source: The American Journal of Sports Medicine. 1982 March-April; 10(2): 129-31.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=7081527

- **Kinesiology: with special reference to electromyographic kinesiology.**
  Author(s): Jonsson B.
  Source: Electroencephalogr Clin Neurophysiol Suppl. 1978; (34): 417-28.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=285846

- **MACLimbs: human peripheral anatomy and kinesiology implemented by HyperCard.**
  Author(s): Furman MB.
  Source: Proc Annu Symp Comput Appl Med Care. 1991; : 766-70.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=1807708

- **Motor function in 90-year olds measured by optoelectronic kinesiology and activities of daily living.**
  Author(s): Matousek M, Baba S, Sonn U, Johnels B, Steg G, Steen B.
  Source: Aging (Milano). 1994 December; 6(6): 444-50.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=7748918

- **Normal upper extremity kinesiology.**
  Author(s): Perry J.
  Source: Physical Therapy. 1978 March; 58(3): 265-78.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=628678

- **Quadriceps kinesiology (emg) with varying hip joint flexion and resistance.**
  Author(s): Deutsch H, Lin DC.
  Source: Archives of Physical Medicine and Rehabilitation. 1978 May; 59(5): 231-6.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=655836

- **QUARK: a quantitative real-time analyser for kinesiology.**
  Author(s): Kleissen RF, Hermens HJ, den Exter T, de Kreek JA, Zilvold G.
  Source: Journal of Medical Engineering & Technology. 1989 January-April; 13(1-2): 96-9.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=2786569

- **Some principles of anatomy and kinesiology in stabilization operations of the foot.**
  Author(s): Kaplan EB.
  Source: Clinical Orthopaedics and Related Research. 1964 May-June; 34: 7-13.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=5889079

- **The impact of dream interpretation using psychological kinesiology on the frequency of recurring dreams.**
  Author(s): Webb DE Jr, Fagan J.
  Source: Psychotherapy and Psychosomatics. 1993; 59(3-4): 203-8.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=8416097

- **The kinesiology and fraudulence of skiing.**
  Author(s): Wilson GL.
  Source: Ind Med Surg. 1967 January; 36(1): 26-7. No Abstract Available.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=5226525

- **The kinesiology of the thumb trapeziometacarpal joint.**
  Author(s): Cooney WP 3rd, Lucca MJ, Chao EY, Linscheid RL.
  Source: The Journal of Bone and Joint Surgery. American Volume. 1981 December; 63(9): 1371-81.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=7320028

- **Uses of applied kinesiology for dentists.**
  Author(s): Walther DS.
  Source: Basal Facts. 1985; 7(2): 133-41. No Abstract Available.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=2931070

CHAPTER 2. ALTERNATIVE MEDICINE AND KINESIOLOGY

Overview

In this chapter, we will begin by introducing you to official information sources on complementary and alternative medicine (CAM) relating to kinesiology. At the conclusion of this chapter, we will provide additional sources.

National Center for Complementary and Alternative Medicine

The National Center for Complementary and Alternative Medicine (NCCAM) of the National Institutes of Health (**http://nccam.nih.gov/**) has created a link to the National Library of Medicine's databases to facilitate research for articles that specifically relate to kinesiology and complementary medicine. To search the database, go to the following Web site: **http://www.nlm.nih.gov/nccam/camonpubmed.html**. Select "CAM on PubMed." Enter "kinesiology" (or synonyms) into the search box. Click "Go." The following references provide information on particular aspects of complementary and alternative medicine that are related to kinesiology:

- **A descriptive analysis of research methods classes in departments of kinesiology and physical education in the United States.**
  Author(s): Silverman S, Keating XD.
  Source: Research Quarterly for Exercise and Sport. 2002 March; 73(1): 1-9.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=11926478

- **A review of the research papers published by the International College of Applied Kinesiology from 1981 to 1987.**
  Author(s): Morgan LG.
  Source: Journal of Manipulative and Physiological Therapeutics. 1990 November-December; 13(9): 553.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=2273337

- **A review of the research papers published by the international College of Applied Kinesiology from 1981 to 1987.**
  Author(s): Klinkoski B, Leboeuf C.
  Source: Journal of Manipulative and Physiological Therapeutics. 1990 May; 13(4): 190-4.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=2351880

- **A software tool to acquire, synchronise and playback multimedia data: an application in kinesiology.**
  Author(s): Guerri JC, Esteve M, Palau C, Monfort M, Angeles Sarti M.
  Source: Computer Methods and Programs in Biomedicine. 2000 May; 62(1): 51-8.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=10699685

- **Applied kinesiology and colon health.**
  Author(s): White PA.
  Source: Basal Facts. 1985; 7(2): 143-50. No Abstract Available.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=2994623

- **Applied kinesiology and dentistry.**
  Author(s): Goodheart GJ.
  Source: Basal Facts. 1987; 9(2): 69-73. No Abstract Available.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=2957996

- **Applied kinesiology for treatment of women with mastalgia.**
  Author(s): Gregory WM, Mills SP, Hamed HH, Fentiman IS.
  Source: Breast (Edinburgh, Scotland). 2001 February; 10(1): 15-9.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=14965552

- **Applied kinesiology in dysfunction of the temporomandibular joint.**
  Author(s): Goodheart G.
  Source: Dent Clin North Am. 1983 July; 27(3): 613-30. Review. No Abstract Available.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=6226544

- **Applied kinesiology unreliable for assessing nutrient status.**
  Author(s): Kenney JJ, Clemens R, Forsythe KD.
  Source: Journal of the American Dietetic Association. 1988 June; 88(6): 698-704.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=3372923

- **Applied kinesiology.**
  Author(s): Godges JJ.
  Source: Physical Therapy. 1982 March; 62(3): 350.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=7063534

- **Applied kinesiology: its use in veterinary diagnosis.**
  Author(s): Tiekert CG.
  Source: Vet Med Small Anim Clin. 1981 November; 76(11): 1621-3. No Abstract Available.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=6916541

- **Applied kinesiology--double-blind pilot study.**
  Author(s): Friedman MH, Weisberg J.
  Source: The Journal of Prosthetic Dentistry. 1981 March; 45(3): 321-3.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=6938675

- **Behavioral kinesiology.**
  Author(s): Diamond J.
  Source: Basal Facts. 1985; 7(1): 47-57. No Abstract Available.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=3160330

- **Biofeedback and kinesiology.**
  Author(s): Eversaul GA.
  Source: J Am Soc Prev Dent. 1976 December; 6(6): 4. No Abstract Available.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=1074822

- **Biofeedback and kinesiology. Technologies for preventive dentistry.**
  Author(s): Eversaul GA.
  Source: J Am Soc Prev Dent. 1976 December; 6(6): 19-23. No Abstract Available.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=1074820

- **Clinical neurokinesiology of spastic gait.**
  Author(s): Mayer M.
  Source: Bratisl Lek Listy. 2002; 103(1): 3-11. Review.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=12061084

- **Computer-assisted instruction as a learning resource for applied anatomy and kinesiology in the occupational therapy curriculum.**
  Author(s): Toth-Cohen S.
  Source: Am J Occup Ther. 1995 September; 49(8): 821-7.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=8526228

- **Control engineering and electromyographic kinesiology analyses of normal human gait.**
  Author(s): Hashimoto F, Ogawa R, Kameyama O.

Source: Journal of Orthopaedic Science : Official Journal of the Japanese Orthopaedic Association. 2000; 5(2): 139-49.
http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=10982648

- **Correlation of applied kinesiology muscle testing findings with serum immunoglobulin levels for food allergies.**
  Author(s): Schmitt WH Jr, Leisman G.
  Source: The International Journal of Neuroscience. 1998 December; 96(3-4): 237-44.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=10069623

- **Diagnosis of thyroid dysfunction: applied kinesiology compared to clinical observations and laboratory tests.**
  Author(s): Jacobs GE, Franks TL, Gilman PG.
  Source: Journal of Manipulative and Physiological Therapeutics. 1984 June; 7(2): 99-104.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=6747487

- **Effects of an applied kinesiology technique on quadriceps femoris muscle isometric strength.**
  Author(s): Grossi JA.
  Source: Physical Therapy. 1981 July; 61(7): 1011-6.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=7243896

- **Evaluation of Chapman's neurolymphatic reflexes via applied kinesiology: a case report of low back pain and congenital intestinal abnormality.**
  Author(s): Caso ML.
  Source: Journal of Manipulative and Physiological Therapeutics. 2004 January; 27(1): 66.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=14739884

- **Expanding the neurological examination using functional neurologic assessment: part II neurologic basis of applied kinesiology.**
  Author(s): Schmitt WH Jr, Yanuck SF.
  Source: The International Journal of Neuroscience. 1999 March; 97(1-2): 77-108. Review.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=10681119

- **George Goodheart, Jr., D.C., and a history of applied kinesiology.**
  Author(s): Gin RH, Green BN.
  Source: Journal of Manipulative and Physiological Therapeutics. 1997 June; 20(5): 331-7.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=9200049

- **Holistic nursing: educational kinesiology.**
  Author(s): Peterson B.

Source: Aarn News Lett. 1993 April; 49(4): 21-2. No Abstract Available.
http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=8484311

- **Interexaminer agreement for applied kinesiology manual muscle testing.**
  Author(s): Lawson A, Calderon L.
  Source: Percept Mot Skills. 1997 April; 84(2): 539-46.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=9106846

- **Is it reasonable to involve kinesiology in medical education?**
  Author(s): Angyan L.
  Source: Acta Physiol Hung. 1999; 86(3-4): 199-203. Review.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=10943648

- **Test-retest-reliability and validity of the Kinesiology muscle test.**
  Author(s): Ludtke R, Kunz B, Seeber N, Ring J.
  Source: Complementary Therapies in Medicine. 2001 September; 9(3): 141-5.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=11926427

- **The clinical utility of force/displacement analysis of muscle testing in applied kinesiology.**
  Author(s): Caruso W, Leisman G.
  Source: The International Journal of Neuroscience. 2001; 106(3-4): 147-57.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=11264916

- **Uses of applied kinesiology for dentists.**
  Author(s): Walther DS.
  Source: Basal Facts. 1985; 7(2): 133-41. No Abstract Available.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=2931070

Additional Web Resources

A number of additional Web sites offer encyclopedic information covering CAM and related topics. The following is a representative sample:

- Alternative Medicine Foundation, Inc.: **http://www.herbmed.org/**
- AOL: **http://search.aol.com/cat.adp?id=169&layer=&from=subcats**
- Chinese Medicine: **http://www.newcenturynutrition.com/**
- drkoop.com®: **http://www.drkoop.com/InteractiveMedicine/IndexC.html**
- Family Village: **http://www.familyvillage.wisc.edu/med_altn.htm**
- Google: **http://directory.google.com/Top/Health/Alternative/**

- Healthnotes: **http://www.healthnotes.com/**
- MedWebPlus: **http://medwebplus.com/subject/Alternative_and_Complementary_Medicine**
- Open Directory Project: **http://dmoz.org/Health/Alternative/**
- HealthGate: **http://www.tnp.com/**
- WebMD®Health: **http://my.webmd.com/drugs_and_herbs**
- WholeHealthMD.com: **http://www.wholehealthmd.com/reflib/0,1529,00.html**
- Yahoo.com: **http://dir.yahoo.com/Health/Alternative_Medicine/**

The following is a specific Web list relating to kinesiology; please note that any particular subject below may indicate either a therapeutic use, or a contraindication (potential danger), and does not reflect an official recommendation:

- **Alternative Therapy**

  Agape Quest Program
  Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
  Hyperlink: http://www.canoe.ca/AltmedDictionary/a.html

  Ak/not Program
  Alternative names: Ferreri program
  Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
  Hyperlink: http://www.canoe.ca/AltmedDictionary/a.html

  Angel Chiropractic Care
  Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
  Hyperlink: http://www.canoe.ca/AltmedDictionary/a.html

  Applied Kinesiology
  Alternative names: AK kinesiology
  Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
  Hyperlink: http://www.canoe.ca/AltmedDictionary/a.html

  Applied Kinesiology
  Source: WholeHealthMD.com, LLC.; www.wholehealthmd.com
  Hyperlink:
  http://www.wholehealthmd.com/refshelf/substances_view/0,1525,711,00.html

  Balanced Health
  Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
  Hyperlink: http://www.canoe.ca/AltmedDictionary/b.html

Behavioral Kinesiology
Alternative names: BK
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/b.html

Biokinesiology
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/b.html

Biological Archeology
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/b.html

Clinical Kinesiology
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/c.html

Contact Reflex Analysis
Alternative names: CRA
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/c.html

Creative Kinesiology
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/c.html

Diamond Method
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/d.html

Edxtm[tm]
Alternative names: Energy Diagnostic Treatment Methods
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/e.html

Energy Psychology
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/e.html

Ferreri Technique
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/f.html

Geopathic Therapy
Alternative names: geopathic medicine
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/g.html

Health Kinesiology
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/h.html

Human Ecology Balancing Sciences
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/h.html

Integrated Kinesiology
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/i.html

Kinesiology
Alternative names: kinesiologies
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/k.html

Lepore Technique
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/l.html

Life Care Kinesiology
Alternative names: Life Care
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/l.html

Life Energy Analysis
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/l.html

Muscle Testing
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/m.html

Myotherapy
Source: WholeHealthMD.com, LLC.; www.wholehealthmd.com
Hyperlink:
http://www.wholehealthmd.com/refshelf/substances_view/0,1525,931,00.html

Naturopathy
Source: WholeHealthMD.com, LLC.; www.wholehealthmd.com
Hyperlink:
http://www.wholehealthmd.com/refshelf/substances_view/0,1525,722,00.html

Nutrition Kinesiology
Alternative names: NK
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/n.html

Optimum Health Balance
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/o.html

Professional Kinesiology Practice
Alternative names: PKP PKP approach
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/p.html

Psycho-kinetic Health
Alternative names: PKH
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/p.html

Resonant Kinesiology
Alternative names: RK
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/r.html

Self-help for Stress and Pain
Alternative names: Self-Help Approach
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/s.html

Somatic Therapy
Alternative names: somatic disciplines somatic methods somatics somatic techniques somatic therapies
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/s.html

Stress Release
Alternative names: Stress Release approach
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/s.html

Therapeutic Kinesiology
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/t.html

Three in One
Alternative names: Three in One Concepts process Three in One approach
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/t.html

Tongue Acupuncture
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/t.html

Touch for Health
Alternative names: TFH
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/t.html

Vegatest Method
Alternative names: Vega in vitro test method Vega method
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/v.html

Visceral Meridian Manipulation Technique
Alternative names: VMM
Source: The Canoe version of A Dictionary of Alternative-Medicine Methods, by Priorities for Health editor Jack Raso, M.S., R.D.
Hyperlink: http://www.canoe.ca/AltmedDictionary/v.html

- **Herbs and Supplements**

Cat's Claw
Alternative names: Uncaria tomentosa
Source: Integrative Medicine Communications; www.drkoop.com

Uncaria Tomentosa
Source: Integrative Medicine Communications; www.drkoop.com

General References

A good place to find general background information on CAM is the National Library of Medicine. It has prepared within the MEDLINEplus system an information topic page dedicated to complementary and alternative medicine. To access this page, go to the MEDLINEplus site at **http://www.nlm.nih.gov/medlineplus/alternativemedicine.html**.

This Web site provides a general overview of various topics and can lead to a number of general sources.

CHAPTER 3. DISSERTATIONS ON KINESIOLOGY

Overview

In this chapter, we will give you a bibliography on recent dissertations relating to kinesiology. We will also provide you with information on how to use the Internet to stay current on dissertations. **IMPORTANT NOTE:** When following the search strategy described below, you may discover non-medical dissertations that use the generic term "kinesiology" (or a synonym) in their titles. To accurately reflect the results that you might find while conducting research on kinesiology, we have not necessarily excluded non-medical dissertations in this bibliography.

Dissertations on Kinesiology

ProQuest Digital Dissertations, the largest archive of academic dissertations available, is located at the following Web address: **http://wwwlib.umi.com/dissertations**. From this archive, we have compiled the following list covering dissertations devoted to kinesiology. You will see that the information provided includes the dissertation's title, its author, and the institution with which the author is associated. The following covers recent dissertations found when using this search procedure:

- **A COMPARATIVE STUDY OF THREE METHODS OF DETERMINING THE CENTER OF GRAVITY OF THE HUMAN BODY (BIOMECHANICS, KINESIOLOGY)** by AVILA, ALUISIO OTAVIO VARGAS, PHD from Peabody College for Teachers of Vanderbilt University, 1984, 135 pages
  http://wwwlib.umi.com/dissertations/fullcit/8419277
- **A THEORY OF BRASSWIND EMBOUCHURE BASED UPON FACIAL ANATOMY, ELECTROMYOGRAPHIC KINESIOLOGY, AND BRASSWIND EMBOUCHURE PEDAGOGY** by ISLEY, CHARLES LEE, JR., EDD from University of North Texas, 1972, 285 pages
  http://wwwlib.umi.com/dissertations/fullcit/7302908
- **Afrocentric kinesiology: Innovators and early adopters in a diffusion of innovations model** by Pittman, Beverly D.; PhD from Temple University, 2001, 334 pages
  http://wwwlib.umi.com/dissertations/fullcit/3031548

- **Comparative locomotor kinesiology in two contemporary hominid groups: Sedentary Americans and mobile Venezuelan foragers** by Hilton, Charles Edward, PhD from The University of New Mexico, 1997, 266 pages
  http://wwwlib.umi.com/dissertations/fullcit/9720485
- **EFFECTS OF A VISUAL DISCRIMINATION TRAINING PROGRAM ON THE ACQUISITION AND MAINTENANCE OF PHYSICAL EDUCATION STUDENTS' VOLLEYBALL SKILL ANALYTIC ABILITY (PEDOGOGICAL KINESIOLOGY, TEACHER)** by WILKINSON, SUSAN, PHD from The Ohio State University, 1986, 331 pages
  http://wwwlib.umi.com/dissertations/fullcit/8618868
- **Effects of concept mapping on learning anatomy and transfer of anatomy knowledge to kinesiology in health sciences students** by Huber, Frances E.; EdD from West Virginia University, 2001, 220 pages
  http://wwwlib.umi.com/dissertations/fullcit/3049277
- **Effects of educational kinesiology, previous performance, gender, and socioeconomic status on phonological awareness literacy screening scores of kindergarten students** by Witcher, Sandra Harmon; EdD from Virginia Polytechnic Institute and State University, 2001, 91 pages
  http://wwwlib.umi.com/dissertations/fullcit/3065470
- **FUNDAMENTAL KINESIOLOGY MADE PLAIN AND SIMPLE: A PROGRAMMED TEXT FOR STUDENTS** by HOLLAND, WILLIAM HAROLD, DA from Middle Tennessee State University, 1995, 148 pages
  http://wwwlib.umi.com/dissertations/fullcit/9536078
- **GENDER BIAS IN TEXTBOOKS IN SELECTED KINESIOLOGY COURSES IN TEXAS COLLEGES AND UNIVERSITIES (KINESIOLOGY TEXTBOOKS, ATHLETIC ADMINISTRATION)** by MUNT, GLADA CAROLE, PHD from University of North Texas, 1991, 143 pages
  http://wwwlib.umi.com/dissertations/fullcit/9201538
- **HUMAN MOVEMENT SCIENCE: A STRATEGY FOR RENEWAL (AFRIKAANS TEXT, PHILOSOPHY OF SCIENCE, KINESIOLOGY)** by ENGELBRECHT, SYBRAND ABRAHAM, PHD from University of Pretoria (South Africa), 1996
  http://wwwlib.umi.com/dissertations/fullcit/f123699
- **IS THE APPLIED KINESIOLOGY TEST A MEASURE OF STRESS? (STRESS MEASURES)** by GROSS, JOHN W., PHD from Southern Illinois University at Carbondale, 1992, 69 pages
  http://wwwlib.umi.com/dissertations/fullcit/9239717
- **Leadership responses to change in 21st century California State University physical education/kinesiology departments** by Hopkins, Paulette Wong, EdD from University of San Diego, 1999, 231 pages
  http://wwwlib.umi.com/dissertations/fullcit/9914178
- **Music reading calisthenics: The effect of a consistent regimen of sightreading and the effect of Educational Kinesiology upon the music sightreading skills of high school music students** by Ferrin, Craig E.; PhD from The University of Utah, 2003, 279 pages
  http://wwwlib.umi.com/dissertations/fullcit/3100977
- **Perceptions of undergraduate alumni of a private liberal arts university on the adequacy of their preparation in kinesiology** by Yingling, Jon David; EdD from Texas A&m University - Commerce, 2000, 93 pages
  http://wwwlib.umi.com/dissertations/fullcit/3007250

- **SPIRITUALITY IN THE TEACHING OF SCIENTIFIC SUBJECT MATTER: A NATURALISTIC STUDY OF A COURSE IN KINESIOLOGY FOR DANCERS** by DITSON, LESLIE ALLEN, PHD from Brigham Young University, 1994, 172 pages
  http://wwwlib.umi.com/dissertations/fullcit/9418486
- **THE DEVELOPMENT OF A MODEL REQUIRED GENERAL KINESIOLOGY PROGRAM FOR THE PROFESSIONAL PREPARATION OF UNDERGRADUATE PHYSICAL EDUCATION MAJORS** by WALKER, LINCOLN RICHARD, EDD from University of Northern Colorado, 1966, 256 pages
  http://wwwlib.umi.com/dissertations/fullcit/6701137
- **THE DEVELOPMENT OF A SELF-INSTRUCTIONAL MECHANICS TEXTBOOK AND THE DETERMINATION OF ITS INFLUENCE ON THE ACHIEVEMENT OF SPECIFIC KNOWLEDGE IN MECHANICAL KINESIOLOGY. (VOLUMES I AND II)** by KRAUSE, JEROME V., EDD from University of Northern Colorado, 1967, 496 pages
  http://wwwlib.umi.com/dissertations/fullcit/6800434
- **THE EFFECTS OF EDUCATIONAL KINESIOLOGY AND FUNCTIONAL VISUAL EFFICIENCY ON TYPEWRITING SPEED AND ACCURACY (VISUAL EFFICIENCY)** by TRAVIS, NORMA JEAN, EDD from Virginia Polytechnic Institute and State University, 1989, 104 pages
  http://wwwlib.umi.com/dissertations/fullcit/9023186
- **THE EFFECTS OF PROGRAMED INSTRUCTION ON ACHIEVEMENT IN PHYSIOLOGICAL KINESIOLOGY. (VOLUMES I AND II)** by BROWN, ROBERT FOSTER, EDD from University of Northern Colorado, 1969, 294 pages
  http://wwwlib.umi.com/dissertations/fullcit/7007105
- **THE RELATIONSHIPS AMONG FIELD DEPENDENCE/INDEPENDENCE, GRE SCORES, AND GPA OF MASTER'S STUDENTS IN KINESIOLOGY, HEALTH PROMOTION, AND RECREATION** by BECK, TERESA MARIE, PHD from University of North Texas, 1995, 135 pages
  http://wwwlib.umi.com/dissertations/fullcit/9529912
- **Utilization of undergraduate kinesiology/biomechanics course content by outstanding elementary physical education teachers in a selected school district in the Commonwealth of Virginia** by Carlson, Kevin Matthew; EdD from University of Kansas, 2002, 146 pages
  http://wwwlib.umi.com/dissertations/fullcit/3071094

Keeping Current

Ask the medical librarian at your library if it has full and unlimited access to the *ProQuest Digital Dissertations* database. From the library, you should be able to do more complete searches via **http://wwwlib.umi.com/dissertations**.

CHAPTER 4. PATENTS ON KINESIOLOGY

Overview

Patents can be physical innovations (e.g. chemicals, pharmaceuticals, medical equipment) or processes (e.g. treatments or diagnostic procedures). The United States Patent and Trademark Office defines a patent as a grant of a property right to the inventor, issued by the Patent and Trademark Office.[4] Patents, therefore, are intellectual property. For the United States, the term of a new patent is 20 years from the date when the patent application was filed. If the inventor wishes to receive economic benefits, it is likely that the invention will become commercially available within 20 years of the initial filing. It is important to understand, therefore, that an inventor's patent does not indicate that a product or service is or will be commercially available. The patent implies only that the inventor has "the right to exclude others from making, using, offering for sale, or selling" the invention in the United States. While this relates to U.S. patents, similar rules govern foreign patents.

In this chapter, we show you how to locate information on patents and their inventors. If you find a patent that is particularly interesting to you, contact the inventor or the assignee for further information. **IMPORTANT NOTE:** When following the search strategy described below, you may discover non-medical patents that use the generic term "kinesiology" (or a synonym) in their titles. To accurately reflect the results that you might find while conducting research on kinesiology, we have not necessarily excluded non-medical patents in this bibliography.

Patents on Kinesiology

By performing a patent search focusing on kinesiology, you can obtain information such as the title of the invention, the names of the inventor(s), the assignee(s) or the company that owns or controls the patent, a short abstract that summarizes the patent, and a few excerpts from the description of the patent. The abstract of a patent tends to be more technical in nature, while the description is often written for the public. Full patent descriptions contain much more information than is presented here (e.g. claims, references, figures, diagrams, etc.). We will tell you how to obtain this information later in the chapter. The following is an

[4]Adapted from the United States Patent and Trademark Office: **http://www.uspto.gov/web/offices/pac/doc/general/whatis.htm**.

example of the type of information that you can expect to obtain from a patent search on kinesiology:

- **Kinesiology testing apparatus**

  Inventor(s): Wise; Raymond (300, 52112 Range Rd. 222, Sherwood Park, Alberta, CA)

  Assignee(s): None Reported

  Patent Number: 5,855,539

  Date filed: May 14, 1996

  Abstract: A **kinesiology** testing apparatus which includes a base. A foot treadle is provided having a first end and a second end. The first end is pivotally attached to the base. A line is provided having a first end and a second end. The second end is secured adjacent to the second end of the foot treadle. Means is provided for securing the first end of the line to a person's arm. When a person has his arm extended out parallel to a floor, a downward force exerted by a foot of the person upon the foot treadle is transmits, via the line, a downward force upon the person's arm.

  Excerpt(s): The present invention relates to a testing apparatus for use in that branch of holistic medicine known as applied **kinesiology.** At the present time, people who follow the teachings of Applied **Kinesiology** must consult a qualified individual, such as Dr. Diamond, in order to be tested. It is not possible for an individual to test himself or herself. This results in unavoidable time delays and necessarily entails some expense. What is required is a **kinesiology** testing apparatus which permits testing to be self administered.

  Web site: http://www.delphion.com/details?pn=US05855539__

- **Multi-modal data input/output apparatus and method compatible with bio-engineering requirements**

  Inventor(s): Anderson; Peter T. (Burlington, VT), Grimes; Ralph S. (South Burlington, VT), Wright, Jr.; Sanford J. (415 A. St., SE., Washington, DC 20005)

  Assignee(s): Said Sanford J. Wright, by Said Peter Anderson and Said Ralph Grimes ()

  Patent Number: 4,070,649

  Date filed: December 1, 1976

  Abstract: Apparatus and method for sensing, recognizing, displaying, processing and storing motion generated symbolic information including a hand held, mark-forming writing instrument having motion sensing means and a wrist mounted display communicating with the writing instrument through character recognition circuitry to simultaneously display information formed by the writing instrument. An information control and storage circuit is included capable of operating in any one of several possible modes to receive, store and cause the display of information thereby permitting a multiplicity of functions heretofor requiring a vastly greater number of physical components. In particular, this highly portable apparatus readily and broadly compliments the **kinesiology** of writing instruments and composures that accompany human thinking and problem solving. The operational modes include horological display, data calculation, reminder message storage and display, and financial account storage.

Excerpt(s): This invention relates to the field of miniaturized data input/output and character recognition systems. While miniaturization of electronic circuitry for data storage and processing applications has progressed to a highly sophicated state, the benefits which would otherwise derive from this sophistication have been impeded by the failure of data input/output technology to develop with equal rapidity. This situation has become so extreme that further miniaturization of electronic circuitry will yield no appreciable benefit to numerous product areas employing miniaturized electronic data processing circuitry unless input/output devices first undergo significant improvement. But, unlike the data processing circuitry itself, size reduction of input/output devices is limited primarily by human engineering factors. For example, the size of the standard keyboard could easily be reduced significantly except that convenient human finger tip operation would no longer be possible because the size of the smallest standard data input/output symbols can not be reduced below what the human eye is capable of quickly or easily perceiving. A particular example of this dilemma is in the field of hand held calculators where the minimum size required for a convenient keyboard is the only limitation standing in the way of further reduction in overall size. To date, most efforts at solving this problem have centered strictly on the hardware technology. For example, one approach has been to replace the standard calculator keyboard with specialized keys, each of which may be pivoted by the human finger in any one of four directions to uniquely indicate one of four character symbols or mathematical operators. By use of five such four-way keys, the size of a normal calculator may be reduced to that of a somewhat oversized writing instrument such as embodied for example in a calculator pen sold under the trademark CALCUPEN available from Chafitz, P.O. Box 2188, Dept. 289, Rockville, Maryland. While a decided improvement over the standard pocket calculator in terms of size, devices which need to accommodate five input switches and a standard visual display necessarily retain a rather bulky appearance and feel compared with a standard hand held writing instrument.

Web site: http://www.delphion.com/details?pn=US04070649__

- **Universal ergonomic handle**

  Inventor(s): Helt, III; Donald G. (101 Woodvale Ave., Staten Island, NY 10309), Kopelman; Larry J. (183 Hidden Ct., Old Bridge, NJ 08857)

  Assignee(s): None Reported

  Patent Number: 5,829,099

  Date filed: April 14, 1997

  Abstract: An ergonomic handle design in which the contours of the handle are matched with the anatomy of the hand, taking into account the dynamics of the **kinesiology** of movement and the physiology of the joints so that muscles are not overtaxed. In the preferred embodiment described, the surface area of the handle is balanced out over the thenar eminance, while its curvatures accommodate the web space between the thumb and the fingers as well as the pads over the metacarpal heads in an efficient manner. The fingers then naturally wrap around the gripping surface of the handle without undue stress on the proximal and interphalangial joints.

  Excerpt(s): This invention relates to such repetitive motion injuries as Carpal Tunnel Syndrome, Tenosynovitis and Lateral Epicondylitis and, more particularly, to the design of an ergonomic handle to reduce such cumulative trauma by making tool movements more efficient, less energy consuming and less fatiguing. As has been reported, Carpal

Tunnel Syndrome and other cumulative trauma disorders constitute the fastest growing problem in the industrial work place. Numerous studies have suggested that these injuries are related to repetitive motions over time, uses of excessive force, and/or abnormal positioning of the body and joints during work. Analysis has shown, however, that the designs of modern tools for different jobs by-and-large have caused these injuries, have increased the severity of them, and/or pre-disposed workers to circumstances leading to them. In fact, one study suggests that over the past 10 years, or so, there has been a ten-fold increase in these Cumulative Trauma Disorders. Evidence has surfaced that tool redesign and enhancements can reduce the severity and impact of the hazard. Such evidence indicates that a pro-active approach to ergonomic intervention in implementing redesigned tools could be an effective deterrent to such debilitating and costly injuries associated with work place tasks.

Web site: http://www.delphion.com/details?pn=US05829099__

Patent Applications on Kinesiology

As of December 2000, U.S. patent applications are open to public viewing.[5] Applications are patent requests which have yet to be granted. (The process to achieve a patent can take several years.) The following patent applications have been filed since December 2000 relating to kinesiology:

- **Electronic kinesiology game device**

  Inventor(s): Mercer, Richard D.; (Pittsburgh, PA), Nicosia, Gregory J.; (Pittsburgh, PA)

  Correspondence: Mckay & Associates, PC.; 801 Mcneilly Road; Pittsburg; PA; 15226; US

  Patent Application Number: 20020132655

  Date filed: March 7, 2002

  Abstract: A hand-held, electronic game device for quantifying statements made by a user based on the principles of **kinesiology** is disclosed. A housing stores a microprocessor and a strain gauge and is adapted to receive a pair of inputs relating to muscle force values received from strength input means and applied simultaneously while contrasting statements are expressed. Software of the microcontroller applies a differential for each reading and couples the digital force readouts on an LCD display with a true/false indication to quantify the thought or amusingly disprove another's verbal expression.

  Excerpt(s): This application hereby claims benefit of provisional application serial No. 60/276,128 for electronic **kinesiology** game device filed Mar. 15, 2001. The present invention relates generally to strength testing devices. In particular, a self-actuated electronic game device is taught herein for measuring, displaying, and correlating a muscle force with a true/false reading that quantifies a user's intuition. Applied kinesiologists in the psychological, medical, and chiropractic communities have used muscle testing as a diagnostic methodology by which the body reveals long-hidden information about a person's individual strengths, weaknesses, beliefs and needs for healing.

  Web site: http://appft1.uspto.gov/netahtml/PTO/search-bool.html

[5] This has been a common practice outside the United States prior to December 2000.

Keeping Current

In order to stay informed about patents and patent applications dealing with kinesiology, you can access the U.S. Patent Office archive via the Internet at the following Web address: **http://www.uspto.gov/patft/index.html**. You will see two broad options: (1) Issued Patent, and (2) Published Applications. To see a list of issued patents, perform the following steps: Under "Issued Patents," click "Quick Search." Then, type "kinesiology" (or synonyms) into the "Term 1" box. After clicking on the search button, scroll down to see the various patents which have been granted to date on kinesiology.

You can also use this procedure to view pending patent applications concerning kinesiology. Simply go back to **http://www.uspto.gov/patft/index.html**. Select "Quick Search" under "Published Applications." Then proceed with the steps listed above.

CHAPTER 5. BOOKS ON KINESIOLOGY

Overview

This chapter provides bibliographic book references relating to kinesiology. In addition to online booksellers such as **www.amazon.com** and **www.bn.com**, excellent sources for book titles on kinesiology include the Combined Health Information Database and the National Library of Medicine. Your local medical library also may have these titles available for loan.

Book Summaries: Federal Agencies

The Combined Health Information Database collects various book abstracts from a variety of healthcare institutions and federal agencies. To access these summaries, go directly to the following hyperlink: **http://chid.nih.gov/detail/detail.html**. You will need to use the "Detailed Search" option. To find book summaries, use the drop boxes at the bottom of the search page where "You may refine your search by." Select the dates and language you prefer. For the format option, select "Monograph/Book." Now type "kinesiology" (or synonyms) into the "For these words:" box. You should check back periodically with this database which is updated every three months. The following is a typical result when searching for books on kinesiology:

- **The alternative health and medicine encyclopedia**

  Source: Detroit, MI: Visible Ink Press. 1995. 400 pp.

  Contact: Available from Gale Research, Visible Ink Press, P.O. Box 33477, Detroit, MI 48232-5477. Telephone: (800) 877-GALE / fax: (800) 414- 5043. $15.95 includes shipping and handling.

  Summary: This book presents information on a wide range of alternative or complementary methods for providing health care. It provides an introductory chapter on alternative medicine which covers approaches such as acupuncture and acupressure, biofeedback, homeopathy, massage, hydrotherapy, **kinesiology,** and visualization therapy, among others. It includes chapters on the following topics: natural nutrition; vitamins; minerals and trace elements; botanical medicines; coping with stress; stress-related disorders; drug abuse and addiction; mental health disorders; common male and female health problems; pregnancy, childbirth, and infant care; dental care; eye, ear,

nose, and throat problems; cancer; heart disorders; and aging. Each chapter presents alternative treatments for specific conditions, includes sidebars which summarize certain strategies, and provides bibliographical references. A glossary, a general bibliography, and an index are included.

Book Summaries: Online Booksellers

Commercial Internet-based booksellers, such as Amazon.com and Barnes&Noble.com, offer summaries which have been supplied by each title's publisher. Some summaries also include customer reviews. Your local bookseller may have access to in-house and commercial databases that index all published books (e.g. Books in Print®). **IMPORTANT NOTE:** Online booksellers typically produce search results for medical and non-medical books. When searching for "kinesiology" at online booksellers' Web sites, you may discover non-medical books that use the generic term "kinesiology" (or a synonym) in their titles. The following is indicative of the results you might find when searching for "kinesiology" (sorted alphabetically by title; follow the hyperlink to view more details at Amazon.com):

- **100 Years of Kinesiology: History, Research, & Reflections** by John L. Haubensticker (Editor), et al; ISBN: 0966708148; http://www.amazon.com/exec/obidos/ASIN/0966708148/icongroupinterna
- **Administrative Leadership in Health, Kinesiology and Leisure Studies** by James E. Bryant (Editor), et al; ISBN: 078728131X; http://www.amazon.com/exec/obidos/ASIN/078728131X/icongroupinterna
- **Analysis of Human Motion: A Textbook in Kinesiology** by M. Gladys Scott; ISBN: 089197024X; http://www.amazon.com/exec/obidos/ASIN/089197024X/icongroupinterna
- **Anatomic Kinesiology**; ISBN: 0697071405; http://www.amazon.com/exec/obidos/ASIN/0697071405/icongroupinterna
- **Anatomic Kinesiology** by Gene A. Logan, Wayne C. McKinney; ISBN: 0697071855; http://www.amazon.com/exec/obidos/ASIN/0697071855/icongroupinterna
- **Anatomical Kinesiology** by Barbara E. Gench, et al; ISBN: 0945483341; http://www.amazon.com/exec/obidos/ASIN/0945483341/icongroupinterna
- **Anatomical Kinesiology: A Programmed Text** by Jerry N. Barham, William J. Thomas; ISBN: 0023060107; http://www.amazon.com/exec/obidos/ASIN/0023060107/icongroupinterna
- **Anatomy and Kinesiology for Ballet Teachers** by Eivind Thomasen, Rachel-Anne Rist; ISBN: 185273048X; http://www.amazon.com/exec/obidos/ASIN/185273048X/icongroupinterna
- **Anatomy, Radiology, & Kinesiology of Hand-Unit** by Hosein A. Motamed; ISBN: 0910161062; http://www.amazon.com/exec/obidos/ASIN/0910161062/icongroupinterna
- **Applied Kinesiology** by Tom Valentine, et al; ISBN: 072251123X; http://www.amazon.com/exec/obidos/ASIN/072251123X/icongroupinterna
- **Applied Kinesiology and Biomechanics** by Clayne R. Jensen, et al; ISBN: 0070324697; http://www.amazon.com/exec/obidos/ASIN/0070324697/icongroupinterna

- **Applied Kinesiology: A Training Manual and Reference Book of Basic Principles and Practices** by Robert Frost, George J. Goodheart; ISBN: 1556433743; http://www.amazon.com/exec/obidos/ASIN/1556433743/icongroupinterna
- **Applied Kinesiology: Basic Procedures and Muscle Testing** by David S. Walther; ISBN: 9996858979; http://www.amazon.com/exec/obidos/ASIN/9996858979/icongroupinterna
- **Applied Kinesiology: Head Neck and Joint Dysfunction** by D Walter; ISBN: 9998962196; http://www.amazon.com/exec/obidos/ASIN/9998962196/icongroupinterna
- **Applied Kinesiology: Head, Neck and Jaw Pain and Dysfunction, the Stomatognathic System** by David S. Walther, et al; ISBN: 0929721012; http://www.amazon.com/exec/obidos/ASIN/0929721012/icongroupinterna
- **Applied Kinesiology: Muscle Response in Diagnosis, Therapy and Preventive Medicine (Thorson's Inside Health Series)** by Tom Valentine, Carole Valentine; ISBN: 0892813288; http://www.amazon.com/exec/obidos/ASIN/0892813288/icongroupinterna
- **Applied Kinesiology: The Scientific Study of Human Performance** by Clayne R. Jensen; ISBN: 0070324638; http://www.amazon.com/exec/obidos/ASIN/0070324638/icongroupinterna
- **Brunnstrom's Clinical Kinesiology** by Elizabeth Lawrence Weiss, et al; ISBN: 0803679165; http://www.amazon.com/exec/obidos/ASIN/0803679165/icongroupinterna
- **Clinical Kinesiology** by Signe. Brunnstrom; ISBN: 0803613016; http://www.amazon.com/exec/obidos/ASIN/0803613016/icongroupinterna
- **Clinical Kinesiology for Occup** by Spaulding; ISBN: 0766835014; http://www.amazon.com/exec/obidos/ASIN/0766835014/icongroupinterna
- **Clinical Kinesiology for Physical Therapist Assistants** by Lynn S. Lippert; ISBN: 080360453X; http://www.amazon.com/exec/obidos/ASIN/080360453X/icongroupinterna
- **Concepts in Kinesiology**; ISBN: 0721643191; http://www.amazon.com/exec/obidos/ASIN/0721643191/icongroupinterna
- **Concepts in Kinesiology** by Richard Groves; ISBN: 0030623723; http://www.amazon.com/exec/obidos/ASIN/0030623723/icongroupinterna
- **Contemporary Kinesiology** by John M. Charles; ISBN: 158874129X; http://www.amazon.com/exec/obidos/ASIN/158874129X/icongroupinterna
- **Dance Kinesiology** by Sally Sevey Fitt; ISBN: 0028645073; http://www.amazon.com/exec/obidos/ASIN/0028645073/icongroupinterna
- **Dental Kinesiology** by George A. Eversaul; ISBN: 0960197818; http://www.amazon.com/exec/obidos/ASIN/0960197818/icongroupinterna
- **Educational Kinesiology In-Depth: Advanced Workshop** by Paul Dennison; ISBN: 9990905983; http://www.amazon.com/exec/obidos/ASIN/9990905983/icongroupinterna
- **Educational Kinesiology In-Depth: The Seven Dimensions of Intelligence** by Paul E. Dennison (Author), Gail E. Dennison (Author); ISBN: 0942143086; http://www.amazon.com/exec/obidos/ASIN/0942143086/icongroupinterna

- **Electromyographical Kinesiology: Proceedings of the 8th Congress of the International Society of Electrophysiological Kinesiology, Held in Baltimore** by Paul A. Anderson, et al; ISBN: 0444812024; http://www.amazon.com/exec/obidos/ASIN/0444812024/icongroupinterna
- **Electrophysiological Kinesiology: Proceedings (International Congress Series No 804)** by Willemien Wallinga, et al; ISBN: 0444810323; http://www.amazon.com/exec/obidos/ASIN/0444810323/icongroupinterna
- **Electrophysiological Kinesiology: Proceedings of the Isek'92 Congress, Florence, June 29-July 2, 1992 (Studies in Health Technology and Informatics,)** by A. Pedotti (Editor), International Society Of Electrophysiolo; ISBN: 9051990952; http://www.amazon.com/exec/obidos/ASIN/9051990952/icongroupinterna
- **Essentials of Kinesiology: A Laboratory Manual** by Dale W. Spence; ISBN: 0812104927; http://www.amazon.com/exec/obidos/ASIN/0812104927/icongroupinterna
- **Explosive Golf: Using the Science of Kinesiology to Improve Your Swing** by Michael, Ph.D. Yessis; ISBN: 1570282234; http://www.amazon.com/exec/obidos/ASIN/1570282234/icongroupinterna
- **Explosive Running : Using the Science of Kinesiology to Improve Your Performance** by Michael, Ph.D. Yessis, Michael Yessis PhD; ISBN: 0809298996; http://www.amazon.com/exec/obidos/ASIN/0809298996/icongroupinterna
- **Health Kinesiology** by Jane Ann Thurnell-Read; ISBN: 0954243900; http://www.amazon.com/exec/obidos/ASIN/0954243900/icongroupinterna
- **Hypno Kinesiology: A Holistic Approach to Healing** by Carl Carpenter; ISBN: 8120724909; http://www.amazon.com/exec/obidos/ASIN/8120724909/icongroupinterna
- **IM TF T9 KINESIOLOGY** by LUTTGENS; ISBN: 0697295230; http://www.amazon.com/exec/obidos/ASIN/0697295230/icongroupinterna
- **Introduction to Kinesiology** by Shirl J. Hoffman (Editor); ISBN: 0736033696; http://www.amazon.com/exec/obidos/ASIN/0736033696/icongroupinterna
- **Introduction to Kinesiology: Studying Physical Activity** by Shirl J. Hoffman (Editor), Janet C. Harris (Editor); ISBN: 0873226763; http://www.amazon.com/exec/obidos/ASIN/0873226763/icongroupinterna
- **Kinematic MRI of the Joints: Functional Anatomy, Kinesiology, and Clinical Applications** by Frank G. Shellock (Editor), Christopher M. Powers (Editor); ISBN: 0849308070; http://www.amazon.com/exec/obidos/ASIN/0849308070/icongroupinterna
- **Kinesiology** by Gene A. Logan; ISBN: 0697071073; http://www.amazon.com/exec/obidos/ASIN/0697071073/icongroupinterna
- **Kinesiology** by John Miller Cooper; ISBN: 0801610400; http://www.amazon.com/exec/obidos/ASIN/0801610400/icongroupinterna
- **Kinesiology** by Marilyn M. Hinson, Marilin M. Hinson; ISBN: 0697071731; http://www.amazon.com/exec/obidos/ASIN/0697071731/icongroupinterna
- **Kinesiology**; ISBN: 0697071413; http://www.amazon.com/exec/obidos/ASIN/0697071413/icongroupinterna
- **Kinesiology** by Pamela Sue Robinson; ISBN: 0801641446; http://www.amazon.com/exec/obidos/ASIN/0801641446/icongroupinterna

- **Kinesiology** by Metcalf; ISBN: 0801679206; http://www.amazon.com/exec/obidos/ASIN/0801679206/icongroupinterna
- **Kinesiology (Basic Stuff, Series 1, Vol 2)** by V. Dianne Ulibarri; ISBN: 0883143585; http://www.amazon.com/exec/obidos/ASIN/0883143585/icongroupinterna
- **Kinesiology (Health Essentials)** by Ann Holding; ISBN: 184333075X; http://www.amazon.com/exec/obidos/ASIN/184333075X/icongroupinterna
- **Kinesiology and Anatomy: Study Cards** by Barbara E. Gench, Marilyn Hinson; ISBN: 0945483864; http://www.amazon.com/exec/obidos/ASIN/0945483864/icongroupinterna
- **Kinesiology and Applied Anatomy: The Science of Human Movement** by Philip J. Rasch; ISBN: 081211132X; http://www.amazon.com/exec/obidos/ASIN/081211132X/icongroupinterna
- **Kinesiology and Injury Prevention for the Dancer** by Karen Sue Clippenger; ISBN: 0880115319; http://www.amazon.com/exec/obidos/ASIN/0880115319/icongroupinterna
- **Kinesiology and Medicine for Dance**; ISBN: 999360349X; http://www.amazon.com/exec/obidos/ASIN/999360349X/icongroupinterna
- **Kinesiology Flashcards** by Lynn S. Lippert, et al; ISBN: 080360386X; http://www.amazon.com/exec/obidos/ASIN/080360386X/icongroupinterna
- **Kinesiology Laboratory Manual** by Jennifer M. Bridges, Randall Jensen; ISBN: 0875639119; http://www.amazon.com/exec/obidos/ASIN/0875639119/icongroupinterna
- **Kinesiology Laboratory Manual for Physical Therapist Assistants** by Mary Alice Duesterhaus Minor, et al; ISBN: 0803602030; http://www.amazon.com/exec/obidos/ASIN/0803602030/icongroupinterna
- **Kinesiology Movement in the Contact Activities IM** by David Paul Greene PhD MS OTR; ISBN: 1556644779; http://www.amazon.com/exec/obidos/ASIN/1556644779/icongroupinterna
- **Kinesiology of Exercise** by Michael Yessis; ISBN: 0940279363; http://www.amazon.com/exec/obidos/ASIN/0940279363/icongroupinterna
- **Kinesiology of the Human Body Under Normal & Pathological Conditions** by Arthur Steindler; ISBN: 0398064423; http://www.amazon.com/exec/obidos/ASIN/0398064423/icongroupinterna
- **Kinesiology of the Musculoskeletal System** by Donald A. Neumann; ISBN: 0815163495; http://www.amazon.com/exec/obidos/ASIN/0815163495/icongroupinterna
- **Kinesiology of Weight Lifting** by B. H. Massey; ISBN: 0697072010; http://www.amazon.com/exec/obidos/ASIN/0697072010/icongroupinterna
- **Kinesiology with PowerWeb: Health and Human Performance** by Michael G. Wade, John A. W. Baker; ISBN: 0072506245; http://www.amazon.com/exec/obidos/ASIN/0072506245/icongroupinterna
- **Kinesiology Workbook** by Jan F. Perry, et al; ISBN: 0803600461; http://www.amazon.com/exec/obidos/ASIN/0803600461/icongroupinterna

- **Kinesiology Workbook and Laboratory Manual** by Ruth W. Harris; ISBN: 0395206685; http://www.amazon.com/exec/obidos/ASIN/0395206685/icongroupinterna
- **Kinesiology, the Science of Movement** by John Piscopo; ISBN: 0023956305; http://www.amazon.com/exec/obidos/ASIN/0023956305/icongroupinterna
- **Kinesiology: Application to Pathological Motion** by Gary L. Soderberg; ISBN: 0683078518; http://www.amazon.com/exec/obidos/ASIN/0683078518/icongroupinterna
- **Kinesiology: Application to Pathological Motion** by L. Gary Soderberg; ISBN: 0683078577; http://www.amazon.com/exec/obidos/ASIN/0683078577/icongroupinterna
- **Kinesiology: Movement in the Context of Activity** by David Paul, Ph.D. Greene, Susan L. Roberts; ISBN: 1556644167; http://www.amazon.com/exec/obidos/ASIN/1556644167/icongroupinterna
- **Kinesiology: Muscle Testing and Energy Balancing for Health and Well-Being (The Health Essentials Series)** by Ann Holdway, Anne Holdway; ISBN: 1862040672; http://www.amazon.com/exec/obidos/ASIN/1862040672/icongroupinterna
- **Kinesiology: Scientific Basis of Human Motion** by Kathryn Luttgens; ISBN: 0697246558; http://www.amazon.com/exec/obidos/ASIN/0697246558/icongroupinterna
- **Kinesiology: Scientific Basis of Human Motion** by Katharine F. Wells; ISBN: 0721692184; http://www.amazon.com/exec/obidos/ASIN/0721692184/icongroupinterna
- **Kinesiology: Scientific Basis of Human Motion with Dynamic Human 2.0 and PowerWeb: Health and Human Performance** by Kathryn Luttgens, Nancy Hamilton; ISBN: 0072489103; http://www.amazon.com/exec/obidos/ASIN/0072489103/icongroupinterna
- **Kinesiology: The Mechanics and Pathomechanics of Human Movement** by Carol A., Ph.D. Oatis; ISBN: 0781719828; http://www.amazon.com/exec/obidos/ASIN/0781719828/icongroupinterna
- **Kinesiology; fundamentals of motion description** by David L. Kelley; ISBN: 0135162602; http://www.amazon.com/exec/obidos/ASIN/0135162602/icongroupinterna
- **Kinesiology; the scientific basis of human motion** by Katharine F. Wells; ISBN: 0721692176; http://www.amazon.com/exec/obidos/ASIN/0721692176/icongroupinterna
- **Lehrbuch der Applied Kinesiology (AK) in der naturheilkundlichen Praxis** by Wolfgang Gerz (Author); ISBN: 3000006168; http://www.amazon.com/exec/obidos/ASIN/3000006168/icongroupinterna
- **Manual of Structural Kinesiology with Dynamic Human 2.0** by Clem W. Thompson, et al; ISBN: 0072408421; http://www.amazon.com/exec/obidos/ASIN/0072408421/icongroupinterna
- **Mechanical Kinesiology** by Jerry N. Barham; ISBN: 0801604761; http://www.amazon.com/exec/obidos/ASIN/0801604761/icongroupinterna

- **Muscles and Movements: A Basis for Human Kinesiology** by Michael Aloysius, MacConaill; ISBN: 068305306X;
http://www.amazon.com/exec/obidos/ASIN/068305306X/icongroupinterna
- **Muscles, Nerves and Movement: Kinesiology in Daily Living** by Barbara Tyldesley, June I. Grieve (Contributor); ISBN: 0632040963;
http://www.amazon.com/exec/obidos/ASIN/0632040963/icongroupinterna
- **Musculoskeletal Function: An Anatomy and Kinesiology Laboratory Manual** by Dortha Esch, et al; ISBN: 0816607168;
http://www.amazon.com/exec/obidos/ASIN/0816607168/icongroupinterna
- **Neuromechanical Basis of Kinesiology**; ISBN: 0873221796;
http://www.amazon.com/exec/obidos/ASIN/0873221796/icongroupinterna
- **Neuromechanical Basis of Kinesiology** by Roger M., Phd Enoka; ISBN: 0873226658;
http://www.amazon.com/exec/obidos/ASIN/0873226658/icongroupinterna
- **New concepts of the motor unit; neuromuscular disorders; electromyographic kinesiology** by John E. Desmedt; ISBN: 3805514514;
http://www.amazon.com/exec/obidos/ASIN/3805514514/icongroupinterna
- **Partners in Movement: A Family-Centered Approach to Pediatric Kinesiology** by Vickie Meade; ISBN: 0761648003;
http://www.amazon.com/exec/obidos/ASIN/0761648003/icongroupinterna
- **Physical Education and Kinesiology in North America** by Earle F. Zeigler; ISBN: 0875634958;
http://www.amazon.com/exec/obidos/ASIN/0875634958/icongroupinterna
- **Physical Therapy & Massage for the Horse: A Comprehensive Approach to Equine Kinesiology** by Jean-Marie Denoix, et al; ISBN: 1570760217;
http://www.amazon.com/exec/obidos/ASIN/1570760217/icongroupinterna
- **Practical Kinesiology for the Physical Therapist Assistant: Laboratory Manual** by Jeff G. Konin (Editor), Ira A. Grunther (Illustrator); ISBN: 1556424191;
http://www.amazon.com/exec/obidos/ASIN/1556424191/icongroupinterna
- **Precision Healing with Neuro-Kinesiology & Herbal Medicine** by Louis J. Marx; ISBN: 1552374610;
http://www.amazon.com/exec/obidos/ASIN/1552374610/icongroupinterna
- **Principles of Kinesiology** by Maggie LA Tourelle, Anthea Courtenay (Contributor); ISBN: 072253454X;
http://www.amazon.com/exec/obidos/ASIN/072253454X/icongroupinterna
- **Principles of Mechanical Kinesiology** by Linus J. Dowell; ISBN: 0896411745;
http://www.amazon.com/exec/obidos/ASIN/0896411745/icongroupinterna
- **Principles of Mechanical Kinesiology**; ISBN: 0896411338;
http://www.amazon.com/exec/obidos/ASIN/0896411338/icongroupinterna
- **Psychokinesiology** by Alexander S. Holub, Evelyn B. Michaels; ISBN: 1893157067;
http://www.amazon.com/exec/obidos/ASIN/1893157067/icongroupinterna
- **Psychological Kinesiology: Changing the Body's Beliefs** by William F. Whisenant; ISBN: 1880790556;
http://www.amazon.com/exec/obidos/ASIN/1880790556/icongroupinterna
- **Social Science and Kinesiology** by G. Roberts; ISBN: 0536596697;
http://www.amazon.com/exec/obidos/ASIN/0536596697/icongroupinterna

- **Social Science and Kinesiology** by Greendorfer; ISBN: 0536572232; http://www.amazon.com/exec/obidos/ASIN/0536572232/icongroupinterna
- **Special Techniques of Applied Kinesiology** by Clifford S Garner; ISBN: 0961280808; http://www.amazon.com/exec/obidos/ASIN/0961280808/icongroupinterna
- **Statistics in Kinesiology** by William J. Vincent; ISBN: 0736001484; http://www.amazon.com/exec/obidos/ASIN/0736001484/icongroupinterna
- **The Complete Illustrated Guide to Kinesiology: A Practical Approach to Muscle Testing and Energy Balancing** by Ann Holdway; ISBN: 1862047057; http://www.amazon.com/exec/obidos/ASIN/1862047057/icongroupinterna
- **The Ultimate Study Guide for the National Certification Examination for Therapeutic Massage and Bodywork: Key Review Questions and Answers (Topics: Human Anatomy, Physiology, and Kinesiology) Volume 1** by Patrick Leonardi; ISBN: 0971999643; http://www.amazon.com/exec/obidos/ASIN/0971999643/icongroupinterna
- **Thorsons Introductory Guide to Kinesiology** by Maggie LA Tourelle, Anthea Courtenay (Contributor); ISBN: 0722526997; http://www.amazon.com/exec/obidos/ASIN/0722526997/icongroupinterna
- **Your Body Can Talk: How to Use Simple Muscle Testing to Learn What Your Body Knows and Needs: The Art and Application of Clinical Kinesiology** by Carol Lehr (Contributor), Susan L. Levy; ISBN: 0934252688; http://www.amazon.com/exec/obidos/ASIN/0934252688/icongroupinterna

Chapters on Kinesiology

In order to find chapters that specifically relate to kinesiology, an excellent source of abstracts is the Combined Health Information Database. You will need to limit your search to book chapters and kinesiology using the "Detailed Search" option. Go to the following hyperlink: **http://chid.nih.gov/detail/detail.html**. To find book chapters, use the drop boxes at the bottom of the search page where "You may refine your search by." Select the dates and language you prefer, and the format option "Book Chapter." Type "kinesiology" (or synonyms) into the "For these words:" box.

APPENDICES

APPENDIX A. PHYSICIAN RESOURCES

Overview

In this chapter, we focus on databases and Internet-based guidelines and information resources created or written for a professional audience.

NIH Guidelines

Commonly referred to as "clinical" or "professional" guidelines, the National Institutes of Health publish physician guidelines for the most common diseases. Publications are available at the following by relevant Institute[6]:

- Office of the Director (OD); guidelines consolidated across agencies available at **http://www.nih.gov/health/consumer/conkey.htm**
- National Institute of General Medical Sciences (NIGMS); fact sheets available at **http://www.nigms.nih.gov/news/facts/**
- National Library of Medicine (NLM); extensive encyclopedia (A.D.A.M., Inc.) with guidelines: **http://www.nlm.nih.gov/medlineplus/healthtopics.html**
- National Cancer Institute (NCI); guidelines available at **http://www.cancer.gov/cancerinfo/list.aspx?viewid=5f35036e-5497-4d86-8c2c-714a9f7c8d25**
- National Eye Institute (NEI); guidelines available at **http://www.nei.nih.gov/order/index.htm**
- National Heart, Lung, and Blood Institute (NHLBI); guidelines available at **http://www.nhlbi.nih.gov/guidelines/index.htm**
- National Human Genome Research Institute (NHGRI); research available at **http://www.genome.gov/page.cfm?pageID=10000375**
- National Institute on Aging (NIA); guidelines available at **http://www.nia.nih.gov/health/**

[6] These publications are typically written by one or more of the various NIH Institutes.

- National Institute on Alcohol Abuse and Alcoholism (NIAAA); guidelines available at **http://www.niaaa.nih.gov/publications/publications.htm**
- National Institute of Allergy and Infectious Diseases (NIAID); guidelines available at **http://www.niaid.nih.gov/publications/**
- National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS); fact sheets and guidelines available at **http://www.niams.nih.gov/hi/index.htm**
- National Institute of Child Health and Human Development (NICHD); guidelines available at **http://www.nichd.nih.gov/publications/pubskey.cfm**
- National Institute on Deafness and Other Communication Disorders (NIDCD); fact sheets and guidelines at **http://www.nidcd.nih.gov/health/**
- National Institute of Dental and Craniofacial Research (NIDCR); guidelines available at **http://www.nidr.nih.gov/health/**
- National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK); guidelines available at **http://www.niddk.nih.gov/health/health.htm**
- National Institute on Drug Abuse (NIDA); guidelines available at **http://www.nida.nih.gov/DrugAbuse.html**
- National Institute of Environmental Health Sciences (NIEHS); environmental health information available at **http://www.niehs.nih.gov/external/facts.htm**
- National Institute of Mental Health (NIMH); guidelines available at **http://www.nimh.nih.gov/practitioners/index.cfm**
- National Institute of Neurological Disorders and Stroke (NINDS); neurological disorder information pages available at **http://www.ninds.nih.gov/health_and_medical/disorder_index.htm**
- National Institute of Nursing Research (NINR); publications on selected illnesses at **http://www.nih.gov/ninr/news-info/publications.html**
- National Institute of Biomedical Imaging and Bioengineering; general information at **http://grants.nih.gov/grants/becon/becon_info.htm**
- Center for Information Technology (CIT); referrals to other agencies based on keyword searches available at **http://kb.nih.gov/www_query_main.asp**
- National Center for Complementary and Alternative Medicine (NCCAM); health information available at **http://nccam.nih.gov/health/**
- National Center for Research Resources (NCRR); various information directories available at **http://www.ncrr.nih.gov/publications.asp**
- Office of Rare Diseases; various fact sheets available at **http://rarediseases.info.nih.gov/html/resources/rep_pubs.html**
- Centers for Disease Control and Prevention; various fact sheets on infectious diseases available at **http://www.cdc.gov/publications.htm**

NIH Databases

In addition to the various Institutes of Health that publish professional guidelines, the NIH has designed a number of databases for professionals.[7] Physician-oriented resources provide a wide variety of information related to the biomedical and health sciences, both past and present. The format of these resources varies. Searchable databases, bibliographic citations, full-text articles (when available), archival collections, and images are all available. The following are referenced by the National Library of Medicine:[8]

- **Bioethics:** Access to published literature on the ethical, legal, and public policy issues surrounding healthcare and biomedical research. This information is provided in conjunction with the Kennedy Institute of Ethics located at Georgetown University, Washington, D.C.: **http://www.nlm.nih.gov/databases/databases_bioethics.html**
- **HIV/AIDS Resources:** Describes various links and databases dedicated to HIV/AIDS research: **http://www.nlm.nih.gov/pubs/factsheets/aidsinfs.html**
- **NLM Online Exhibitions:** Describes "Exhibitions in the History of Medicine": **http://www.nlm.nih.gov/exhibition/exhibition.html**. Additional resources for historical scholarship in medicine: **http://www.nlm.nih.gov/hmd/hmd.html**
- **Biotechnology Information:** Access to public databases. The National Center for Biotechnology Information conducts research in computational biology, develops software tools for analyzing genome data, and disseminates biomedical information for the better understanding of molecular processes affecting human health and disease: **http://www.ncbi.nlm.nih.gov/**
- **Population Information:** The National Library of Medicine provides access to worldwide coverage of population, family planning, and related health issues, including family planning technology and programs, fertility, and population law and policy: **http://www.nlm.nih.gov/databases/databases_population.html**
- **Cancer Information:** Access to cancer-oriented databases: **http://www.nlm.nih.gov/databases/databases_cancer.html**
- **Profiles in Science:** Offering the archival collections of prominent twentieth-century biomedical scientists to the public through modern digital technology: **http://www.profiles.nlm.nih.gov/**
- **Chemical Information:** Provides links to various chemical databases and references: **http://sis.nlm.nih.gov/Chem/ChemMain.html**
- **Clinical Alerts:** Reports the release of findings from the NIH-funded clinical trials where such release could significantly affect morbidity and mortality: **http://www.nlm.nih.gov/databases/alerts/clinical_alerts.html**
- **Space Life Sciences:** Provides links and information to space-based research (including NASA): **http://www.nlm.nih.gov/databases/databases_space.html**
- **MEDLINE:** Bibliographic database covering the fields of medicine, nursing, dentistry, veterinary medicine, the healthcare system, and the pre-clinical sciences: **http://www.nlm.nih.gov/databases/databases_medline.html**

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[7] Remember, for the general public, the National Library of Medicine recommends the databases referenced in MEDLINE*plus* (**http://medlineplus.gov/** or **http://www.nlm.nih.gov/medlineplus/databases.html**).

[8] See **http://www.nlm.nih.gov/databases/databases.html**.

- **Toxicology and Environmental Health Information (TOXNET):** Databases covering toxicology and environmental health: **http://sis.nlm.nih.gov/Tox/ToxMain.html**
- **Visible Human Interface:** Anatomically detailed, three-dimensional representations of normal male and female human bodies: **http://www.nlm.nih.gov/research/visible/visible_human.html**

The NLM Gateway[9]

The NLM (National Library of Medicine) Gateway is a Web-based system that lets users search simultaneously in multiple retrieval systems at the U.S. National Library of Medicine (NLM). It allows users of NLM services to initiate searches from one Web interface, providing one-stop searching for many of NLM's information resources or databases.[10] To use the NLM Gateway, simply go to the search site at **http://gateway.nlm.nih.gov/gw/Cmd**. Type "kinesiology" (or synonyms) into the search box and click "Search." The results will be presented in a tabular form, indicating the number of references in each database category.

Results Summary

Category	Items Found
Journal Articles	4152
Books / Periodicals / Audio Visual	203
Consumer Health	7
Meeting Abstracts	1
Other Collections	0
Total	4363

HSTAT[11]

HSTAT is a free, Web-based resource that provides access to full-text documents used in healthcare decision-making.[12] These documents include clinical practice guidelines, quick-reference guides for clinicians, consumer health brochures, evidence reports and technology assessments from the Agency for Healthcare Research and Quality (AHRQ), as well as AHRQ's Put Prevention Into Practice.[13] Simply search by "kinesiology" (or synonyms) at the following Web site: **http://text.nlm.nih.gov**.

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[9] Adapted from NLM: **http://gateway.nlm.nih.gov/gw/Cmd?Overview.x**.

[10] The NLM Gateway is currently being developed by the Lister Hill National Center for Biomedical Communications (LHNCBC) at the National Library of Medicine (NLM) of the National Institutes of Health (NIH).

[11] Adapted from HSTAT: **http://www.nlm.nih.gov/pubs/factsheets/hstat.html**.

[12] The HSTAT URL is **http://hstat.nlm.nih.gov/**.

[13] Other important documents in HSTAT include: the National Institutes of Health (NIH) Consensus Conference Reports and Technology Assessment Reports; the HIV/AIDS Treatment Information Service (ATIS) resource documents; the Substance Abuse and Mental Health Services Administration's Center for Substance Abuse Treatment (SAMHSA/CSAT) Treatment Improvement Protocols (TIP) and Center for Substance Abuse Prevention (SAMHSA/CSAP) Prevention Enhancement Protocols System (PEPS); the Public Health Service (PHS) Preventive Services Task Force's *Guide to Clinical Preventive Services*; the independent, nonfederal Task Force on Community Services' *Guide to Community Preventive Services*; and the Health Technology Advisory Committee (HTAC) of the Minnesota Health Care Commission (MHCC) health technology evaluations.

Coffee Break: Tutorials for Biologists[14]

Coffee Break is a general healthcare site that takes a scientific view of the news and covers recent breakthroughs in biology that may one day assist physicians in developing treatments. Here you will find a collection of short reports on recent biological discoveries. Each report incorporates interactive tutorials that demonstrate how bioinformatics tools are used as a part of the research process. Currently, all Coffee Breaks are written by NCBI staff.[15] Each report is about 400 words and is usually based on a discovery reported in one or more articles from recently published, peer-reviewed literature.[16] This site has new articles every few weeks, so it can be considered an online magazine of sorts. It is intended for general background information. You can access the Coffee Break Web site at the following hyperlink: **http://www.ncbi.nlm.nih.gov/Coffeebreak/**.

Other Commercial Databases

In addition to resources maintained by official agencies, other databases exist that are commercial ventures addressing medical professionals. Here are some examples that may interest you:

- **CliniWeb International:** Index and table of contents to selected clinical information on the Internet; see **http://www.ohsu.edu/cliniweb/**.
- **Medical World Search:** Searches full text from thousands of selected medical sites on the Internet; see **http://www.mwsearch.com/**.

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[14] Adapted from **http://www.ncbi.nlm.nih.gov/Coffeebreak/Archive/FAQ.html**.

[15] The figure that accompanies each article is frequently supplied by an expert external to NCBI, in which case the source of the figure is cited. The result is an interactive tutorial that tells a biological story.

[16] After a brief introduction that sets the work described into a broader context, the report focuses on how a molecular understanding can provide explanations of observed biology and lead to therapies for diseases. Each vignette is accompanied by a figure and hypertext links that lead to a series of pages that interactively show how NCBI tools and resources are used in the research process.

APPENDIX B. PATIENT RESOURCES

Overview

Official agencies, as well as federally funded institutions supported by national grants, frequently publish a variety of guidelines written with the patient in mind. These are typically called "Fact Sheets" or "Guidelines." They can take the form of a brochure, information kit, pamphlet, or flyer. Often they are only a few pages in length. Since new guidelines on kinesiology can appear at any moment and be published by a number of sources, the best approach to finding guidelines is to systematically scan the Internet-based services that post them.

Patient Guideline Sources

The remainder of this chapter directs you to sources which either publish or can help you find additional guidelines on topics related to kinesiology. Due to space limitations, these sources are listed in a concise manner. Do not hesitate to consult the following sources by either using the Internet hyperlink provided, or, in cases where the contact information is provided, contacting the publisher or author directly.

The National Institutes of Health

The NIH gateway to patients is located at **http://health.nih.gov/**. From this site, you can search across various sources and institutes, a number of which are summarized below.

Topic Pages: MEDLINEplus

The National Library of Medicine has created a vast and patient-oriented healthcare information portal called MEDLINEplus. Within this Internet-based system are "health topic pages" which list links to available materials relevant to kinesiology. To access this system, log on to **http://www.nlm.nih.gov/medlineplus/healthtopics.html**. From there you can either search using the alphabetical index or browse by broad topic areas. Recently, MEDLINEplus listed the following when searched for "kinesiology":

- Other guides

  Attention Deficit Disorder with Hyperactivity
  http://www.nlm.nih.gov/medlineplus/attentiondeficitdisorderwithhyperactivity.html

  Health Occupations
  http://www.nlm.nih.gov/medlineplus/healthoccupations.html

  Sports Injuries
  http://www.nlm.nih.gov/medlineplus/sportsinjuries.html

You may also choose to use the search utility provided by MEDLINEplus at the following Web address: **http://www.nlm.nih.gov/medlineplus/**. Simply type a keyword into the search box and click "Search." This utility is similar to the NIH search utility, with the exception that it only includes materials that are linked within the MEDLINEplus system (mostly patient-oriented information). It also has the disadvantage of generating unstructured results. We recommend, therefore, that you use this method only if you have a very targeted search.

The NIH Search Utility

The NIH search utility allows you to search for documents on over 100 selected Web sites that comprise the NIH-WEB-SPACE. Each of these servers is "crawled" and indexed on an ongoing basis. Your search will produce a list of various documents, all of which will relate in some way to kinesiology. The drawbacks of this approach are that the information is not organized by theme and that the references are often a mix of information for professionals and patients. Nevertheless, a large number of the listed Web sites provide useful background information. We can only recommend this route, therefore, for relatively rare or specific disorders, or when using highly targeted searches. To use the NIH search utility, visit the following Web page: **http://search.nih.gov/index.html**.

Additional Web Sources

A number of Web sites are available to the public that often link to government sites. These can also point you in the direction of essential information. The following is a representative sample:

- AOL: **http://search.aol.com/cat.adp?id=168&layer=&from=subcats**
- Family Village: **http://www.familyvillage.wisc.edu/specific.htm**
- Google: **http://directory.google.com/Top/Health/Conditions_and_Diseases/**
- Med Help International: **http://www.medhelp.org/HealthTopics/A.html**
- Open Directory Project: **http://dmoz.org/Health/Conditions_and_Diseases/**
- Yahoo.com: **http://dir.yahoo.com/Health/Diseases_and_Conditions/**
- WebMD®Health: **http://my.webmd.com/health_topics**

Finding Associations

There are several Internet directories that provide lists of medical associations with information on or resources relating to kinesiology. By consulting all of associations listed in this chapter, you will have nearly exhausted all sources for patient associations concerned with kinesiology.

The National Health Information Center (NHIC)

The National Health Information Center (NHIC) offers a free referral service to help people find organizations that provide information about kinesiology. For more information, see the NHIC's Web site at **http://www.health.gov/NHIC/** or contact an information specialist by calling 1-800-336-4797.

Directory of Health Organizations

The Directory of Health Organizations, provided by the National Library of Medicine Specialized Information Services, is a comprehensive source of information on associations. The Directory of Health Organizations database can be accessed via the Internet at **http://www.sis.nlm.nih.gov/Dir/DirMain.html**. It is composed of two parts: DIRLINE and Health Hotlines.

The DIRLINE database comprises some 10,000 records of organizations, research centers, and government institutes and associations that primarily focus on health and biomedicine. To access DIRLINE directly, go to the following Web site: **http://dirline.nlm.nih.gov/**. Simply type in "kinesiology" (or a synonym), and you will receive information on all relevant organizations listed in the database.

Health Hotlines directs you to toll-free numbers to over 300 organizations. You can access this database directly at **http://www.sis.nlm.nih.gov/hotlines/**. On this page, you are given the option to search by keyword or by browsing the subject list. When you have received your search results, click on the name of the organization for its description and contact information.

The Combined Health Information Database

Another comprehensive source of information on healthcare associations is the Combined Health Information Database. Using the "Detailed Search" option, you will need to limit your search to "Organizations" and "kinesiology". Type the following hyperlink into your Web browser: **http://chid.nih.gov/detail/detail.html**. To find associations, use the drop boxes at the bottom of the search page where "You may refine your search by." For publication date, select "All Years." Then, select your preferred language and the format option "Organization Resource Sheet." Type "kinesiology" (or synonyms) into the "For these words:" box. You should check back periodically with this database since it is updated every three months.

The National Organization for Rare Disorders, Inc.

The National Organization for Rare Disorders, Inc. has prepared a Web site that provides, at no charge, lists of associations organized by health topic. You can access this database at the following Web site: **http://www.rarediseases.org/search/orgsearch.html**. Type "kinesiology" (or a synonym) into the search box, and click "Submit Query."

APPENDIX C. FINDING MEDICAL LIBRARIES

Overview

In this Appendix, we show you how to quickly find a medical library in your area.

Preparation

Your local public library and medical libraries have interlibrary loan programs with the National Library of Medicine (NLM), one of the largest medical collections in the world. According to the NLM, most of the literature in the general and historical collections of the National Library of Medicine is available on interlibrary loan to any library. If you would like to access NLM medical literature, then visit a library in your area that can request the publications for you.[17]

Finding a Local Medical Library

The quickest method to locate medical libraries is to use the Internet-based directory published by the National Network of Libraries of Medicine (NN/LM). This network includes 4626 members and affiliates that provide many services to librarians, health professionals, and the public. To find a library in your area, simply visit **http://nnlm.gov/members/adv.html** or call 1-800-338-7657.

Medical Libraries in the U.S. and Canada

In addition to the NN/LM, the National Library of Medicine (NLM) lists a number of libraries with reference facilities that are open to the public. The following is the NLM's list and includes hyperlinks to each library's Web site. These Web pages can provide information on hours of operation and other restrictions. The list below is a small sample of

[17] Adapted from the NLM: **http://www.nlm.nih.gov/psd/cas/interlibrary.html**.

libraries recommended by the National Library of Medicine (sorted alphabetically by name of the U.S. state or Canadian province where the library is located)[18]:

- **Alabama:** Health InfoNet of Jefferson County (Jefferson County Library Cooperative, Lister Hill Library of the Health Sciences), **http://www.uab.edu/infonet/**
- **Alabama:** Richard M. Scrushy Library (American Sports Medicine Institute)
- **Arizona:** Samaritan Regional Medical Center: The Learning Center (Samaritan Health System, Phoenix, Arizona), **http://www.samaritan.edu/library/bannerlibs.htm**
- **California:** Kris Kelly Health Information Center (St. Joseph Health System, Humboldt), **http://www.humboldt1.com/~kkhic/index.html**
- **California:** Community Health Library of Los Gatos, **http://www.healthlib.org/orgresources.html**
- **California:** Consumer Health Program and Services (CHIPS) (County of Los Angeles Public Library, Los Angeles County Harbor-UCLA Medical Center Library) - Carson, CA, **http://www.colapublib.org/services/chips.html**
- **California:** Gateway Health Library (Sutter Gould Medical Foundation)
- **California:** Health Library (Stanford University Medical Center), **http://www-med.stanford.edu/healthlibrary/**
- **California:** Patient Education Resource Center - Health Information and Resources (University of California, San Francisco), **http://sfghdean.ucsf.edu/barnett/PERC/default.asp**
- **California:** Redwood Health Library (Petaluma Health Care District), **http://www.phcd.org/rdwdlib.html**
- **California:** Los Gatos PlaneTree Health Library, **http://planetreesanjose.org/**
- **California:** Sutter Resource Library (Sutter Hospitals Foundation, Sacramento), **http://suttermedicalcenter.org/library/**
- **California:** Health Sciences Libraries (University of California, Davis), **http://www.lib.ucdavis.edu/healthsci/**
- **California:** ValleyCare Health Library & Ryan Comer Cancer Resource Center (ValleyCare Health System, Pleasanton), **http://gaelnet.stmarys-ca.edu/other.libs/gbal/east/vchl.html**
- **California:** Washington Community Health Resource Library (Fremont), **http://www.healthlibrary.org/**
- **Colorado:** William V. Gervasini Memorial Library (Exempla Healthcare), **http://www.saintjosephdenver.org/yourhealth/libraries/**
- **Connecticut:** Hartford Hospital Health Science Libraries (Hartford Hospital), **http://www.harthosp.org/library/**
- **Connecticut:** Healthnet: Connecticut Consumer Health Information Center (University of Connecticut Health Center, Lyman Maynard Stowe Library), **http://library.uchc.edu/departm/hnet/**

[18] Abstracted from **http://www.nlm.nih.gov/medlineplus/libraries.html**.

- **Connecticut:** Waterbury Hospital Health Center Library (Waterbury Hospital, Waterbury), **http://www.waterburyhospital.com/library/consumer.shtml**
- **Delaware:** Consumer Health Library (Christiana Care Health System, Eugene du Pont Preventive Medicine & Rehabilitation Institute, Wilmington), **http://www.christianacare.org/health_guide/health_guide_pmri_health_info.cfm**
- **Delaware:** Lewis B. Flinn Library (Delaware Academy of Medicine, Wilmington), **http://www.delamed.org/chls.html**
- **Georgia:** Family Resource Library (Medical College of Georgia, Augusta), **http://cmc.mcg.edu/kids_families/fam_resources/fam_res_lib/frl.htm**
- **Georgia:** Health Resource Center (Medical Center of Central Georgia, Macon), **http://www.mccg.org/hrc/hrchome.asp**
- **Hawaii:** Hawaii Medical Library: Consumer Health Information Service (Hawaii Medical Library, Honolulu), **http://hml.org/CHIS/**
- **Idaho:** DeArmond Consumer Health Library (Kootenai Medical Center, Coeur d'Alene), **http://www.nicon.org/DeArmond/index.htm**
- **Illinois:** Health Learning Center of Northwestern Memorial Hospital (Chicago), **http://www.nmh.org/health_info/hlc.html**
- **Illinois:** Medical Library (OSF Saint Francis Medical Center, Peoria), **http://www.osfsaintfrancis.org/general/library/**
- **Kentucky:** Medical Library - Services for Patients, Families, Students & the Public (Central Baptist Hospital, Lexington), **http://www.centralbap.com/education/community/library.cfm**
- **Kentucky:** University of Kentucky - Health Information Library (Chandler Medical Center, Lexington), **http://www.mc.uky.edu/PatientEd/**
- **Louisiana:** Alton Ochsner Medical Foundation Library (Alton Ochsner Medical Foundation, New Orleans), **http://www.ochsner.org/library/**
- **Louisiana:** Louisiana State University Health Sciences Center Medical Library-Shreveport, **http://lib-sh.lsuhsc.edu/**
- **Maine:** Franklin Memorial Hospital Medical Library (Franklin Memorial Hospital, Farmington), **http://www.fchn.org/fmh/lib.htm**
- **Maine:** Gerrish-True Health Sciences Library (Central Maine Medical Center, Lewiston), **http://www.cmmc.org/library/library.html**
- **Maine:** Hadley Parrot Health Science Library (Eastern Maine Healthcare, Bangor), **http://www.emh.org/hll/hpl/guide.htm**
- **Maine:** Maine Medical Center Library (Maine Medical Center, Portland), **http://www.mmc.org/library/**
- **Maine:** Parkview Hospital (Brunswick), **http://www.parkviewhospital.org/**
- **Maine:** Southern Maine Medical Center Health Sciences Library (Southern Maine Medical Center, Biddeford), **http://www.smmc.org/services/service.php3?choice=10**
- **Maine:** Stephens Memorial Hospital's Health Information Library (Western Maine Health, Norway), **http://www.wmhcc.org/Library/**

- **Manitoba, Canada:** Consumer & Patient Health Information Service (University of Manitoba Libraries), **http://www.umanitoba.ca/libraries/units/health/reference/chis.html**
- **Manitoba, Canada:** J.W. Crane Memorial Library (Deer Lodge Centre, Winnipeg), **http://www.deerlodge.mb.ca/crane_library/about.asp**
- **Maryland:** Health Information Center at the Wheaton Regional Library (Montgomery County, Dept. of Public Libraries, Wheaton Regional Library), **http://www.mont.lib.md.us/healthinfo/hic.asp**
- **Massachusetts:** Baystate Medical Center Library (Baystate Health System), **http://www.baystatehealth.com/1024/**
- **Massachusetts:** Boston University Medical Center Alumni Medical Library (Boston University Medical Center), **http://med-libwww.bu.edu/library/lib.html**
- **Massachusetts:** Lowell General Hospital Health Sciences Library (Lowell General Hospital, Lowell), **http://www.lowellgeneral.org/library/HomePageLinks/WWW.htm**
- **Massachusetts:** Paul E. Woodard Health Sciences Library (New England Baptist Hospital, Boston), **http://www.nebh.org/health_lib.asp**
- **Massachusetts:** St. Luke's Hospital Health Sciences Library (St. Luke's Hospital, Southcoast Health System, New Bedford), **http://www.southcoast.org/library/**
- **Massachusetts:** Treadwell Library Consumer Health Reference Center (Massachusetts General Hospital), **http://www.mgh.harvard.edu/library/chrcindex.html**
- **Massachusetts:** UMass HealthNet (University of Massachusetts Medical School, Worchester), **http://healthnet.umassmed.edu/**
- **Michigan:** Botsford General Hospital Library - Consumer Health (Botsford General Hospital, Library & Internet Services), **http://www.botsfordlibrary.org/consumer.htm**
- **Michigan:** Helen DeRoy Medical Library (Providence Hospital and Medical Centers), **http://www.providence-hospital.org/library/**
- **Michigan:** Marquette General Hospital - Consumer Health Library (Marquette General Hospital, Health Information Center), **http://www.mgh.org/center.html**
- **Michigan:** Patient Education Resouce Center - University of Michigan Cancer Center (University of Michigan Comprehensive Cancer Center, Ann Arbor), **http://www.cancer.med.umich.edu/learn/leares.htm**
- **Michigan:** Sladen Library & Center for Health Information Resources - Consumer Health Information (Detroit), **http://www.henryford.com/body.cfm?id=39330**
- **Montana:** Center for Health Information (St. Patrick Hospital and Health Sciences Center, Missoula)
- **National:** Consumer Health Library Directory (Medical Library Association, Consumer and Patient Health Information Section), **http://caphis.mlanet.org/directory/index.html**
- **National:** National Network of Libraries of Medicine (National Library of Medicine) - provides library services for health professionals in the United States who do not have access to a medical library, **http://nnlm.gov/**
- **National:** NN/LM List of Libraries Serving the Public (National Network of Libraries of Medicine), **http://nnlm.gov/members/**

- **Nevada:** Health Science Library, West Charleston Library (Las Vegas-Clark County Library District, Las Vegas), **http://www.lvccld.org/special_collections/medical/index.htm**
- **New Hampshire:** Dartmouth Biomedical Libraries (Dartmouth College Library, Hanover), **http://www.dartmouth.edu/~biomed/resources.htmld/conshealth.htmld/**
- **New Jersey:** Consumer Health Library (Rahway Hospital, Rahway), **http://www.rahwayhospital.com/library.htm**
- **New Jersey:** Dr. Walter Phillips Health Sciences Library (Englewood Hospital and Medical Center, Englewood), **http://www.englewoodhospital.com/links/index.htm**
- **New Jersey:** Meland Foundation (Englewood Hospital and Medical Center, Englewood), **http://www.geocities.com/ResearchTriangle/9360/**
- **New York:** Choices in Health Information (New York Public Library) - NLM Consumer Pilot Project participant, **http://www.nypl.org/branch/health/links.html**
- **New York:** Health Information Center (Upstate Medical University, State University of New York, Syracuse), **http://www.upstate.edu/library/hic/**
- **New York:** Health Sciences Library (Long Island Jewish Medical Center, New Hyde Park), **http://www.lij.edu/library/library.html**
- **New York:** ViaHealth Medical Library (Rochester General Hospital), **http://www.nyam.org/library/**
- **Ohio:** Consumer Health Library (Akron General Medical Center, Medical & Consumer Health Library), **http://www.akrongeneral.org/hwlibrary.htm**
- **Oklahoma:** The Health Information Center at Saint Francis Hospital (Saint Francis Health System, Tulsa), **http://www.sfh-tulsa.com/services/healthinfo.asp**
- **Oregon:** Planetree Health Resource Center (Mid-Columbia Medical Center, The Dalles), **http://www.mcmc.net/phrc/**
- **Pennsylvania:** Community Health Information Library (Milton S. Hershey Medical Center, Hershey), **http://www.hmc.psu.edu/commhealth/**
- **Pennsylvania:** Community Health Resource Library (Geisinger Medical Center, Danville), **http://www.geisinger.edu/education/commlib.shtml**
- **Pennsylvania:** HealthInfo Library (Moses Taylor Hospital, Scranton), **http://www.mth.org/healthwellness.html**
- **Pennsylvania:** Hopwood Library (University of Pittsburgh, Health Sciences Library System, Pittsburgh), **http://www.hsls.pitt.edu/guides/chi/hopwood/index_html**
- **Pennsylvania:** Koop Community Health Information Center (College of Physicians of Philadelphia), **http://www.collphyphil.org/kooppg1.shtml**
- **Pennsylvania:** Learning Resources Center - Medical Library (Susquehanna Health System, Williamsport), **http://www.shscares.org/services/lrc/index.asp**
- **Pennsylvania:** Medical Library (UPMC Health System, Pittsburgh), **http://www.upmc.edu/passavant/library.htm**
- **Quebec, Canada:** Medical Library (Montreal General Hospital), **http://www.mghlib.mcgill.ca/**

- **South Dakota:** Rapid City Regional Hospital Medical Library (Rapid City Regional Hospital), **http://www.rcrh.org/Services/Library/Default.asp**
- **Texas:** Houston HealthWays (Houston Academy of Medicine-Texas Medical Center Library), **http://hhw.library.tmc.edu/**
- **Washington:** Community Health Library (Kittitas Valley Community Hospital), **http://www.kvch.com/**
- **Washington:** Southwest Washington Medical Center Library (Southwest Washington Medical Center, Vancouver), **http://www.swmedicalcenter.com/body.cfm?id=72**

ONLINE GLOSSARIES

The Internet provides access to a number of free-to-use medical dictionaries. The National Library of Medicine has compiled the following list of online dictionaries:

- ADAM Medical Encyclopedia (A.D.A.M., Inc.), comprehensive medical reference: **http://www.nlm.nih.gov/medlineplus/encyclopedia.html**
- MedicineNet.com Medical Dictionary (MedicineNet, Inc.): **http://www.medterms.com/Script/Main/hp.asp**
- Merriam-Webster Medical Dictionary (Inteli-Health, Inc.): **http://www.intelihealth.com/IH/**
- Multilingual Glossary of Technical and Popular Medical Terms in Eight European Languages (European Commission) - Danish, Dutch, English, French, German, Italian, Portuguese, and Spanish: **http://allserv.rug.ac.be/~rvdstich/eugloss/welcome.html**
- On-line Medical Dictionary (CancerWEB): **http://cancerweb.ncl.ac.uk/omd/**
- Rare Diseases Terms (Office of Rare Diseases): **http://ord.aspensys.com/asp/diseases/diseases.asp**
- Technology Glossary (National Library of Medicine) - Health Care Technology: **http://www.nlm.nih.gov/nichsr/ta101/ta10108.htm**

Beyond these, MEDLINEplus contains a very patient-friendly encyclopedia covering every aspect of medicine (licensed from A.D.A.M., Inc.). The ADAM Medical Encyclopedia can be accessed at **http://www.nlm.nih.gov/medlineplus/encyclopedia.html**. ADAM is also available on commercial Web sites such as drkoop.com (**http://www.drkoop.com/**) and Web MD (**http://my.webmd.com/adam/asset/adam_disease_articles/a_to_z/a**).

Online Dictionary Directories

The following are additional online directories compiled by the National Library of Medicine, including a number of specialized medical dictionaries:

- Medical Dictionaries: Medical & Biological (World Health Organization): **http://www.who.int/hlt/virtuallibrary/English/diction.htm#Medical**
- MEL-Michigan Electronic Library List of Online Health and Medical Dictionaries (Michigan Electronic Library): **http://mel.lib.mi.us/health/health-dictionaries.html**
- Patient Education: Glossaries (DMOZ Open Directory Project): **http://dmoz.org/Health/Education/Patient_Education/Glossaries/**
- Web of Online Dictionaries (Bucknell University): **http://www.yourdictionary.com/diction5.html#medicine**

KINESIOLOGY DICTIONARY

The definitions below are derived from official public sources, including the National Institutes of Health [NIH] and the European Union [EU].

Abdominal: Having to do with the abdomen, which is the part of the body between the chest and the hips that contains the pancreas, stomach, intestines, liver, gallbladder, and other organs. [NIH]

Actin: Essential component of the cell skeleton. [NIH]

Activities of Daily Living: The performance of the basic activities of self care, such as dressing, ambulation, eating, etc., in rehabilitation. [NIH]

Adaptation: 1. The adjustment of an organism to its environment, or the process by which it enhances such fitness. 2. The normal ability of the eye to adjust itself to variations in the intensity of light; the adjustment to such variations. 3. The decline in the frequency of firing of a neuron, particularly of a receptor, under conditions of constant stimulation. 4. In dentistry, (a) the proper fitting of a denture, (b) the degree of proximity and interlocking of restorative material to a tooth preparation, (c) the exact adjustment of bands to teeth. 5. In microbiology, the adjustment of bacterial physiology to a new environment. [EU]

Adductor: A muscle that draws a part toward the median line. [NIH]

Adjustment: The dynamic process wherein the thoughts, feelings, behavior, and biophysiological mechanisms of the individual continually change to adjust to the environment. [NIH]

Adolescence: The period of life beginning with the appearance of secondary sex characteristics and terminating with the cessation of somatic growth. The years usually referred to as adolescence lie between 13 and 18 years of age. [NIH]

Aerobic: In biochemistry, reactions that need oxygen to happen or happen when oxygen is present. [NIH]

Aerobic Exercise: A type of physical activity that includes walking, jogging, running, and dancing. Aerobic training improves the efficiency of the aerobic energy-producing systems that can improve cardiorespiratory endurance. [NIH]

Afferent: Concerned with the transmission of neural impulse toward the central part of the nervous system. [NIH]

Air Pressure: The force per unit area that the air exerts on any surface in contact with it. Primarily used for articles pertaining to air pressure within a closed environment. [NIH]

Algorithms: A procedure consisting of a sequence of algebraic formulas and/or logical steps to calculate or determine a given task. [NIH]

Alternative medicine: Practices not generally recognized by the medical community as standard or conventional medical approaches and used instead of standard treatments. Alternative medicine includes the taking of dietary supplements, megadose vitamins, and herbal preparations; the drinking of special teas; and practices such as massage therapy, magnet therapy, spiritual healing, and meditation. [NIH]

Anaphylatoxins: The family of peptides C3a, C4a, C5a, and C5a des-arginine produced in the serum during complement activation. They produce smooth muscle contraction, mast cell histamine release, affect platelet aggregation, and act as mediators of the local inflammatory process. The order of anaphylatoxin activity from strongest to weakest is C5a,

C3a, C4a, and C5a des-arginine. The latter is the so-called "classical" anaphylatoxin but shows no spasmogenic activity though it contains some chemotactic ability. [NIH]

Anatomical: Pertaining to anatomy, or to the structure of the organism. [EU]

Ankle: That part of the lower limb directly above the foot. [NIH]

Ankle Joint: The joint that is formed by the inferior articular and malleolar articular surfaces of the tibia, the malleolar articular surface of the fibula, and the medial malleolar, lateral malleolar, and superior surfaces of the talus. [NIH]

Antibody: A type of protein made by certain white blood cells in response to a foreign substance (antigen). Each antibody can bind to only a specific antigen. The purpose of this binding is to help destroy the antigen. Antibodies can work in several ways, depending on the nature of the antigen. Some antibodies destroy antigens directly. Others make it easier for white blood cells to destroy the antigen. [NIH]

Antigen: Any substance which is capable, under appropriate conditions, of inducing a specific immune response and of reacting with the products of that response, that is, with specific antibody or specifically sensitized T-lymphocytes, or both. Antigens may be soluble substances, such as toxins and foreign proteins, or particulate, such as bacteria and tissue cells; however, only the portion of the protein or polysaccharide molecule known as the antigenic determinant (q.v.) combines with antibody or a specific receptor on a lymphocyte. Abbreviated Ag. [EU]

Antigen-Antibody Complex: The complex formed by the binding of antigen and antibody molecules. The deposition of large antigen-antibody complexes leading to tissue damage causes immune complex diseases. [NIH]

Anus: The opening of the rectum to the outside of the body. [NIH]

Aqueous: Having to do with water. [NIH]

Arteries: The vessels carrying blood away from the heart. [NIH]

Articular: Of or pertaining to a joint. [EU]

Back Pain: Acute or chronic pain located in the posterior regions of the trunk, including the thoracic, lumbar, sacral, or adjacent regions. [NIH]

Bacteria: Unicellular prokaryotic microorganisms which generally possess rigid cell walls, multiply by cell division, and exhibit three principal forms: round or coccal, rodlike or bacillary, and spiral or spirochetal. [NIH]

Bacterial Physiology: Physiological processes and activities of bacteria. [NIH]

Base: In chemistry, the nonacid part of a salt; a substance that combines with acids to form salts; a substance that dissociates to give hydroxide ions in aqueous solutions; a substance whose molecule or ion can combine with a proton (hydrogen ion); a substance capable of donating a pair of electrons (to an acid) for the formation of a coordinate covalent bond. [EU]

Biochemical: Relating to biochemistry; characterized by, produced by, or involving chemical reactions in living organisms. [EU]

Bioengineering: The application of engineering principles to the solution of biological problems, for example, remote-handling devices, life-support systems, controls, and displays. [NIH]

Biological Sciences: All of the divisions of the natural sciences dealing with the various aspects of the phenomena of life and vital processes. The concept includes anatomy and physiology, biochemistry and biophysics, and the biology of animals, plants, and microorganisms. It should be differentiated from biology, one of its subdivisions, concerned specifically with the origin and life processes of living organisms. [NIH]

Biomechanics: The study of the application of mechanical laws and the action of forces to living structures. [NIH]

Biomedical Engineering: Application of principles and practices of engineering science to biomedical research and health care. [NIH]

Biophysics: The science of physical phenomena and processes in living organisms. [NIH]

Biotechnology: Body of knowledge related to the use of organisms, cells or cell-derived constituents for the purpose of developing products which are technically, scientifically and clinically useful. Alteration of biologic function at the molecular level (i.e., genetic engineering) is a central focus; laboratory methods used include transfection and cloning technologies, sequence and structure analysis algorithms, computer databases, and gene and protein structure function analysis and prediction. [NIH]

Blood pressure: The pressure of blood against the walls of a blood vessel or heart chamber. Unless there is reference to another location, such as the pulmonary artery or one of the heart chambers, it refers to the pressure in the systemic arteries, as measured, for example, in the forearm. [NIH]

Blood vessel: A tube in the body through which blood circulates. Blood vessels include a network of arteries, arterioles, capillaries, venules, and veins. [NIH]

Bolus: A single dose of drug usually injected into a blood vessel over a short period of time. Also called bolus infusion. [NIH]

Bolus infusion: A single dose of drug usually injected into a blood vessel over a short period of time. Also called bolus. [NIH]

Bone Density: The amount of mineral per square centimeter of bone. This is the definition used in clinical practice. Actual bone density would be expressed in grams per milliliter. It is most frequently measured by photon absorptiometry or x-ray computed tomography. [NIH]

Bone Marrow: The soft tissue filling the cavities of bones. Bone marrow exists in two types, yellow and red. Yellow marrow is found in the large cavities of large bones and consists mostly of fat cells and a few primitive blood cells. Red marrow is a hematopoietic tissue and is the site of production of erythrocytes and granular leukocytes. Bone marrow is made up of a framework of connective tissue containing branching fibers with the frame being filled with marrow cells. [NIH]

Branch: Most commonly used for branches of nerves, but applied also to other structures. [NIH]

Calcium: A basic element found in nearly all organized tissues. It is a member of the alkaline earth family of metals with the atomic symbol Ca, atomic number 20, and atomic weight 40. Calcium is the most abundant mineral in the body and combines with phosphorus to form calcium phosphate in the bones and teeth. It is essential for the normal functioning of nerves and muscles and plays a role in blood coagulation (as factor IV) and in many enzymatic processes. [NIH]

Capsular: Cataract which is initiated by an opacification at the surface of the lens. [NIH]

Carbon Dioxide: A colorless, odorless gas that can be formed by the body and is necessary for the respiration cycle of plants and animals. [NIH]

Cardiology: The study of the heart, its physiology, and its functions. [NIH]

Cardiorespiratory: Relating to the heart and lungs and their function. [EU]

Cardiovascular: Having to do with the heart and blood vessels. [NIH]

Cardiovascular disease: Any abnormal condition characterized by dysfunction of the heart and blood vessels. CVD includes atherosclerosis (especially coronary heart disease, which

can lead to heart attacks), cerebrovascular disease (e.g., stroke), and hypertension (high blood pressure). [NIH]

Cardiovascular Physiology: Functions and activities of the cardiovascular system as a whole or of any of its parts. [NIH]

Cardiovascular System: The heart and the blood vessels by which blood is pumped and circulated through the body. [NIH]

Case report: A detailed report of the diagnosis, treatment, and follow-up of an individual patient. Case reports also contain some demographic information about the patient (for example, age, gender, ethnic origin). [NIH]

Cause of Death: Factors which produce cessation of all vital bodily functions. They can be analyzed from an epidemiologic viewpoint. [NIH]

Cell: The individual unit that makes up all of the tissues of the body. All living things are made up of one or more cells. [NIH]

Cell Respiration: The metabolic process of all living cells (animal and plant) in which oxygen is used to provide a source of energy for the cell. [NIH]

Cerebral: Of or pertaining of the cerebrum or the brain. [EU]

Cerebral Palsy: Refers to a motor disability caused by a brain dysfunction. [NIH]

Cerebrovascular: Pertaining to the blood vessels of the cerebrum, or brain. [EU]

Cerebrum: The largest part of the brain. It is divided into two hemispheres, or halves, called the cerebral hemispheres. The cerebrum controls muscle functions of the body and also controls speech, emotions, reading, writing, and learning. [NIH]

Cervix: The lower, narrow end of the uterus that forms a canal between the uterus and vagina. [NIH]

Character: In current usage, approximately equivalent to personality. The sum of the relatively fixed personality traits and habitual modes of response of an individual. [NIH]

Chemotactic Factors: Chemical substances that attract or repel cells or organisms. The concept denotes especially those factors released as a result of tissue injury, invasion, or immunologic activity, that attract leukocytes, macrophages, or other cells to the site of infection or insult. [NIH]

Chin: The anatomical frontal portion of the mandible, also known as the mentum, that contains the line of fusion of the two separate halves of the mandible (symphysis menti). This line of fusion divides inferiorly to enclose a triangular area called the mental protuberance. On each side, inferior to the second premolar tooth, is the mental foramen for the passage of blood vessels and a nerve. [NIH]

Chiropractic: A system of treating bodily disorders by manipulation of the spine and other parts, based on the belief that the cause is the abnormal functioning of a nerve. [NIH]

Cholesterol: The principal sterol of all higher animals, distributed in body tissues, especially the brain and spinal cord, and in animal fats and oils. [NIH]

Chromosome: Part of a cell that contains genetic information. Except for sperm and eggs, all human cells contain 46 chromosomes. [NIH]

Chronic: A disease or condition that persists or progresses over a long period of time. [NIH]

Chronic Fatigue Syndrome: Fatigue caused by the combined effects of different types of prolonged fatigue. [NIH]

Clinical trial: A research study that tests how well new medical treatments or other interventions work in people. Each study is designed to test new methods of screening,

prevention, diagnosis, or treatment of a disease. [NIH]

Cloning: The production of a number of genetically identical individuals; in genetic engineering, a process for the efficient replication of a great number of identical DNA molecules. [NIH]

Coagulation: 1. The process of clot formation. 2. In colloid chemistry, the solidification of a sol into a gelatinous mass; an alteration of a disperse phase or of a dissolved solid which causes the separation of the system into a liquid phase and an insoluble mass called the clot or curd. Coagulation is usually irreversible. 3. In surgery, the disruption of tissue by physical means to form an amorphous residuum, as in electrocoagulation and photocoagulation. [EU]

Colon: The long, coiled, tubelike organ that removes water from digested food. The remaining material, solid waste called stool, moves through the colon to the rectum and leaves the body through the anus. [NIH]

Complement: A term originally used to refer to the heat-labile factor in serum that causes immune cytolysis, the lysis of antibody-coated cells, and now referring to the entire functionally related system comprising at least 20 distinct serum proteins that is the effector not only of immune cytolysis but also of other biologic functions. Complement activation occurs by two different sequences, the classic and alternative pathways. The proteins of the classic pathway are termed 'components of complement' and are designated by the symbols C1 through C9. C1 is a calcium-dependent complex of three distinct proteins C1q, C1r and C1s. The proteins of the alternative pathway (collectively referred to as the properdin system) and complement regulatory proteins are known by semisystematic or trivial names. Fragments resulting from proteolytic cleavage of complement proteins are designated with lower-case letter suffixes, e.g., C3a. Inactivated fragments may be designated with the suffix 'i', e.g. C3bi. Activated components or complexes with biological activity are designated by a bar over the symbol e.g. C1 or C4b,2a. The classic pathway is activated by the binding of C1 to classic pathway activators, primarily antigen-antibody complexes containing IgM, IgG1, IgG3; C1q binds to a single IgM molecule or two adjacent IgG molecules. The alternative pathway can be activated by IgA immune complexes and also by nonimmunologic materials including bacterial endotoxins, microbial polysaccharides, and cell walls. Activation of the classic pathway triggers an enzymatic cascade involving C1, C4, C2 and C3; activation of the alternative pathway triggers a cascade involving C3 and factors B, D and P. Both result in the cleavage of C5 and the formation of the membrane attack complex. Complement activation also results in the formation of many biologically active complement fragments that act as anaphylatoxins, opsonins, or chemotactic factors. [EU]

Complementary and alternative medicine: CAM. Forms of treatment that are used in addition to (complementary) or instead of (alternative) standard treatments. These practices are not considered standard medical approaches. CAM includes dietary supplements, megadose vitamins, herbal preparations, special teas, massage therapy, magnet therapy, spiritual healing, and meditation. [NIH]

Complementary medicine: Practices not generally recognized by the medical community as standard or conventional medical approaches and used to enhance or complement the standard treatments. Complementary medicine includes the taking of dietary supplements, megadose vitamins, and herbal preparations; the drinking of special teas; and practices such as massage therapy, magnet therapy, spiritual healing, and meditation. [NIH]

Computational Biology: A field of biology concerned with the development of techniques for the collection and manipulation of biological data, and the use of such data to make biological discoveries or predictions. This field encompasses all computational methods and theories applicable to molecular biology and areas of computer-based techniques for solving

biological problems including manipulation of models and datasets. [NIH]

Consciousness: Sense of awareness of self and of the environment. [NIH]

Contraindications: Any factor or sign that it is unwise to pursue a certain kind of action or treatment, e. g. giving a general anesthetic to a person with pneumonia. [NIH]

Contralateral: Having to do with the opposite side of the body. [NIH]

Coronary: Encircling in the manner of a crown; a term applied to vessels; nerves, ligaments, etc. The term usually denotes the arteries that supply the heart muscle and, by extension, a pathologic involvement of them. [EU]

Coronary heart disease: A type of heart disease caused by narrowing of the coronary arteries that feed the heart, which needs a constant supply of oxygen and nutrients carried by the blood in the coronary arteries. When the coronary arteries become narrowed or clogged by fat and cholesterol deposits and cannot supply enough blood to the heart, CHD results. [NIH]

Coronary Thrombosis: Presence of a thrombus in a coronary artery, often causing a myocardial infarction. [NIH]

Cortex: The outer layer of an organ or other body structure, as distinguished from the internal substance. [EU]

Cortical: Pertaining to or of the nature of a cortex or bark. [EU]

Cumulative Trauma Disorders: Harmful and painful condition caused by overuse or overexertion of some part of the musculoskeletal system, often resulting from work-related physical activities. It is characterized by inflammation, pain, or dysfunction of the involved joints, bones, ligaments, and nerves. [NIH]

Data Collection: Systematic gathering of data for a particular purpose from various sources, including questionnaires, interviews, observation, existing records, and electronic devices. The process is usually preliminary to statistical analysis of the data. [NIH]

Degenerative: Undergoing degeneration : tending to degenerate; having the character of or involving degeneration; causing or tending to cause degeneration. [EU]

Dendrites: Extensions of the nerve cell body. They are short and branched and receive stimuli from other neurons. [NIH]

Dental Care: The total of dental diagnostic, preventive, and restorative services provided to meet the needs of a patient (from Illustrated Dictionary of Dentistry, 1982). [NIH]

Dentists: Individuals licensed to practice dentistry. [NIH]

Diagnostic procedure: A method used to identify a disease. [NIH]

Diathesis: A constitution or condition of the body which makes the tissues react in special ways to certain extrinsic stimuli and thus tends to make the person more than usually susceptible to certain diseases. [EU]

Diffusion of Innovation: The broad dissemination of new ideas, procedures, techniques, materials, and devices and the degree to which these are accepted and used. [NIH]

Direct: 1. Straight; in a straight line. 2. Performed immediately and without the intervention of subsidiary means. [EU]

Distal: Remote; farther from any point of reference; opposed to proximal. In dentistry, used to designate a position on the dental arch farther from the median line of the jaw. [EU]

Double-blind: Pertaining to a clinical trial or other experiment in which neither the subject nor the person administering treatment knows which treatment any particular subject is receiving. [EU]

Dreams: A series of thoughts, images, or emotions occurring during sleep which are dissociated from the usual stream of consciousness of the waking state. [NIH]

Dystonia: Disordered tonicity of muscle. [EU]

Effector: It is often an enzyme that converts an inactive precursor molecule into an active second messenger. [NIH]

Efficacy: The extent to which a specific intervention, procedure, regimen, or service produces a beneficial result under ideal conditions. Ideally, the determination of efficacy is based on the results of a randomized control trial. [NIH]

Electromyography: Recording of the changes in electric potential of muscle by means of surface or needle electrodes. [NIH]

Electrophysiological: Pertaining to electrophysiology, that is a branch of physiology that is concerned with the electric phenomena associated with living bodies and involved in their functional activity. [EU]

Endocrine System: The system of glands that release their secretions (hormones) directly into the circulatory system. In addition to the endocrine glands, included are the chromaffin system and the neurosecretory systems. [NIH]

Endocrinology: A subspecialty of internal medicine concerned with the metabolism, physiology, and disorders of the endocrine system. [NIH]

Endotoxins: Toxins closely associated with the living cytoplasm or cell wall of certain microorganisms, which do not readily diffuse into the culture medium, but are released upon lysis of the cells. [NIH]

Environmental Health: The science of controlling or modifying those conditions, influences, or forces surrounding man which relate to promoting, establishing, and maintaining health. [NIH]

Enzymatic: Phase where enzyme cuts the precursor protein. [NIH]

Enzyme: A protein that speeds up chemical reactions in the body. [NIH]

Esophagus: The muscular tube through which food passes from the throat to the stomach. [NIH]

Expiration: The act of breathing out, or expelling air from the lungs. [EU]

Extremity: A limb; an arm or leg (membrum); sometimes applied specifically to a hand or foot. [EU]

Family Planning: Programs or services designed to assist the family in controlling reproduction by either improving or diminishing fertility. [NIH]

Fat: Total lipids including phospholipids. [NIH]

Fatigue: The state of weariness following a period of exertion, mental or physical, characterized by a decreased capacity for work and reduced efficiency to respond to stimuli. [NIH]

Fibula: The bone of the lower leg lateral to and smaller than the tibia. In proportion to its length, it is the most slender of the long bones. [NIH]

Flexion: In gynaecology, a displacement of the uterus in which the organ is bent so far forward or backward that an acute angle forms between the fundus and the cervix. [EU]

Fold: A plication or doubling of various parts of the body. [NIH]

Frontal Lobe: The anterior part of the cerebral hemisphere. [NIH]

Fundus: The larger part of a hollow organ that is farthest away from the organ's opening. The bladder, gallbladder, stomach, uterus, eye, and cavity of the middle ear all have a

fundus. [NIH]

Gait: Manner or style of walking. [NIH]

Gallbladder: The pear-shaped organ that sits below the liver. Bile is concentrated and stored in the gallbladder. [NIH]

Ganglia: Clusters of multipolar neurons surrounded by a capsule of loosely organized connective tissue located outside the central nervous system. [NIH]

Gene: The functional and physical unit of heredity passed from parent to offspring. Genes are pieces of DNA, and most genes contain the information for making a specific protein. [NIH]

Gene Expression: The phenotypic manifestation of a gene or genes by the processes of gene action. [NIH]

Gene Therapy: The introduction of new genes into cells for the purpose of treating disease by restoring or adding gene expression. Techniques include insertion of retroviral vectors, transfection, homologous recombination, and injection of new genes into the nuclei of single cell embryos. The entire gene therapy process may consist of multiple steps. The new genes may be introduced into proliferating cells in vivo (e.g., bone marrow) or in vitro (e.g., fibroblast cultures) and the modified cells transferred to the site where the gene expression is required. Gene therapy may be particularly useful for treating enzyme deficiency diseases, hemoglobinopathies, and leukemias and may also prove useful in restoring drug sensitivity, particularly for leukemia. [NIH]

Genetics: The biological science that deals with the phenomena and mechanisms of heredity. [NIH]

Gland: An organ that produces and releases one or more substances for use in the body. Some glands produce fluids that affect tissues or organs. Others produce hormones or participate in blood production. [NIH]

Governing Board: The group in which legal authority is vested for the control of health-related institutions and organizations. [NIH]

Grade: The grade of a tumor depends on how abnormal the cancer cells look under a microscope and how quickly the tumor is likely to grow and spread. Grading systems are different for each type of cancer. [NIH]

Graft: Healthy skin, bone, or other tissue taken from one part of the body and used to replace diseased or injured tissue removed from another part of the body. [NIH]

Growth: The progressive development of a living being or part of an organism from its earliest stage to maturity. [NIH]

Habitual: Of the nature of a habit; according to habit; established by or repeated by force of habit, customary. [EU]

Haematuria: Blood in the urine. [EU]

Haemophilia: A haemorrhagic diathesis occurring in two main forms: 1. Haemophilia A (classic haemophilia, factor VIII deficiency), an X-linked disorder due to deficiency of coagulation factor VIII; 2. Haemophilia B (factor IX deficiency, Christmas disease), also X-linked, due to deficiency of coagulation factor IX. Both forms are determined by a mutant gene near the telomere of the long arm of the X chromosome (Xq), but a different loci, and are characterized by subcutaneous and intramuscular haemorrhages; bleeding from the mouth, gums, lips, and tongue; haematuria; and haemarthroses. [EU]

Health Promotion: Encouraging consumer behaviors most likely to optimize health potentials (physical and psychosocial) through health information, preventive programs, and access to medical care. [NIH]

Heart attack: A seizure of weak or abnormal functioning of the heart. [NIH]

Hemodynamics: The movements of the blood and the forces involved in systemic or regional blood circulation. [NIH]

Hemoglobinopathies: A group of inherited disorders characterized by structural alterations within the hemoglobin molecule. [NIH]

Hemorrhage: Bleeding or escape of blood from a vessel. [NIH]

Heredity: 1. The genetic transmission of a particular quality or trait from parent to offspring. 2. The genetic constitution of an individual. [EU]

Homologous: Corresponding in structure, position, origin, etc., as (a) the feathers of a bird and the scales of a fish, (b) antigen and its specific antibody, (c) allelic chromosomes. [EU]

Hormone: A substance in the body that regulates certain organs. Hormones such as gastrin help in breaking down food. Some hormones come from cells in the stomach and small intestine. [NIH]

Host: Any animal that receives a transplanted graft. [NIH]

Human Engineering: The science of designing, building or equipping mechanical devices or artificial environments to the anthropometric, physiological, or psychological requirements of the people who will use them. [NIH]

Hydrogen: The first chemical element in the periodic table. It has the atomic symbol H, atomic number 1, and atomic weight 1. It exists, under normal conditions, as a colorless, odorless, tasteless, diatomic gas. Hydrogen ions are protons. Besides the common H1 isotope, hydrogen exists as the stable isotope deuterium and the unstable, radioactive isotope tritium. [NIH]

Hypertension: Persistently high arterial blood pressure. Currently accepted threshold levels are 140 mm Hg systolic and 90 mm Hg diastolic pressure. [NIH]

Id: The part of the personality structure which harbors the unconscious instinctive desires and strivings of the individual. [NIH]

Immune system: The organs, cells, and molecules responsible for the recognition and disposal of foreign ("non-self") material which enters the body. [NIH]

Immunoglobulin: A protein that acts as an antibody. [NIH]

Immunology: The study of the body's immune system. [NIH]

Impairment: In the context of health experience, an impairment is any loss or abnormality of psychological, physiological, or anatomical structure or function. [NIH]

In vitro: In the laboratory (outside the body). The opposite of in vivo (in the body). [NIH]

In vivo: In the body. The opposite of in vitro (outside the body or in the laboratory). [NIH]

Indicative: That indicates; that points out more or less exactly; that reveals fairly clearly. [EU]

Infant Care: Care of infants in the home or institution. [NIH]

Infarction: A pathological process consisting of a sudden insufficient blood supply to an area, which results in necrosis of that area. It is usually caused by a thrombus, an embolus, or a vascular torsion. [NIH]

Inflammation: A pathological process characterized by injury or destruction of tissues caused by a variety of cytologic and chemical reactions. It is usually manifested by typical signs of pain, heat, redness, swelling, and loss of function. [NIH]

Insight: The capacity to understand one's own motives, to be aware of one's own psychodynamics, to appreciate the meaning of symbolic behavior. [NIH]

Internal Medicine: A medical specialty concerned with the diagnosis and treatment of diseases of the internal organ systems of adults. [NIH]

Intervertebral: Situated between two contiguous vertebrae. [EU]

Intervertebral Disk Displacement: An intervertebral disk in which the nucleus pulposus has protruded through surrounding fibrocartilage. This occurs most frequently in the lower lumbar region. [NIH]

Intestinal: Having to do with the intestines. [NIH]

Intestines: The section of the alimentary canal from the stomach to the anus. It includes the large intestine and small intestine. [NIH]

Intramuscular: IM. Within or into muscle. [NIH]

Intrinsic: Situated entirely within or pertaining exclusively to a part. [EU]

Ions: An atom or group of atoms that have a positive or negative electric charge due to a gain (negative charge) or loss (positive charge) of one or more electrons. Atoms with a positive charge are known as cations; those with a negative charge are anions. [NIH]

Joint: The point of contact between elements of an animal skeleton with the parts that surround and support it. [NIH]

Kb: A measure of the length of DNA fragments, 1 Kb = 1000 base pairs. The largest DNA fragments are up to 50 kilobases long. [NIH]

Kinetic: Pertaining to or producing motion. [EU]

Labile: 1. Gliding; moving from point to point over the surface; unstable; fluctuating. 2. Chemically unstable. [EU]

Lens: The transparent, double convex (outward curve on both sides) structure suspended between the aqueous and vitreous; helps to focus light on the retina. [NIH]

Leukemia: Cancer of blood-forming tissue. [NIH]

Library Services: Services offered to the library user. They include reference and circulation. [NIH]

Ligaments: Shiny, flexible bands of fibrous tissue connecting together articular extremities of bones. They are pliant, tough, and inextensile. [NIH]

Linkage: The tendency of two or more genes in the same chromosome to remain together from one generation to the next more frequently than expected according to the law of independent assortment. [NIH]

Liver: A large, glandular organ located in the upper abdomen. The liver cleanses the blood and aids in digestion by secreting bile. [NIH]

Locomotion: Movement or the ability to move from one place or another. It can refer to humans, vertebrate or invertebrate animals, and microorganisms. [NIH]

Locomotor: Of or pertaining to locomotion; pertaining to or affecting the locomotive apparatus of the body. [EU]

Loop: A wire usually of platinum bent at one end into a small loop (usually 4 mm inside diameter) and used in transferring microorganisms. [NIH]

Low Back Pain: Acute or chronic pain in the lumbar or sacral regions, which may be associated with musculo-ligamentous sprains and strains; intervertebral disk displacement; and other conditions. [NIH]

Lumbar: Pertaining to the loins, the part of the back between the thorax and the pelvis. [EU]

Mandible: The largest and strongest bone of the face constituting the lower jaw. It supports

the lower teeth. [NIH]

Mastication: The act and process of chewing and grinding food in the mouth. [NIH]

Medial: Lying near the midsaggital plane of the body; opposed to lateral. [NIH]

MEDLINE: An online database of MEDLARS, the computerized bibliographic Medical Literature Analysis and Retrieval System of the National Library of Medicine. [NIH]

Membrane: A very thin layer of tissue that covers a surface. [NIH]

Memory: Complex mental function having four distinct phases: (1) memorizing or learning, (2) retention, (3) recall, and (4) recognition. Clinically, it is usually subdivided into immediate, recent, and remote memory. [NIH]

Mental: Pertaining to the mind; psychic. 2. (L. mentum chin) pertaining to the chin. [EU]

Mental Health: The state wherein the person is well adjusted. [NIH]

Mental Processes: Conceptual functions or thinking in all its forms. [NIH]

Mentors: Senior professionals who provide guidance, direction and support to those persons desirous of improvement in academic positions, administrative positions or other career development situations. [NIH]

MI: Myocardial infarction. Gross necrosis of the myocardium as a result of interruption of the blood supply to the area; it is almost always caused by atherosclerosis of the coronary arteries, upon which coronary thrombosis is usually superimposed. [NIH]

Microbiology: The study of microorganisms such as fungi, bacteria, algae, archaea, and viruses. [NIH]

Milliliter: A measure of volume for a liquid. A milliliter is approximately 950-times smaller than a quart and 30-times smaller than a fluid ounce. A milliliter of liquid and a cubic centimeter (cc) of liquid are the same. [NIH]

Minority Groups: A subgroup having special characteristics within a larger group, often bound together by special ties which distinguish it from the larger group. [NIH]

Mobility: Capability of movement, of being moved, or of flowing freely. [EU]

Modeling: A treatment procedure whereby the therapist presents the target behavior which the learner is to imitate and make part of his repertoire. [NIH]

Molecular: Of, pertaining to, or composed of molecules : a very small mass of matter. [EU]

Molecule: A chemical made up of two or more atoms. The atoms in a molecule can be the same (an oxygen molecule has two oxygen atoms) or different (a water molecule has two hydrogen atoms and one oxygen atom). Biological molecules, such as proteins and DNA, can be made up of many thousands of atoms. [NIH]

Motor Cortex: Area of the frontal lobe concerned with primary motor control. It lies anterior to the central sulcus. [NIH]

Muscle Contraction: A process leading to shortening and/or development of tension in muscle tissue. Muscle contraction occurs by a sliding filament mechanism whereby actin filaments slide inward among the myosin filaments. [NIH]

Musculoskeletal System: Themuscles, bones, and cartilage of the body. [NIH]

Myocardium: The muscle tissue of the heart composed of striated, involuntary muscle known as cardiac muscle. [NIH]

Myosin: Chief protein in muscle and the main constituent of the thick filaments of muscle fibers. In conjunction with actin, it is responsible for the contraction and relaxation of muscles. [NIH]

Need: A state of tension or dissatisfaction felt by an individual that impels him to action toward a goal he believes will satisfy the impulse. [NIH]

Nerve: A cordlike structure of nervous tissue that connects parts of the nervous system with other tissues of the body and conveys nervous impulses to, or away from, these tissues. [NIH]

Nervous System: The entire nerve apparatus composed of the brain, spinal cord, nerves and ganglia. [NIH]

Neural: 1. Pertaining to a nerve or to the nerves. 2. Situated in the region of the spinal axis, as the neutral arch. [EU]

Neurologic: Having to do with nerves or the nervous system. [NIH]

Neuromuscular: Pertaining to muscles and nerves. [EU]

Neurons: The basic cellular units of nervous tissue. Each neuron consists of a body, an axon, and dendrites. Their purpose is to receive, conduct, and transmit impulses in the nervous system. [NIH]

Nuclei: A body of specialized protoplasm found in nearly all cells and containing the chromosomes. [NIH]

Nursing Research: Research carried out by nurses, generally in clinical settings, in the areas of clinical practice, evaluation, nursing education, nursing administration, and methodology. [NIH]

Occupational Therapy: The field concerned with utilizing craft or work activities in the rehabilitation of patients. Occupational therapy can also refer to the activities themselves. [NIH]

Oral Health: The optimal state of the mouth and normal functioning of the organs of the mouth without evidence of disease. [NIH]

Osteoporosis: Reduction of bone mass without alteration in the composition of bone, leading to fractures. Primary osteoporosis can be of two major types: postmenopausal osteoporosis and age-related (or senile) osteoporosis. [NIH]

Oxygen Consumption: The oxygen consumption is determined by calculating the difference between the amount of oxygen inhaled and exhaled. [NIH]

Palate: The structure that forms the roof of the mouth. It consists of the anterior hard palate and the posterior soft palate. [NIH]

Pancreas: A mixed exocrine and endocrine gland situated transversely across the posterior abdominal wall in the epigastric and hypochondriac regions. The endocrine portion is comprised of the Islets of Langerhans, while the exocrine portion is a compound acinar gland that secretes digestive enzymes. [NIH]

Paralysis: Loss of ability to move all or part of the body. [NIH]

Pathologic: 1. Indicative of or caused by a morbid condition. 2. Pertaining to pathology (= branch of medicine that treats the essential nature of the disease, especially the structural and functional changes in tissues and organs of the body caused by the disease). [EU]

Pathophysiology: Altered functions in an individual or an organ due to disease. [NIH]

Pelvis: The lower part of the abdomen, located between the hip bones. [NIH]

PH: The symbol relating the hydrogen ion (H+) concentration or activity of a solution to that of a given standard solution. Numerically the pH is approximately equal to the negative logarithm of H+ concentration expressed in molarity. pH 7 is neutral; above it alkalinity increases and below it acidity increases. [EU]

Pharmacologic: Pertaining to pharmacology or to the properties and reactions of drugs. [EU]

Pharynx: The hollow tube about 5 inches long that starts behind the nose and ends at the top of the trachea (windpipe) and esophagus (the tube that goes to the stomach). [NIH]

Physical Medicine: A medical specialty concerned with the use of physical agents, mechanical apparatus, and manipulation in rehabilitating physically diseased or injured patients. [NIH]

Physiologic: Having to do with the functions of the body. When used in the phrase "physiologic age," it refers to an age assigned by general health, as opposed to calendar age. [NIH]

Physiology: The science that deals with the life processes and functions of organismus, their cells, tissues, and organs. [NIH]

Pilot study: The initial study examining a new method or treatment. [NIH]

Plants: Multicellular, eukaryotic life forms of the kingdom Plantae. They are characterized by a mainly photosynthetic mode of nutrition; essentially unlimited growth at localized regions of cell divisions (meristems); cellulose within cells providing rigidity; the absence of organs of locomotion; absense of nervous and sensory systems; and an alteration of haploid and diploid generations. [NIH]

Plasticity: In an individual or a population, the capacity for adaptation: a) through gene changes (genetic plasticity) or b) through internal physiological modifications in response to changes of environment (physiological plasticity). [NIH]

Platinum: Platinum. A heavy, soft, whitish metal, resembling tin, atomic number 78, atomic weight 195.09, symbol Pt. (From Dorland, 28th ed) It is used in manufacturing equipment for laboratory and industrial use. It occurs as a black powder (platinum black) and as a spongy substance (spongy platinum) and may have been known in Pliny's time as "alutiae". [NIH]

Pneumonia: Inflammation of the lungs. [NIH]

Posterior: Situated in back of, or in the back part of, or affecting the back or dorsal surface of the body. In lower animals, it refers to the caudal end of the body. [EU]

Postmenopausal: Refers to the time after menopause. Menopause is the time in a woman's life when menstrual periods stop permanently; also called "change of life." [NIH]

Practice Guidelines: Directions or principles presenting current or future rules of policy for the health care practitioner to assist him in patient care decisions regarding diagnosis, therapy, or related clinical circumstances. The guidelines may be developed by government agencies at any level, institutions, professional societies, governing boards, or by the convening of expert panels. The guidelines form a basis for the evaluation of all aspects of health care and delivery. [NIH]

Preventive Dentistry: The branch of dentistry concerned with the prevention of disease and the maintenance and promotion of oral health. [NIH]

Problem Solving: A learning situation involving more than one alternative from which a selection is made in order to attain a specific goal. [NIH]

Protein S: The vitamin K-dependent cofactor of activated protein C. Together with protein C, it inhibits the action of factors VIIIa and Va. A deficiency in protein S can lead to recurrent venous and arterial thrombosis. [NIH]

Proteins: Polymers of amino acids linked by peptide bonds. The specific sequence of amino acids determines the shape and function of the protein. [NIH]

Proteolytic: 1. Pertaining to, characterized by, or promoting proteolysis. 2. An enzyme that promotes proteolysis (= the splitting of proteins by hydrolysis of the peptide bonds with formation of smaller polypeptides). [EU]

Proximal: Nearest; closer to any point of reference; opposed to distal. [EU]

Psychic: Pertaining to the psyche or to the mind; mental. [EU]

Psychology: The science dealing with the study of mental processes and behavior in man and animals. [NIH]

Public Health: Branch of medicine concerned with the prevention and control of disease and disability, and the promotion of physical and mental health of the population on the international, national, state, or municipal level. [NIH]

Public Policy: A course or method of action selected, usually by a government, from among alternatives to guide and determine present and future decisions. [NIH]

Randomized: Describes an experiment or clinical trial in which animal or human subjects are assigned by chance to separate groups that compare different treatments. [NIH]

Receptor: A molecule inside or on the surface of a cell that binds to a specific substance and causes a specific physiologic effect in the cell. [NIH]

Recombination: The formation of new combinations of genes as a result of segregation in crosses between genetically different parents; also the rearrangement of linked genes due to crossing-over. [NIH]

Rectum: The last 8 to 10 inches of the large intestine. [NIH]

Refer: To send or direct for treatment, aid, information, de decision. [NIH]

Regimen: A treatment plan that specifies the dosage, the schedule, and the duration of treatment. [NIH]

Reliability: Used technically, in a statistical sense, of consistency of a test with itself, i. e. the extent to which we can assume that it will yield the same result if repeated a second time. [NIH]

Research Design: A plan for collecting and utilizing data so that desired information can be obtained with sufficient precision or so that an hypothesis can be tested properly. [NIH]

Respiration: The act of breathing with the lungs, consisting of inspiration, or the taking into the lungs of the ambient air, and of expiration, or the expelling of the modified air which contains more carbon dioxide than the air taken in (Blakiston's Gould Medical Dictionary, 4th ed.). This does not include tissue respiration (= oxygen consumption) or cell respiration (= cell respiration). [NIH]

Retroviral vector: RNA from a virus that is used to insert genetic material into cells. [NIH]

Rheumatism: A group of disorders marked by inflammation or pain in the connective tissue structures of the body. These structures include bone, cartilage, and fat. [NIH]

Rheumatoid: Resembling rheumatism. [EU]

Risk factor: A habit, trait, condition, or genetic alteration that increases a person's chance of developing a disease. [NIH]

Sagittal: The line of direction passing through the body from back to front, or any vertical plane parallel to the medial plane of the body and inclusive of that plane; often restricted to the medial plane, the plane of the sagittal suture. [NIH]

Screening: Checking for disease when there are no symptoms. [NIH]

Sedentary: 1. Sitting habitually; of inactive habits. 2. Pertaining to a sitting posture. [EU]

Self Care: Performance of activities or tasks traditionally performed by professional health care providers. The concept includes care of oneself or one's family and friends. [NIH]

Semantics: The relationships between symbols and their meanings. [NIH]

Senile: Relating or belonging to old age; characteristic of old age; resulting from infirmity of old age. [NIH]

Serum: The clear liquid part of the blood that remains after blood cells and clotting proteins have been removed. [NIH]

Sex Characteristics: Those characteristics that distinguish one sex from the other. The primary sex characteristics are the ovaries and testes and their related hormones. Secondary sex characteristics are those which are masculine or feminine but not directly related to reproduction. [NIH]

Shock: The general bodily disturbance following a severe injury; an emotional or moral upset occasioned by some disturbing or unexpected experience; disruption of the circulation, which can upset all body functions: sometimes referred to as circulatory shock. [NIH]

Skeletal: Having to do with the skeleton (boney part of the body). [NIH]

Skeleton: The framework that supports the soft tissues of vertebrate animals and protects many of their internal organs. The skeletons of vertebrates are made of bone and/or cartilage. [NIH]

Soma: The body as distinct from the mind; all the body tissue except the germ cells; all the axial body. [NIH]

Somatic: 1. Pertaining to or characteristic of the soma or body. 2. Pertaining to the body wall in contrast to the viscera. [EU]

Spastic: 1. Of the nature of or characterized by spasms. 2. Hypertonic, so that the muscles are stiff and the movements awkward. 3. A person exhibiting spasticity, such as occurs in spastic paralysis or in cerebral palsy. [EU]

Spasticity: A state of hypertonicity, or increase over the normal tone of a muscle, with heightened deep tendon reflexes. [EU]

Specialist: In medicine, one who concentrates on 1 special branch of medical science. [NIH]

Spinal cord: The main trunk or bundle of nerves running down the spine through holes in the spinal bone (the vertebrae) from the brain to the level of the lower back. [NIH]

Sprains and Strains: A collective term for muscle and ligament injuries without dislocation or fracture. A sprain is a joint injury in which some of the fibers of a supporting ligament are ruptured but the continuity of the ligament remains intact. A strain is an overstretching or overexertion of some part of the musculature. [NIH]

Stabilization: The creation of a stable state. [EU]

Stomach: An organ of digestion situated in the left upper quadrant of the abdomen between the termination of the esophagus and the beginning of the duodenum. [NIH]

Stool: The waste matter discharged in a bowel movement; feces. [NIH]

Stress: Forcibly exerted influence; pressure. Any condition or situation that causes strain or tension. Stress may be either physical or psychologic, or both. [NIH]

Stroke: Sudden loss of function of part of the brain because of loss of blood flow. Stroke may be caused by a clot (thrombosis) or rupture (hemorrhage) of a blood vessel to the brain. [NIH]

Subcutaneous: Beneath the skin. [NIH]

Systemic: Affecting the entire body. [NIH]

Talus: The second largest of the tarsal bones and occupies the middle and upper part of the tarsus. [NIH]

Telomere: A terminal section of a chromosome which has a specialized structure and which

is involved in chromosomal replication and stability. Its length is believed to be a few hundred base pairs. [NIH]

Tendon: A discrete band of connective tissue mainly composed of parallel bundles of collagenous fibers by which muscles are attached, or two muscles bellies joined. [NIH]

Thoracic: Having to do with the chest. [NIH]

Thrombosis: The formation or presence of a blood clot inside a blood vessel. [NIH]

Thyroid: A gland located near the windpipe (trachea) that produces thyroid hormone, which helps regulate growth and metabolism. [NIH]

Tibia: The second longest bone of the skeleton. It is located on the medial side of the lower leg, articulating with the fibula laterally, the talus distally, and the femur proximally. [NIH]

Tissue: A group or layer of cells that are alike in type and work together to perform a specific function. [NIH]

Tome: A zone produced by a number of irregular spaces contained in the outermost layer of denture of the root of a tooth. [NIH]

Tomography: Imaging methods that result in sharp images of objects located on a chosen plane and blurred images located above or below the plane. [NIH]

Tone: 1. The normal degree of vigour and tension; in muscle, the resistance to passive elongation or stretch; tonus. 2. A particular quality of sound or of voice. 3. To make permanent, or to change, the colour of silver stain by chemical treatment, usually with a heavy metal. [EU]

Tonicity: The normal state of muscular tension. [NIH]

Tonus: A state of slight tension usually present in muscles even when they are not undergoing active contraction. [NIH]

Tooth Preparation: Procedures carried out with regard to the teeth or tooth structures preparatory to specified dental therapeutic and surgical measures. [NIH]

Toxic: Having to do with poison or something harmful to the body. Toxic substances usually cause unwanted side effects. [NIH]

Toxicology: The science concerned with the detection, chemical composition, and pharmacologic action of toxic substances or poisons and the treatment and prevention of toxic manifestations. [NIH]

Toxin: A poison; frequently used to refer specifically to a protein produced by some higher plants, certain animals, and pathogenic bacteria, which is highly toxic for other living organisms. Such substances are differentiated from the simple chemical poisons and the vegetable alkaloids by their high molecular weight and antigenicity. [EU]

Trace element: Substance or element essential to plant or animal life, but present in extremely small amounts. [NIH]

Trachea: The cartilaginous and membranous tube descending from the larynx and branching into the right and left main bronchi. [NIH]

Transfection: The uptake of naked or purified DNA into cells, usually eukaryotic. It is analogous to bacterial transformation. [NIH]

Trauma: Any injury, wound, or shock, must frequently physical or structural shock, producing a disturbance. [NIH]

Unconscious: Experience which was once conscious, but was subsequently rejected, as the "personal unconscious". [NIH]

Uterus: The small, hollow, pear-shaped organ in a woman's pelvis. This is the organ in

which a fetus develops. Also called the womb. [NIH]

Veterinary Medicine: The medical science concerned with the prevention, diagnosis, and treatment of diseases in animals. [NIH]

Vitro: Descriptive of an event or enzyme reaction under experimental investigation occurring outside a living organism. Parts of an organism or microorganism are used together with artificial substrates and/or conditions. [NIH]

Windpipe: A rigid tube, 10 cm long, extending from the cricoid cartilage to the upper border of the fifth thoracic vertebra. [NIH]

X-ray: High-energy radiation used in low doses to diagnose diseases and in high doses to treat cancer. [NIH]

INDEX


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