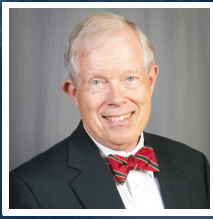


Heat Transfer for Health and Healing



Kenneth R. Diller
Professor, Biomedical Engineering

CURRENT RESEARCH

Innovative cooling and heating methods that maintain health and speed healing

Although often taken for granted, body temperature strongly affects how our immune system functions and also governs our ability to have quality sleep. Dr. Kenneth Diller, Professor of Biomedical Engineering at The University of Texas at Austin, has identified some of the most powerful and subtle features of our body's thermoregulation performance and created new and unique devices and methods to access our temperature control center safely and effectively, which can provide protection in life-threatening medical events such as stroke, heart attack and traumatic brain injury. His technology has been further adapted to create a thermally interactive sleeping environment that enables the sleeper to progress through a quality sleep experience, and it may be applied to ensure a safe and simple control of body temperature during surgical procedures.

The human body has a remarkably sophisticated and effective means of regulating its status and condition, and the most effective approach to facilitating healing from injury is to cooperate with how the body works while requiring as little invasive intervention as possible. Standing on this philosophy during the invention and design process, Professor Diller has also discovered that advanced heating and cooling methods can be applied to speed the healing process in tissue that has experienced a traumatic injury, commonly occurring during athletic activities or orthopedic surgery. Special medical devices have been built to carry out these heating and cooling procedures in concert with how the body naturally functions. This is in strong contrast to most alternative thermal treatment methods that use less effective heat transfer procedures and work against the body's...

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AFFILIATION



EDUCATION

- Sc.D. in Mechanical Engineering 1972, Massachusetts Institute of Technology

AWARDS

- Max Jakob Award, 2014
- H.R. Lissner Medal, 2002
- ASME Heat Transfer Memorial Award, 1994
- John E. Fogarty Senior International Fellow at Cambridge University, UK, 1989
- Alexander von Humboldt Fellow (FRG) at University of Stuttgart, 1983
- and 1 more...

RESEARCH AREAS

Life Science, Cardiovascular, Circulatory, Musculoskeletal

FUNDING REQUEST

At The University of Texas, Austin, Professor Kenneth Diller's full research program is at the stage of requiring \$2M annually. If the clinical trials we are starting prove successful, this amount could grow further as we bring our devices to market to be available to patients. Your contributions will therefore help propel these technologies forward, and support researchers who are joining efforts and creating novel approaches to address the overlooked therapeutic elements of body temperature!