



*Lecture sponsored by
The Pittsburgh Mind-
Body Center &
Department of
Psychology,
Carnegie Mellon
University*

*Monday,
February 8, 2010
12:00-1:00 pm*

*Baker Hall, Rm 336B
Third Floor, CMU
412-268-4238*

***“Life Styles and Brain Health: Studies on the
Neuroprotective Effects of Exercise”***

Michael J. Zigmond, Ph.D.

**Professor of Neurology, Psychiatry, & Neurobiology
Pittsburgh Institute for Neurodegenerative Diseases
University of Pittsburgh**

The United States has one of the highest *predicted* life expectancies in the world based on socioeconomic factors and health care expenditures, yet it has among the lowest in *actual* life expectancy among developed countries and by many measures our health is actually declining. Having conquered most infectious diseases, we are experiencing a rise in non-communicative diseases. Why? The answer is undoubtedly complex, but almost certainly includes the American life style, which often involves a poor diet, low levels of social interaction, high levels of stress, and little to no exercise. Dr. Zigmond’s research group has been focusing on the last of these variables, exercise, within the context of a specific neurodegenerative disease, Parkinson’s disease. Using animal and cellular models disease, they are examining the hypothesis that physical exercise increases the resiliency of the brain to cellular stress by enhancing the availability of specific “neurotrophic factors,” thereby reducing the incidence and progression of the disorder. In this seminar, Dr. Zigmond will begin by commenting on evidence that the life style of indigenous peoples was far healthier than our own, and then briefly describe the symptoms and pathology of Parkinson’s disease. He will then present animal studies showing that exercise can protect specific neurons from otherwise lethal neurotoxins. Finally, Dr. Zigmond will briefly describe laboratory studies designed to uncover the mechanism of exercise-induced neuroprotection. In the future he wishes to begin to ask why many people make unhealthy decisions regarding issues such as exercise, and what might be done to change that situation.