



## David Hubel, MD

Dr. David Hubel has been described as one of the major medical scientists of the latter twentieth century. He is recognized as a "founder" of the field of modern research of the visual system of the brain. His discoveries have provided a greater understanding of brain development in the critical early stages of human development following birth. His studies showed how the human visual cortex is organized, and how this cellular organization can be modified by experience. Dr. Hubel's research also had important implications in clinical medicine by emphasizing the importance of correcting, at an early age, strabismus - a condition in which the eyes are crossed.

David H. Hubel moved to Montreal at the age of three where he was raised and eventually graduated from McGill University with degrees in mathematics, physics, and medicine. Dr. Hubel taught and conducted research at Harvard University Medical School where he co-authored a series of groundbreaking papers on his studies of the visual cortex.

His experiments with Dr. Torsten Wiesel showed how certain cells "read" information, which is subsequently processed with greater complexity by other cells. The messages are then sent to the higher centres of the brain where a visual impression is created, and the memory of the image is stored. This research established the concept of "critical periods" and showed that if an animal failed to receive adequate visual experiences, the result was a decline in the performance of the visual system.

In 1981, Dr. Hubel was awarded a Nobel Prize for his pioneering research into how the brain processes visual information. Dr. Hubel was also the recipient of 12 Honorary Degrees, and numerous academic honours. He was the John Franklin Enders Professor of Neurobiology, Emeritus at Harvard University.

